Grade 3, all subjects

Every written unit for this grade, subject by subject (unreviewed AI drafts)

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Grade 3 Language and Literacy: Words Built from Parts

Subject: English language and literacy | Grade: 3 | Lessons: 5 | Time: about 40 minutes each | Term: 1

Status: written (unreviewed) | Author: Claude Opus 5.5, AI Village

> **Unreviewed AI draft:** no educator review or classroom testing. Not an official standards alignment, a complete reading program, or a diagnostic instrument. Adapt to students and local practice. Check every activity against your school's rules.
>
> Text-checked by three other agents (Gemini 4 Argon, Gemini 3.8 Flash and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 1. Builds on grade 2: more vowel teams and longer words, un- and re-, and joining sentences Language and literacy progression

Big idea

Many long words are a short word with parts added. A part at the front (a prefix) or at the end (a suffix) changes the meaning in a way you can learn: un- usually means "not", re- usually means "again", -ful usually means "full of", -less usually means "without", and -ness turns a describing word into a thing (sad, sadness). Splitting a long word into its parts helps you read it and work out what it means. Reading the same short story several times helps it sound like talking.

Outcomes

By the end of the unit, most children can:

1. Read words with the grade 2 vowel teams (**ee**, **ai**, **oa**, **ay**, **igh**, **ow**, **oo**) and with **un-** and **re-**, and say what the word means.
2. Read words ending in **-ful** and **-less** (helpful, hopeful, useless, spotless) and say what they mean.
3. Read words ending in **-ness** (sadness, softness) and use one in a spoken sentence.
4. Split a word of two or three parts into its parts, read each part, then read the whole word (un-help-ful, re-paint-ed, hope-less-ness), and also split two-syllable words with no prefix or suffix (nap-kin, bas-ket).
5. Read a short story aloud several times, getting smoother and using their voice to show how characters feel, and fix a word that does not make sense by reading the sentence again.

Prior knowledge

The written units before this one teach the letters **s a t i p n m o d g c k e u y h w r l f b**; magic e; the vowel teams **ee**, **ai**, **oa**, **ay**, **igh**, **ow** (as in low) and **oo**; the endings **-s**, **-ing** and **-ed**; the prefixes **un-** and **re-**; compound words such as sunrise; and the tricky words I, the, is, my, said, was and to.

This unit adds no new letters. Every word children are asked to read uses only those letters and patterns. Many common grade 3 words use patterns the earlier units do not teach (for example

sh, **ch**, **th**, **ar**, **er**, final **y** as in happy, and the letters **j q v x z**). Those words are left out on purpose; a school that has taught them can add them. That choice is the author's, not from a source.

At the start of lesson 1, check: can the child read rain, unlock and refill? If not, use the grade 2 term 2 unit first.

Lessons

#	Lesson	Focus
1	Check-in: vowel teams, un- and re-	Reading grade 2 patterns again; prefixes mean something
2	-ful and -less	Suffixes that mean "full of" and "without"
3	-ness, and adding more than one part	Making a describing word into a thing; helpfulness
4	Splitting long words	Prefix, base word, suffix; two-syllable words with no affix
5	Reading Hen's Flag with expression	Reading a short story several times; fixing words that don't make sense

Materials (whole class unless noted)

- Word cards (lesson lists are in each lesson), large enough to read from the back of the room
- Part cards: prefix cards (un-, re-), suffix cards (-ful, -less, -ness), and base-word cards, one set per pair (lessons 1 to 4)
- Sorting mat with two columns, "full of" and "without", and a pencil, one per pair (lesson 2; pairs write each word they build in a column, then take the cards apart)
- A soft cloth and a damp sponge (plain water) in a tray (lesson 3)
- Scissors with rounded ends, one per pair (lesson 4)
- Strips of paper with long words written on them, one set per pair (lesson 4)
- The story Hen's Flag (lesson 5 lists all 12 pages), one copy per child, in large print for any child who needs it
- Whiteboard and pens
- Mini whiteboards and pens, one per child

⚠ Safety and access

- Lesson 3: check for allergies before handing round the cloth and sponge; plain water only.
- Scissors: rounded ends; an adult can cut for any child who prefers, or children can fold and tear.
- Any child may answer by pointing, signing, using a communication aid or choosing between two spoken meanings. Their own way counts.
- Low vision: large-print cards and story; let children sit near the board.
- Blind children: braille or tactile part cards if your school has them; part cards can also be told apart by a notch or bump on each prefix card and a different one on each suffix card.
- Deaf children and children who sign: show every word in print as you say it; in lesson 5, expression can be shown with face and hands as well as voice.
- Reading aloud is never forced. A child can read to an adult alone, read with a partner, or listen and point.

- Lesson 5 mentions Hen feeling sad and hopeless. Keep it about Hen; don't ask children about their own sad times.

Assessment

One-to-one, about 3 minutes per child, during lessons 4 and 5. For each item mark **yes**, **with help** or **not yet**.

1. Read refill and unpaid and say what each means. (Outcome 1)
2. Read helpful and spotless and say what each means. (Outcome 2)
3. Read softness and use it in a spoken sentence. (Outcome 3)
4. Split unhelpful into its parts, then read it. (Outcome 4)
5. Split napkin, then read it. (Outcome 4)
6. Read page 6 of Hen's Flag twice; does the second reading sound smoother and show how Hen feels? (Outcome 5)

Sources

Common Core State Standards for English Language Arts, Reading Standards: Foundational Skills, Grade 3, page 17 of https://learning.ccsso.org/wp-content/uploads/2022/11/ELA_Standards1.pdf

Quoted exactly; the unit is not a full alignment.

- RF.3.3: "Know and apply grade-level phonics and word analysis skills in decoding words."
  - RF.3.3a: "Identify and know the meaning of the most common prefixes and derivational suffixes."
  - RF.3.3c: "Decode multisyllable words."
- RF.3.4: "Read with sufficient accuracy and fluency to support comprehension."
  - RF.3.4a: "Read grade-level text with purpose and understanding."
  - RF.3.4b: "Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings" (no full stop in the source's grade 3 column)
  - RF.3.4c: "Use context to confirm or self-correct word recognition and understanding, rereading as necessary."

The story Hen's Flag, the word lists and the meanings given for each prefix and suffix are the author's, not from a source.

Known gaps and cautions

- Unreviewed AI draft; not tested in a classroom.
- Three other agents (Gemini 4 Argon, Gemini 3.8 Flash and Gemini 4 Carbon, all at 21c718c) text-checked this unit on 2026-11-11. Argon and Gemini 3.8 Flash reported no errors. Carbon found three: by in the story was not a taught word, bold uses a long-o pattern not yet taught, and one suffix card per pair could not cover the sort. All three were fixed in edec025; Carbon and Argon re-checked the fixes the same day. Those are text checks by AI agents, not a teacher review or classroom test.
- RF.3.3b ("Decode words with common Latin suffixes.") and RF.3.3d ("Read grade-appropriate irregularly spelled words.") are left for term 2, as the grade 3 year plan says. This unit does not teach them.

- Word lists are kept to letters and patterns taught in earlier units, so they leave out many common words (see Prior knowledge). Real grade 3 classes have usually met far more patterns.
- Suffix meanings are given with "usually"; some words don't follow them.
- The year plan mentions "short chapter books"; this unit uses one 12-page original story instead, because no chapter book fits the taught letters.
- No poetry is read, although RF.3.4b names it.

Lesson 1: Check-in: Vowel Teams, un- and re-

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children read grade 2 vowel-team words again, and read words with **un-** and **re-**, saying what each one means.

Materials

- Word cards: rain, feet, boat, play, night, low, moon
- Word cards: lock, unlock, pack, unpack, safe, unsafe, paid, unpaid, seen, unseen
- Word cards: fill, refill, paint, repaint, tell, retell, play, replay, use, reuse
- Part cards un- and re-, and base-word cards lock, pack, safe, fill, paint, tell, one set per pair
- Whiteboard and pens; mini whiteboards and pens, one per child

Steps

✎ Opening (5 min)

Hold up the vowel-team cards one at a time: rain, feet, boat, play, night, low, moon. The class reads each one together. Note any child who hesitates; they get extra time in the main activity.

✎ Main activity (25 min)

1. **Un- means "not"** (7 min): show lock, then put the un- card in front: unlock. "What does it mean?" To open the lock; the opposite of lock. Do the same with pack/unpack, safe/unsafe, paid/unpaid, seen/unseen. Write on the board: "un- usually means not, or the opposite."
2. **Re- means "again"** (7 min): show fill, then put re- in front: refill. "What does it mean?" Fill it again. Do the same with paint/repaint, tell/retell, play/replay, use/reuse. Write: "re- usually means again."
3. **Pairs build words** (8 min): each pair has the part cards un- and re- and the base-word cards. One child builds a word; the other reads it and says what it means. Swap. Ask them to find a word that does not make sense (relock is a real word; unpaint is not one we use). Talk about it: not every part goes with every word.
4. **Write one** (3 min): each child writes one un- word and one re- word on a mini whiteboard and holds it up.

✓ Discussion questions (5 min)

- "What does unsafe mean?" Not safe.

- "What does retell mean?" Tell it again.
- "If you repaint a fence, was it painted before?" Yes; re- means again.

✓ Closing check (5 min)

Show unpack and replay. Each child reads them to a partner and says what they mean.

Answers: unpack: take things out, the opposite of pack. replay: play it again.

Vocabulary

prefix, base word, un-, re-, meaning

Differentiation

- **Support:** work with only un- first; read the base word before adding the prefix.
- **Stretch:** find a word where re- does not mean "again" (for example red: the re there is not a prefix).
- **Tactile:** use part cards with a notch on the prefix cards so children can feel which piece goes at the front.

⚠ Safety

No special risks. Make sure word cards are big enough to read without leaning over others.

Teacher notes and misconceptions

- Children sometimes think any word starting with re or un has a prefix (red, under). The test: take the part off; is what is left a real word with a linked meaning?
- Un- can mean "not" (unsafe) or "do the opposite" (unlock). Both count.
- The word list uses only letters and patterns from earlier units, so it leaves out common words such as unhappy (final y) and rewrite (silent w).

Lesson 2: -ful and -less

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 40 minutes.

Goal

Children read words ending in **-ful** and **-less** and say what they mean.

Materials

- Word cards: help, helpful, helpless; hope, hopeful, hopeless; use, useful, useless; pain, painful, painless; rest, restful; play, playful; end, endless; spot, spotless; sleep, sleepless
- Part cards -ful and -less, and base-word cards help, hope, use, pain, rest, play, end, spot, sleep, one set per pair
- Sorting mat with two columns, "full of" and "without", one per pair (a sheet of paper folded in half works; an adult reads the headings with the class, since of and without use letters not yet taught), and a pencil, one per pair
- Whiteboard and pens; mini whiteboards and pens, one per child

Steps

✎ Opening (5 min)

Quick review: show unlock, refill and unseen. Children read each one and say what it means. Then: "Today the part goes at the end."

✎ Main activity (25 min)

1. **-ful means "full of"** (7 min): show help, then add -ful: helpful. "Full of help." Do the same with hope/hopeful, use/useful, rest/restful, play/playful. Point out that -ful has one l at the end. Write on the board: "-ful usually means full of."
2. **-less means "without"** (7 min): show help, then add -less: helpless. "Without help." Do the same with hope/hopeless, use/useless, end/endless, spot/spotless, sleep/sleepless. Write: "-less usually means without."
3. **Same base, two endings** (4 min): put hopeful and hopeless side by side. "Are these the same or opposite?" Opposite. Do the same with useful/useless and painful/painless.
4. **Pairs sort** (7 min): pairs build a word from a base-word card and a part card, read it, and write it in the "full of" or "without" column of the mat. Then they take the cards apart and build the next word. They say each meaning out loud.

✓ Discussion questions (5 min)

- "A spotless plate: does it have spots?" No; it is without spots, very clean.
- "A restful day: is it busy or calm?" Calm; full of rest.

- "Is endless rain good news for a picnic?" No; it seems to go on without an end.

✓ Closing check (5 min)

Show painless and playful. Each child writes F (full of) or W (without) for each on a mini whiteboard, then reads the word to a partner.

Answers: painless: W, without pain. playful: F, full of play.

Vocabulary

suffix, -ful, -less, opposite, meaning

Differentiation

- **Support:** start with three pairs only (helpful/helpless, hopeful/hopeless, useful/useless); cover the suffix, read the base word, then uncover it.
- **Stretch:** make a spoken sentence with both words in a pair: "The map was useful, but the old one was useless."
- **Tactile:** use part cards with a notch on the suffix cards, different from the prefix notch, so children can feel which piece goes at the end.

⚠ Safety

No special risks. Talk about painful and sleepless lightly, as words; don't ask children about their own pain or sleep.

Teacher notes and misconceptions

- Children may spell -ful as full. The suffix has one l.
- Hope + -ful keeps the e: hopeful. The same is true of use/useful/useless. The base word does not change in any word this lesson uses.
- Not every -ful word means "full of" in a literal way (playful means liking to play). "Usually" is the honest word.

Lesson 3: -ness, and Adding More Than One Part

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 40 minutes.

Goal

Children read words ending in **-ness**, use one in a spoken sentence, and read words with two suffixes, such as helpfulness.

Materials

- Word cards: sad, sadness; red, redness; wet, wetness; soft, softness; still, stillness; dim, dimness; fit, fitness; damp, dampness; late, lateness
- Word cards: helpfulness, playfulness, usefulness, hopelessness, restlessness
- Part cards -ful, -less and -ness, and base-word cards sad, soft, still, help, play, use, hope, rest, one set per pair
- The un- part card from lesson 1, one per pair (for the stretch task)
- A soft cloth and a damp sponge in a tray (for the opening)
- Whiteboard and pens; mini whiteboards and pens, one per child

Steps

✎ Opening (5 min)

Pass the soft cloth and the damp sponge round in the tray (children can touch or just look). "The cloth is soft. Its softness is how soft it is. The sponge is damp. Its dampness is how damp it is." Write soft and softness on the board, and underline -ness.

✎ Main activity (25 min)

1. **-ness makes a thing** (8 min): show sad, then add -ness: sadness. "Sad is how Hen feels. Sadness is the feeling itself." Read redness, wetness, stillness, dimness, fitness, dampness and lateness the same way: base word first, then the whole word. Write: "-ness usually turns a describing word into a thing."
2. **Say it in a sentence** (5 min): pairs choose two -ness words and say a sentence with each to each other: "The stillness of the pond..." Share three with the class.
3. **Two parts at the end** (7 min): build help + -ful + -ness with the part cards: helpfulness. Read it in three parts, then as one word. "Full of help... the thing of being full of help." Do the same with playfulness, usefulness, then hope + -less + -ness (hopelessness) and rest + -less + -ness (restlessness).
4. **Pairs build** (5 min): pairs use their part cards to build as many real words as they can from one base word (for example help, helpful, helpless, helpfulness), and read each one.

✓ Discussion questions (5 min)

- "What is wetness?" How wet something is.
- "In helpfulness, which part comes first, -ful or -ness?" -ful, then -ness.
- "Is sadness a describing word or a thing?" A thing (a feeling).

✓ Closing check (5 min)

Each child reads dimness and usefulness to a partner, then splits usefulness into parts on a mini whiteboard.

Answers: dim + ness; use + ful + ness.

Vocabulary

suffix, -ness, describing word, base word

Differentiation

- **Support:** stay with one-suffix words (sadness, softness); cover the suffix, read, uncover.
- **Stretch:** build a word with three added parts from the cards: is there one? (unhelpfulness: un- + help + -ful + -ness.) The un- card from lesson 1 can be added to the set.
- **Tactile:** feel the cloth and sponge; use notched part cards.

⚠ Safety

- Check for allergies before handing round the cloth and sponge; use plain water only in the sponge.
- Sadness and hopelessness are taught as words about story characters. Don't ask children about their own sad times.

Teacher notes and misconceptions

- In sadness, -ness follows a word ending in d, so no letter doubles. Children may write sadnes; -ness always has two s letters.
- Lateness keeps the magic e of late. No base word in this lesson changes its spelling.
- Children may read hopelessness as one long run of letters. Splitting at each part first is the whole point of the lesson.

Lesson 4: Splitting Long Words

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 40 minutes.

Goal

Children split a word of two or three parts into its parts, read each part, then read the whole word. They also split two-syllable words that have no prefix or suffix.

Materials

- Paper strips with these words written large, one set per pair: unhelpful, repainted, unlocking, refilled, hopelessness, playfulness, unpacked, spotless
- Paper strips with these words, one set per pair: napkin, basket, picnic, magnet, rabbit, kitten
- Scissors with rounded ends, one per pair
- Whiteboard and pens; mini whiteboards and pens, one per child

Steps

✎ Opening (5 min)

Write unhelpful on the board. "This looks long. Who can see a part we know?" Draw a line after un and before ful: un | help | ful. Read each part, then the whole word. "Not full of help."

✎ Main activity (25 min)

1. **Find the parts** (6 min): with the class, split repainted (re | paint | ed) and hopelessness (hope | less | ness) on the board. Steps every time: find a prefix at the front, find suffixes at the end, read what is left (the base word), then put it all together.
2. **Cut and read** (8 min): pairs take the first set of strips. One child says where to cut; the other cuts (or folds and tears). They read each part, then push the parts together and read the whole word. Then they say what it means.
3. **Words with no prefix or suffix** (6 min): show napkin. "No prefix, no suffix, but still long." Split it between the two middle consonants: nap | kin. Read each part, then the whole word. Do the same with basket (bas | ket), picnic (pic | nic) and magnet (mag | net). For rabbit and kitten, split between the double letters: rab | bit, kit | ten.
4. **Pairs cut the second set** (5 min): pairs split the second set of strips the same way and read them to each other.

✓ Discussion questions (5 min)

- "What is the base word in unlocking?" lock.
- "How many parts does playfulness have?" Three: play, ful, ness.

- "Where do we split basket?" Between s and k: bas | ket.

✓ Closing check (5 min)

Each child splits refilled and magnet on a mini whiteboard with lines, then reads both words to a partner. One-to-one assessment (see the unit overview) can start now, with an adult working with a few children while others finish.

Answers: re | fill | ed; mag | net.

Vocabulary

prefix, suffix, base word, split, syllable

Differentiation

- **Support:** give strips with the split already marked in pencil; the child cuts on the line and reads.
- **Stretch:** write a long word for a partner to split, using part cards from earlier lessons.
- **Tactile:** fold and tear instead of cutting; feel the separate pieces before pushing them back together.

⚠ Safety

- Rounded-end scissors only. Children who don't want to cut can fold and tear, or an adult can cut.
- Collect scissors before the discussion.

Teacher notes and misconceptions

- Refilled has a double l because fill already ends in ll; nothing is added. Children may think the -ed doubled it.
- -ed sounds different in different words: /d/ in refilled, /t/ in unpacked, and an extra beat, /id/, in repainted. Splitting it off as a part still works for all three.
- "Split between two middle consonants" is a useful first try, not a rule that always works. It works for every word in this lesson.

Lesson 5: Reading Hen's Flag with Expression

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

Children read a short story several times, getting smoother each time and using their voice to show how the characters feel. They notice when a word does not make sense and read the sentence again to fix it.

Materials

- The story Hen's Flag (below), one copy per child, in large print for any child who needs it
- Word cards: endless, useless, hopeless, sadness, helpful, repainted, spotless, hopeful
- Whiteboard and pens

Steps

✎ Opening (5 min)

Show the word cards one at a time. Children split each one into parts in their heads, then read it: end-less, use-less, hope-less, sad-ness, help-ful, re-paint-ed, spot-less, hope-ful. "All of these are in today's story."

✎ Main activity (25 min)

1. **First read: listen and follow** (6 min): read the whole story aloud while children follow with a finger. Read it with feeling: long and slow for the endless rain on page 3, cross on page 5, sad on page 6, bright on page 7.
2. **Second read: pairs** (6 min): pairs read it together, one page each, helping each other split long words into parts.
3. **Third read: voices** (7 min): look at the speech marks. "Who is talking on page 6? How does Hen feel?" Sad, hopeless. "So how should Hen's voice sound?" Slow, quiet. "Page 7: how does Duck sound?" Bright, kind. Point out that **?** makes the voice go up and **!** makes it strong. Pairs read pages 5 to 8 again, using voices. Children who sign can show the feelings with face and hands.
4. **Does it make sense?** (6 min): read page 9 aloud with one word swapped: "Hen got red pain and repainted it." Children put up a hand when something sounds wrong. "What should it be?" Paint. "How did you know?" You can't repaint with pain; reading the sentence again shows paint fits. Do two more: page 10, "Duck held the flag up in the sand" (sun), and page 11, "the flag was spotted" (spotless: the paint was fixed).

✓ Discussion questions (5 min)

- "Why did Hen feel hopeless?" The rain made the red paint run, so the flag was useless.
- "How did Duck help?" Duck held the flag while Hen repainted it, then held it up in the sun.
- "How did Hen feel at the end?" Hopeful.

✓ Closing check (5 min)

Each child reads page 6 to a partner (or an adult) twice. The partner says one thing that got better the second time. One-to-one assessment item 6 (see the unit overview) uses this same page.

Answer: any honest improvement counts: smoother, fewer stops, more feeling in Hen's voice.

The story: Hen's Flag

An example written for this unit, not from a source. Every word uses letters and patterns taught in earlier units, plus the tricky words I, the, said, was and to.

1. Hen had a big red flag. It said "Hen's Buns".
2. Hen kept the flag up at a bun stand on a hill.
3. In the night, rain fell and fell. It felt endless.
4. At sunrise, Hen got up and ran up to the stand.
5. The flag was wet, and the red paint had run. It was useless!
6. "I am hopeless at painting," said Hen. Hen sat on a step in sadness.
7. Duck came up to Hen. "Hopeless? Not a bit!" said Duck.
8. "Let us repaint it. I am a helpful duck."
9. Duck held the flag. Hen got red paint and repainted it, a bit at a time.
10. Duck held the flag up in the sun.
11. At last the flag was spotless. "Hen's Buns!" It was big and bright.
12. Hen got a hot bun and handed it to Duck. "I am not hopeless," said Hen. "I am hopeful!"

Vocabulary

expression, speech marks, question mark, exclamation mark, reread

Differentiation

- **Support:** read the story with an adult first, or echo-read: the adult reads a page, the child reads it back.
- **Stretch:** read the whole story to a younger class, or read Duck's lines in a pair with one child as Hen and one as Duck.
- **Tactile and low vision:** large-print or braille copy if your school has one; any child can follow by listening instead.

⚠ Safety

- Reading aloud is never forced; a child can read to an adult alone or listen and point.
- Keep the sadness and hopelessness about Hen. Don't ask children about their own sad times.

Teacher notes and misconceptions

- Fast is not the same as fluent. Reading at a talking pace, with feeling, is the goal, not racing.
- Children may read Hen's as hens. The small mark means the buns belong to Hen, as with Duck's in grade 2.
- The year plan mentions "short chapter books"; this unit uses one short original story because no chapter book fits the taught letters. Schools that have taught more patterns can use a real chapter book.

Grade 3 Language and Literacy: Longer Words and Short Reports

Subject: English language and literacy | Grade: 3 | Lessons: 5 | Time: about 40 minutes each | Term: 2

Status: written (unreviewed) | Author: Claude Opus 5.5, AI Village

> **Unreviewed AI draft:** no educator review or classroom testing. Not an official standards alignment, a complete reading program, or a diagnostic instrument. Adapt to students and local practice. Check every activity against your school's rules.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on grade 3 term 1: words built from parts; grade 2: writing for a reason Language and literacy progression

Big idea

Long words are easier when you know their parts. Some endings change what kind of word it is: pay is something you do, but a payment is a thing. Some endings are not said the way they look: -tion is said "shun". Some short, common words are tricky because a part of them does not follow the rules, so we learn that part by heart. Writers use what they know to tell a reader about a topic: a short report says what the topic is, puts facts that belong together in groups, adds a picture where it helps, and finishes with a sentence that sums up.

Outcomes

By the end of the unit, most children can:

1. Read words ending in **-ment** and **-able** (payment, agreement, bendable, refillable) and say what they mean.
2. Read words ending in **-tion** (action, collection, subtraction), knowing that the ending is said "shun" even though it is not spelled that way.
3. Read eight tricky words (of, do, two, one, some, come, could, would) and point to the part of each that does not follow the rules.
4. Plan a short report about measuring the weather: choose facts that are about the topic, put them in two groups under headings, and draw a picture with labels.
5. Write the report with an opening sentence, the two groups of facts joined with linking words (also, another, and, more, but), and a concluding sentence, then read it to a partner.

Prior knowledge

The written units before this one teach the letters **s a t i p n m o d g c k e u y h w r l f b**; magic e; the vowel teams **ee**, **ai**, **oa**, **ay**, **igh**, **ow** (as in low) and **oo**; the endings **-s**, **-ing** and **-ed**; the prefixes **un-** and **re-**; the suffixes **-ful**, **-less** and **-ness**; compound words; and the tricky words I, the, is, my, said, was and to.

This unit adds the suffixes **-ment**, **-able** and **-tion** and eight tricky words. Every word children are asked to decode in lessons 1 to 3 uses only those letters and patterns. The fact cards, the model report and the word bank in lessons 4 and 5 use words with patterns the earlier units do not teach (for example weather, thermometer, another); the teacher reads them aloud first, and children copy them from the word bank rather than decode them. Many common grade 3 words use patterns the earlier units do not teach (for example **sh**, **ch**, **th**, **ar**, **er** and final **y**). A school that has taught them can add more words.

The report is about the weather, so it fits best while the class is doing the grade 3 science unit Weather over a season (term 2). The model report is about magnets, from the term 1 science unit Magnets.

At the start of lesson 1, check: can the child read helpful, unlock and softness? If not, use the term 1 unit first.

Lessons

#	Lesson	Focus
1	-ment and -able	Suffixes that make a thing (payment) and mean "can be" (bendable)
2	-tion: an ending said "shun"	act and action; splitting three-part words
3	Tricky words	Eight common words with a part to learn by heart
4	Planning a short report	Reading a model report; sorting fact cards into two groups; a labelled picture
5	Writing and sharing the report	Opening sentence, two groups, linking words, concluding sentence; reading to a partner

Materials (whole class unless noted)

- Word cards (lesson lists are in each lesson), large enough to read from the back of the room (lessons 1 to 3)
- Part cards, one set per pair (lesson 1): base-word cards pay, state, agree, content, play, print, bend, refill, lock, stack, and one suffix card each for -ment and -able
- Sorting mat with two columns, "a thing" and "can be done", and a pencil, one per pair (lesson 1; pairs write each word they build in a column, then take the cards apart)
- Word strips with the twelve -tion words from lesson 2, one set per pair, and a pencil and a coloured pencil per pair (lesson 2)
- Tricky-word cards (the eight words), one large set for the board and one small set per pair, and a coloured pencil per pair (lesson 3; the large some, could and two cards are used again in lesson 4)
- Sentence strips (the six sentences in lesson 3), one set per pair (lesson 3)
- The model report Magnets (lesson 4 gives the full text), on a large sheet or the board (lessons 4 and 5)
- Fact cards (the twelve cards in lesson 4), one set per pair (lessons 4 and 5)
- Planning sheet, one per child (lessons 4 and 5): a title line, two heading boxes with three lines each, and a picture box
- Word bank sheet, one per child (lessons 4 and 5; the list is in lesson 4)
- Lined paper, one or two sheets per child (lesson 5)
- Report checklist card, one per child (lesson 5; the five checks are in lesson 5)
- Pencils and coloured pencils, one each per child (lessons 4 and 5)

- Whiteboard and pens
- Mini whiteboards and pens, one per child (lessons 1 to 3)

⚠ Safety and access

- No scissors, food or liquids are used in this unit.
- Any child may answer by pointing, signing, using a communication aid or choosing between two spoken meanings. Their own way counts.
- Writing: a child can dictate the report to an adult, type it, build it from cut-out word bank words or record it. The thinking (choosing and grouping facts, linking them, summing up) is what counts, not handwriting.
- Low vision: large-print cards, strips and report sheets; let children sit near the board.
- Blind children: braille or tactile cards if your school has them; suffix cards can be told apart by a notch on -ment and two notches on -able. The picture in the report can be a tactile picture (string, card shapes) with braille or spoken labels.
- Deaf children and children who sign: show every word in print as you say it. "Said 'shun'" in lesson 2 means the same ending every time; show it with the written part and a sign or gesture the class agrees on.
- Reading aloud is never forced. A child can read to an adult alone, read with a partner, or listen and point.
- Storms: the fact cards mention a storm once. Keep it about what the weather is; if a child is worried about storms, they can leave that card out.
- Children write about the class's weather and the fact cards, not about their own homes or families.

Assessment

One-to-one, about 3 minutes per child, during lessons 4 and 5, plus a look at each child's finished report. For each item mark **yes**, **with help** or **not yet**.

1. Read payment and bendable and say what each means. (Outcome 1)
2. Read collection and subtraction; point to the part that is said "shun". (Outcome 2)
3. Read could, two and some; point to the tricky part of one of them. (Outcome 3)
4. Shown four fact cards (two about weather tools, one about a kind of weather, one about magnets), put the two tool cards under the heading "Tools" and say which card is not about the weather. (Outcome 4)
5. In the finished report: is there an opening sentence that says the topic, and a concluding sentence? (Outcome 5)
6. In the finished report: are there two groups of facts under headings, at least one linking word, and a picture with at least two labels? (Outcomes 4 and 5)

Sources

Common Core State Standards for English Language Arts, Grade 3: Reading Standards: Foundational Skills (page 17) and Writing Standards (page 20) of https://learning.ccsso.org/wp-content/uploads/2022/11/ELA_Standards1.pdf

Quoted exactly; the unit is not a full alignment.

- RF.3.3: "Know and apply grade-level phonics and word analysis skills in decoding words."
  - RF.3.3a: "Identify and know the meaning of the most common prefixes and derivational suffixes."
  - RF.3.3b: "Decode words with common Latin suffixes."
  - RF.3.3c: "Decode multisyllable words."
  - RF.3.3d: "Read grade-appropriate irregularly spelled words."
- W.3.2: "Write informative/explanatory texts to examine a topic and convey ideas and information clearly."
  - W.3.2a: "Introduce a topic and group related information together; include illustrations when useful to aiding comprehension."
  - W.3.2b: "Develop the topic with facts, definitions, and details."
  - W.3.2c: "Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information."
  - W.3.2d: "Provide a concluding statement or section."

Wikipedia, "English orthography": https://en.wikipedia.org/wiki/English_orthography

- It says that in English "there is not a one-to-one correspondence between letters and sounds", and gives could as one of nine ways the letters **ou** can be said. Lesson 3 uses that idea.

Wikipedia, "Morphological derivation": https://en.wikipedia.org/wiki/Morphological_derivation

- It lists "-ful, -able, im-, un-, -ing, -er" as examples of derivational morphemes in English, and says a derivational suffix can change a word into a different part of speech. Lesson 1 uses that idea (pay to payment).

The model report, the fact cards, the word lists, the meanings given for each suffix and the choice of tricky words are the author's, not from a source.

Known gaps and cautions

- Unreviewed AI draft; not tested in a classroom.
- Four other agents (Gemini 3.5 Flash and Gemini 3.8 Flash at 783e0dd, Gemini 4 Carbon at 783e0dd/5010efc, Gemini 4 Argon at b6fa3dc) text-checked this unit on 2026-11-12 and reported no errors; Carbon made one optional note about a lesson 1 example, now changed. Those are text checks by AI agents, not teacher reviews or classroom tests.
- Which suffixes count as "common Latin suffixes" (RF.3.3b) is the author's choice: this unit uses -ment, -able and -tion. The standard gives no list.
- Suffix meanings are given with "usually"; some words don't follow them (comment and table end in the same letters but are not a base word plus a suffix).
- -tion is said "shun" in most kinds of English, but not exactly the same everywhere. Use the way your class says it.
- The spelling changes when some suffixes are added (dropping the e in usable, changing y to i) are not taught. Every word in lesson 1 keeps its base word whole.
- The tricky-word list is the author's choice of eight common words. Your school may have its own list and order.
- The fact cards, model report and word bank use patterns not yet taught (see Prior knowledge). Children hear them read aloud first and copy them; spelling of those words is not marked.

- The report has two groups of facts. W.3.2 does not say how many; a school could add a third group.
- Lesson 3 uses a "find the tricky part and learn it by heart" method, often called "heart words". That is a teaching choice, not something the standards require.
- Addition is add + i + -tion; lesson 2 says this plainly rather than teaching a rule. -tion words with a long vowel before the ending (nation, motion) are left for later.
- The lesson 3 stretch task uses should, which needs **sh** (not taught in the earlier units); it is read to children who are not ready.
- RF.3.4 (fluency) is not a focus of this unit, although children read their reports aloud.
- No poetry is read.

Lesson 1: -ment and -able

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children read words ending in **-ment** and **-able** and say what they mean. They learn that **-ment** usually turns a word into a thing or an idea (pay, payment), and **-able** usually means "can be" (bendable means "can be bent").

Materials

- Word cards: helpful, unlock, softness (opening); payment, statement, agreement, contentment, playable, printable, bendable, stackable, lockable, refillable; comment
- Part cards, one set per pair: base-word cards pay, state, agree, content, play, print, bend, refill, lock, stack, and one suffix card each for -ment and -able
- Sorting mat with two columns, "a thing" and "can be done", and a pencil, one per pair
- Whiteboard and pens
- Mini whiteboards and pens, one per child

Steps

✎ Opening (5 min)

1. Show helpful, unlock and softness. The class reads each one, then says the parts: help-ful, un-lock, soft-ness.
2. Ask: "What does -ful do to help?" (It makes it mean "full of help".) "What does un- do to lock?" (It makes it mean the opposite: open it.)
3. Say: "Today we meet two more endings. They change what kind of word it is."

✎ Main activity (25 min)

1. **Meet -ment (6 min).** Write pay on the board. "Pay is something you do: you pay for a bus ticket." Add **-ment**: payment. "A payment is a thing: the money you pay." Do the same with state to statement (a thing you say or write), agree to agreement (a thing two people agree on) and content to contentment (content means happy with what you have; contentment is that feeling). Write the rule on the board: **-ment usually makes a word into a thing or an idea.** Children read all four words from the cards, first the parts, then the whole word.
2. **Meet -able (6 min).** Hold up a word card with bend. "You can bend a straw. A straw is bendable: it can be bent." Write the rule: **-able usually means "can be".** Read playable (can be played), printable (can be printed), stackable (can be stacked, one on top of another), lockable (can be locked) and refillable (can be filled again: re-fill-able, three parts). Children say the meaning each time with "can be": "Lockable means it can be locked."

3. **Build and sort in pairs (9 min).** Give each pair the part cards and a sorting mat. One child chooses a base word and a suffix card, builds a word and reads it. The partner says what it means. If it is a real word from today, they write it in the right column ("a thing" for -ment words, "can be done" for -able words), then take the cards apart and swap jobs. Not every base word goes with both endings: payable is a real word, but bendment is not. If a pair builds a word they are not sure about, they put it to one side to ask about.
4. **One sentence each (4 min).** On mini whiteboards, each child writes one sentence using a word from their mat, for example My bag is lockable. or Ted made an agreement. Two or three children read theirs aloud.

✓ Discussion questions (5 min)

- "Is comment the word com with -ment added?" (No. Com is not a word on its own. Comment just ends in the same letters. Not every word ending in **-ment** has a suffix.)
- "What could unbendable mean?" (Cannot be bent: un-bend-able, three parts.)
- "Is a payment something you do, or a thing?" (A thing. Pay is what you do.)

✓ Closing check (5 min)

Children answer on mini whiteboards, by pointing to a word card, or by saying it.

1. Show statement. "Read it. Is it a thing, or something that can be done?" (A thing: something you say or write.)
2. Show stackable. "Read it. What does it mean?" (It can be stacked.)
3. "Which word means 'can be printed': printable or payment?" (printable)
4. "Split refillable into its parts." (re-fill-able)

Vocabulary

suffix, base word, -ment, -able, payment, statement, agreement, contentment, playable, printable, bendable, stackable, lockable, refillable

Differentiation

- **Support:** work with the four -ment words first, then the -able words. Keep the two rules on the board, each with a small picture (a coin for payment, a bending straw for bendable).
- **Stretch:** build three-part words (re-fill-able, un-bend-able, un-lock-able) and say what each means. Unlockable is tricky: it can mean "cannot be locked" or "can be unlocked". Talk about how the sentence tells you which.
- **Tactile:** suffix cards with a notch on -ment and two notches on -able, so a child can feel which ending they are holding.

⚠ Safety

- No special hazards. Keep part cards on the table.

Teacher notes and misconceptions

- Some children read -ment as "meant". Model it as one short beat: pay-ment.
- Contentment uses content as in "happy with what you have", said with the stress at the end. Children may know content as in "the content of a box". You can leave contentment out if it confuses.
- **-able** words in this lesson keep the base word whole. Words that drop an **e** (usable) are left for later.
- Rules here use "usually". Children who find a word that breaks a rule have spotted something real; praise it.

Lesson 2: -tion: an ending said "shun"

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 40 minutes.

Goal

Children read words ending in **-tion**. They learn that **-tion** is said "shun", even though it is not spelled that way, and that many **-tion** words are built from a word they know (act, action). They split longer words into parts to read them.

Materials

- Word cards: payment, bendable (opening); act, action, collect, collection, connect, connection, inspect, inspection, subtract, subtraction, add, addition; fiction, section, function, fraction, mention, intention
- Word strips with the twelve -tion words, one set per pair: action, collection, connection, inspection, subtraction, addition, fiction, section, function, fraction, mention, intention
- A pencil and a coloured pencil, one each per pair
- Whiteboard and pens
- Mini whiteboards and pens, one per child

Steps

✎ Opening (5 min)

1. Show payment and bendable. Children read them and say what they mean. (A thing you pay; can be bent.)
2. Say: "Today's ending is a bit of a trick. It is not said the way it looks."

✎ Main activity (25 min)

1. **Meet -tion (6 min).** Write act on the board. "To act is to do something." Add **-ion**, so the word ends in **-tion**: action. Read it: ac-tion. "The end is said 'shun'. The letters **t-i** do not say /t/ /i/ here; together with **-on** they say 'shun'." Write the rule on the board: **-tion is said "shun".** Do the same with collect to collection and connect to connection. Children read each pair from the cards: first the base word, then the long word.
2. **Base word and -tion (6 min).** Show inspect and inspection, subtract and subtraction, then add and addition. "Addition is a bit different: it is add, then i, then tion: ad-di-tion." Children say the meaning of each: an action is something done; a collection is things collected; a connection is where things join; an inspection is a careful look; a subtraction is a take-away sum; an addition is an adding sum.

3. **Mark and split in pairs (9 min).** Give each pair the twelve word strips, a pencil and a coloured pencil. For each strip, one child reads it, the partner checks, then they:
    - colour the letters **t-i** with the coloured pencil, to show where "shun" starts;
    - draw a pencil line between the parts, as in sub | trac | tion or ac | tion.

    The six words without a base word on the board (fiction, section, function, fraction, mention, intention) are read the same way: split, then read each part. Lines may fall in slightly different places; any split that helps the child read the word is fine.
4. **Sort the words (4 min).** On mini whiteboards, children write two lists: words with a base word they know (action, collection, connection, inspection, subtraction, addition) and words without one. If a child gives a good reason for moving a word, accept it.

✓ Discussion questions (5 min)

- "What is the same in all twelve words?" (They all end in **-tion**, said "shun".)
- "Fiction is a kind of book. What kind?" (Made-up stories, not facts.) "Next week we write facts, not fiction."
- "How many parts are in subtraction?" (Three: sub-trac-tion.)

✓ Closing check (5 min)

Children answer on mini whiteboards, by pointing to a word card, or by saying it.

1. Show collection. "Read it. Point to where 'shun' starts." (collection; the **t-i**.)
2. "What word is connect with **-ion** added?" (connection)
3. Show subtraction. "Read it and split it into parts." (sub-trac-tion)
4. Show mention. "Read it." (mention)

Vocabulary

-tion, base word, part, action, collection, connection, inspection, subtraction, addition, fiction, section, function, fraction, mention, intention

Differentiation

- **Support:** work with the six word pairs first (act and action and so on), covering the end of the long word and then showing it. Use the base word to read the start of the long word.
- **Stretch:** find which base words take both **-tion** and an ending from lesson 1 or the term 1 unit (connect, connection, connected; collect, collection, collectable) and write a sentence using two of them.
- **Tactile:** word strips with a raised line or a fold between the parts, so a child can feel the parts before reading.

⚠ Safety

- No special hazards. Children draw lines on the strips; nothing is cut.

Teacher notes and misconceptions

- Some children read **-tion** as "tee-on" or "tie-on". Point to the coloured **t-i** each time and say "shun".
- The words in this lesson have a short vowel before **-tion** (ac-tion, sec-tion, fic-tion), so the earlier letters read as taught. Words like nation and motion have a long vowel before **-tion** and are left for later.
- Addition has an extra i between add and -tion; say this plainly rather than making a rule.
- Function and intention may be new words for some children. Give a short meaning (a function is a job something does; an intention is what you mean to do) and do not test them on meanings.
- The lesson uses only **-tion**. Other endings said "shun" or "zhun" (-sion in mansion and vision) are left for a later year.

Lesson 3: Tricky words

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 40 minutes.

Goal

Children read eight common words that have a part that does not follow the rules: of, do, two, one, some, come, could and would. For each word, they sound out the parts that do follow the rules and learn the tricky part by heart.

Materials

- Word cards: action, subtraction (opening); said, was (review)
- Tricky-word cards (of, do, two, one, some, come, could, would): one large set for the board and one small set per pair
- A coloured pencil, one per pair
- Sentence strips, one set of six per pair (the sentences are in step 3 below)
- Whiteboard and pens
- Mini whiteboards and pens, one per child

Steps

✎ Opening (5 min)

1. Show action and subtraction. Children read them and point to where "shun" starts.
2. Show said and was, two tricky words from earlier years. "Which part of said is tricky?" (The **ai** says /e/, not /ay/.) "Which part of was?" (The **a** does not say /a/ as in cat, and the **s** says /z/.)
3. Say: "Today we learn eight more tricky words. Most of each word follows the rules. We find the tricky part and learn just that bit by heart."

✎ Main activity (25 min)

1. **Find the tricky part (10 min).** Take the large cards one at a time. For each word, say it, sound the letters that follow the rules, and ask the class which part does not. Draw a heart above the tricky part on the board.
    - of: the **o** says /u/ and the **f** says /v/.
    - do: the **o** says /oo/.
    - two: the **w** is silent and the **o** says /oo/. Two means the number 2.
    - one: the whole word is said "wun". One means the number 1.
    - some and come: the **o** says /u/, and the **e** at the end does not make the **o** long. They look like magic e words, but they are not.
    - could and would: the **oul** says /oo/ as in good; the **l** is silent. They rhyme.

2. **Mark the hearts in pairs (6 min).** Give each pair the small set of cards and a coloured pencil. One child reads a card, the partner checks against the board, then they draw a small heart above the tricky part with the coloured pencil. They swap after each card.

3. **Read the sentence strips (6 min).** Give each pair the six sentence strips. Partners take turns to read a strip aloud. All the other words in the strips use only letters and patterns the class has been taught.

    1. Can I get one of the red pens?
    2. Some cats come to the mill.
    3. Two dogs ran to the pond.
    4. Would Ted like to do the test?
    5. I could not get up the hill.
    6. "Come in!" said Meg.

4. **Write them (3 min).** On mini whiteboards, the teacher says three words (two, some, could). Children write each one, then check it against the card and put a heart over the tricky part.

✓ Discussion questions (5 min)

- "Which two words rhyme and are spelled almost the same?" (could and would)
- "Some and come end in **e**. Why don't they say sohm and cohm?" (They are tricky words; the **e** does not change the **o** here. We learn them by heart.)
- "Two and to sound the same. How do you know which one to write?" (Two is the number 2; to is as in ran to the pond.)

✓ Closing check (5 min)

Children answer on mini whiteboards, by pointing to a card, or by saying it.

1. Show could. "Read it. Which letter is silent?" (The **l**.)
2. Show of. "Read it. Which letter says /v/?" (The **f**.)
3. "Write the word that means the number 2." (two)
4. Show one and come. "Read them." (one, come)

Vocabulary

tricky word, tricky part, by heart, silent letter, of, do, two, one, some, come, could, would

Differentiation

- **Support:** learn four words first (of, do, two, one), then the other four in a later session. Keep the large cards with hearts on the wall.
- **Stretch:** find should, which follows the same pattern as could and would, and say what is different at the start (**sh**). Write a sentence using could and would.
- **Tactile:** tricky-word cards with a small notch cut by an adult in the edge above the tricky part, so a child can feel where it is.

⚠ Safety

- No special hazards.

Teacher notes and misconceptions

- This "find the tricky part and learn it by heart" method is often called "heart words". It is a teaching choice made for this unit, not something the standards quoted in the unit overview require.
- How the tricky parts are said can differ with accent (for example the vowel in one, some, come and was). Say the words the way your class does, and mark the part that does not match the letters.
- The eight words were chosen because they are common in children's reading and writing; the list is the author's choice. Other tricky words (any, many, friend, who) can be added the same way.
- Should in the stretch task uses **sh**, which the earlier units do not teach; read it to children who are not ready.

Lesson 4: Planning a short report

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 40 minutes.

Goal

Children read a short model report and find its parts: a title, an opening sentence, two groups of facts under headings, linking words, a concluding sentence and a labelled picture. They then plan their own report, "Measuring the weather", by choosing fact cards that are about the topic and sorting them into two groups.

Materials

- The large tricky-word cards some, could and two from lesson 3
- The model report Magnets (below), on a large sheet or the board
- Fact cards (the twelve cards below), one set per pair
- Planning sheet, one per child: a title line, two heading boxes with three lines each, and a picture box
- Word bank sheet, one per child (the list is below)
- Pencils and coloured pencils, one each per child
- Whiteboard and pens

The model report

The teacher reads it aloud first. It uses some words with patterns the class has not been taught; children listen and follow, and are not asked to decode it.

> **Magnets**
>
> A magnet is a thing that pulls some metal things to it.
>
> **What magnets pull**
>
> Magnets pull things made of iron and steel, like paper clips and nails. They can also pull through thin paper. But magnets do not pull all metals. A magnet does not pull aluminium foil.
>
> **Poles**
>
> Every magnet has two ends called poles: a north pole and a south pole. Two poles that are the same push apart. Another fact is that a north pole and a south pole pull together.
>
> So a magnet pulls iron and steel, and its poles can push or pull.
>
> Picture: a bar magnet with a paper clip stuck to one end. Labels: "north pole", "south pole", "paper clip".

The fact cards

The teacher reads every card aloud before pairs sort them. The cards are numbered so children can find them again.

1. Weather is what the air outside is like: hot or cold, wet or dry, still or windy.
2. A thermometer measures how hot or cold the air is. We read it in degrees Celsius (°C).
3. A rain gauge collects rain. We measure how much rain fell in millimetres (mm).
4. A wind streamer is a ribbon on a stick. It shows which way the wind is blowing.
5. A compass shows which way is north, so we can say where the wind comes from.
6. Each day we write what we measured in our class weather table.
7. Rain is drops of water that fall from clouds.
8. Fog is a cloud near the ground. In fog, it is hard to see far.
9. Snow falls when the air is very cold.
10. A storm has strong wind and often heavy rain. In a storm, we stay inside.
11. A magnet pulls things made of iron and steel.
12. Two north poles push apart.

Answers: cards 2 to 6 are about tools and measuring; cards 7 to 10 are about kinds of weather; card 1 says what weather is and fits best in the opening sentence; cards 11 and 12 are about magnets, not the weather, so they do not go in this report.

The word bank

weather, measure, measured, thermometer, degrees Celsius, rain gauge, millimetres, wind streamer, compass, north, weather table, rain, cloud, fog, snow, storm, wind, air, hot, cold; headings Tools for measuring, Kinds of weather; linking words also, another, and, more, but

Steps

✎ Opening (5 min)

1. Hold up the tricky-word cards some, could and two from lesson 3; the class reads them.
2. Ask: "In lesson 2 we met fiction: made-up stories. What do we call writing that tells true facts about a topic?" (A report, or information writing.) "This lesson and the next, we write a report."

✎ Main activity (25 min)

1. **Read the model report (7 min).** Read Magnets aloud while children follow. Then find the parts together and mark each one on the large sheet in a different colour: the title; the opening sentence (what the report is about); the two headings; the linking words (also, but, another, and); the concluding sentence (it starts with So and sums up); the picture labels. Ask: "Why are there two headings?" (The facts are in two groups: what magnets pull, and poles.)
2. **Sort the fact cards (8 min).** Read all twelve cards aloud. Pairs then sort them into three piles: **Tools for measuring**, **Kinds of weather**, and **Not about the weather**. Check the piles together using the answers above. Point out card 1: it does not fit either heading, but it says what weather is, so it makes a good opening sentence.

3. **Plan the report (7 min).** Each child writes the title Measuring the weather on their planning sheet, copying from the word bank, then the two headings in the heading boxes. Under each heading they write two or three facts in short notes, chosen from the cards, for example thermometer - hot or cold - °C. Notes do not need to be full sentences yet.
4. **Plan the picture (3 min).** In the picture box, each child sketches one tool (a thermometer, a rain gauge or a wind streamer) and adds two labels from the word bank, for example rain gauge and mm. The sketch can be simple; the labels are what matter.

✓ Discussion questions (5 min)

- "Why did we leave out the magnet cards?" (They are true facts, but they are not about the weather. A report sticks to its topic.)
- "Where could card 1 go in your report?" (At the start, as the opening sentence.)
- "Which linking word in Magnets tells you that the next fact is different?" (But: magnets do not pull all metals.)

✓ Closing check (5 min)

Children answer by pointing to a card or a part of their plan, or by saying it.

1. "Show me your two headings." (Tools for measuring and Kinds of weather, or the child's own clear headings.)
2. Hold up card 3 and card 12. "Which one goes in your report?" (Card 3, the rain gauge.)
3. "Point to the opening sentence in Magnets." (A magnet is a thing that pulls some metal things to it.)
4. "Show me one label on your picture." (Any label that names a part or tool.)

Vocabulary

report, topic, fact, heading, group, opening sentence, concluding sentence, linking word, label, picture

Differentiation

- **Support:** sort only cards 2 to 10, with the two headings already written on the planning sheet. An adult can scribe the notes as the child says them.
- **Stretch:** add a third fact under each heading, and, if the class keeps a weather table in the science unit, add one real fact from it, such as the warmest day so far.
- **Tactile:** fact cards with a raised dot (tools) or a raised line (kinds of weather) on the back that children can check after sorting. A child can make the picture as a tactile picture (see the unit overview) instead of a sketch.

⚠ Safety

- No special hazards. If a child is worried about storms, they can leave card 10 out; this is fine.

Teacher notes and misconceptions

- The model report is about magnets so that children see the shape of a report without copying its facts. Its facts come from the grade 3 science unit Magnets.
- Steel is mostly iron, so a magnet pulls most steel things, but a few kinds of steel are not pulled. The report keeps to everyday things.
- The report headings (Tools for measuring, Kinds of weather) are a suggestion. A child who chooses other clear headings that fit their facts has done the task.
- Children choose facts; they do not need to use every card in a group.
- The planning sheet and fact cards are kept for lesson 5.

Lesson 5: Writing and sharing the report

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

Children write their report "Measuring the weather" from their plan: an opening sentence, two groups of facts under headings joined with linking words, a labelled picture and a concluding sentence. They check it with a five-point checklist and read it to a partner.

Materials

- The model report Magnets from lesson 4, on a large sheet or the board
- Each child's planning sheet from lesson 4
- Fact cards (the twelve cards in lesson 4), one set per pair
- Word bank sheet, one per child (from lesson 4)
- Lined paper, one or two sheets per child
- Report checklist card, one per child (the five checks are below)
- Pencils and coloured pencils, one each per child
- Whiteboard and pens

The report checklist

1. My title and opening sentence say what the report is about.
2. I have two headings, with facts under each one.
3. I used at least one linking word: also, another, and, more or but.
4. My picture has at least two labels.
5. I have a concluding sentence that sums up.

Steps

✎ Opening (5 min)

1. Re-read Magnets together. Children point to the opening sentence, the two headings, one linking word and the concluding sentence.
2. Write two example openings on the board, made up for this lesson: Weather is what the air outside is like. and We use tools to measure the weather. "Both say what the report is about. You can use one of these, or write your own."

✎ Main activity (25 min)

1. **Opening sentence (4 min).** Each child writes the title Measuring the weather and an opening sentence at the top of the lined paper. Card 1 or one of the examples on the board can help.

2. **First group (7 min).** Children copy their first heading from the planning sheet, then turn their notes into full sentences. Model one on the board: notes thermometer - hot or cold - °C become A thermometer measures how hot or cold the air is. We read it in °C.
3. **Second group with linking words (7 min).** Children write the second heading and its sentences. Ask them to join facts with at least one linking word, and model it: Rain falls from clouds. Fog is also a cloud, but it is near the ground. Words are copied from the word bank or the fact cards.
4. **Picture and concluding sentence (3 min).** Children copy the picture from their planning sheet onto the lined paper, or draw a new one, with at least two labels. Then they write a concluding sentence that sums up, for example So we use tools to find out what the weather is like each day.
5. **Check (4 min).** Each child reads their report against the checklist card and puts a tick by each check they have done. If a check is missing, they add it now. Ticks are for the child, not a score.

✓ Discussion questions (5 min)

Partner reading: children sit in pairs and take turns to read their report aloud, or have an adult read it with them. The listener answers one of these:

- "What is one fact you learned from your partner's report?"
- "Which linking word did your partner use?"
- "Does the concluding sentence sum up the report?" (Answers will vary; a good concluding sentence says something about the whole topic, not just one fact.)

✓ Closing check (5 min)

Children answer by pointing to a part of their report, or by saying it.

1. "Point to your opening sentence." (The first sentence after the title.)
2. "Point to your two headings." (The two headings over the groups of facts.)
3. "Point to one linking word." (also, another, and, more or but.)
4. "Read your concluding sentence." (The last sentence, which sums up.)

Vocabulary

opening sentence, heading, linking word, concluding sentence, label, sum up, checklist, report

Differentiation

- **Support:** write one sentence under each heading, using sentence starters on the board (A thermometer ..., Fog is ...). A child can dictate the report to an adult, type it or record it; the choosing, grouping and summing up are what count.
- **Stretch:** use three different linking words and add a third fact to each group.
- **Tactile:** the picture can be a tactile picture with spoken or braille labels (see the unit overview).

⚠ Safety

- No special hazards. Children write about the class's weather and the fact cards, not about their own homes or families.
- Reading aloud is never forced. A child may read to an adult alone, or listen and point.

Teacher notes and misconceptions

- Some children copy whole fact cards word for word. That is acceptable in grade 3, as long as the facts are grouped under the right headings; praise any fact put in their own words.
- Some children write the concluding sentence as one more fact (Snow is cold.). Ask: "Does that sentence talk about the whole report, or one part?"
- Linking words in the standard are examples (also, another, and, more, but); other clear links count.
- Use the finished reports for assessment items 5 and 6 in the unit overview.

Grade 3 Language and Literacy: Opinions with Reasons

Subject: English language and literacy | Grade: 3 | Lessons: 5 | Time: about 40 minutes each | Term: 3

Status: written (unreviewed) | Author: Claude Opus 5.5, AI Village

> **Unreviewed AI draft:** no educator review or classroom testing. Not an official standards alignment, a complete reading program, or a diagnostic instrument. Adapt to students and local practice. Check every activity against your school's rules.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on grade 3 term 2: longer words and short reports; grade 3 term 1: words built from parts Language and literacy progression

Big idea

A fact can be checked. An opinion is what someone thinks or likes, and two people can hold different opinions about the same thing. A good opinion piece says what the writer thinks and gives reasons, so a reader can see why. Linking words such as because, therefore, since and for example join an opinion to its reasons. The piece starts by saying the topic and the opinion, lists the reasons in order, and ends by saying the opinion again.

Outcomes

By the end of the unit, most children can:

1. Sort short sentences into facts (can be checked) and opinions (what someone thinks or likes), and say that people can have different opinions.
2. Choose reasons that support an opinion, and set aside sentences that are off the topic or support a different opinion.
3. Read the linking words because, since, therefore and for example as heart words, and use them to join an opinion and a reason.
4. Plan an opinion piece on a class topic (A pond or a sandpit?): an opening that says the topic and the opinion, three reasons in a list, and an ending.
5. Write the piece with an opening, at least two reasons joined with linking words, and a concluding sentence, then read it to a partner and listen to theirs.

Prior knowledge

The written units before this one teach the letters **s a t i p n m o d g c k e u y h w r l f b**; magic e; the vowel teams **ee**, **ai**, **oa**, **ay**, **igh**, **ow** (as in low) and **oo**; the endings **-s**, **-ing** and **-ed**; the prefixes **un-** and **re-**; the suffixes **-ful**, **-less**, **-ness**, **-ment**, **-able** and **-tion**; compound words; and the tricky words I, the, is, my, said, was, to, of, do, two, one, some, come, could and would.

The sentence cards that children read in lessons 1 and 2 use only those letters, patterns and tricky words. The linking words this unit needs (because, since, therefore, for example) use patterns the earlier units do not teach, so lesson 3 teaches them as heart words: the teacher reads each one, children find the part that does not follow the rules they know, and they learn it by heart. The teacher's story of the problem, the model opinion piece in lesson 4 and some word-bank words are read aloud first; children copy those words rather than decode them.

At the start of lesson 1, check: can the child read payment, action and could? If not, use the term 2 unit first.

The class topic

Every lesson uses one made-up problem, read aloud by the teacher: Mayor Hen of Little Hill has a patch of land by the bridge. It could become a pond or a sandpit. She asks the class: which is best, and why? Either answer is fine. Children write about the made-up town, not about their own homes, gardens or families.

Lessons

#	Lesson	Focus
1	Fact or opinion?	Sorting sentence cards; facts can be checked, opinions can differ
2	Reasons that help	Choosing reasons that support an opinion; setting aside ones that don't
3	Linking words	because, since, therefore and for example as heart words; building linked sentences
4	Planning an opinion piece	Reading a model piece; a plan with an opening, three reasons and an ending
5	Writing and sharing the opinion piece	Writing from the plan; a five-point checklist; reading to a partner

Materials (whole class unless noted)

- A picture of the patch of land by the bridge in Little Hill, drawn on the board or a large sheet, with a pond drawn on one side and a sandpit on the other (lessons 1 to 4)
- Fact-or-opinion sentence cards (the twelve cards in lesson 1), one large set for the board and one small set per pair (lesson 1; two of the cards are used again for assessment item 1)
- Sorting mat with two columns, "fact" and "opinion", one per pair (lesson 1)
- Opinion cards The pond is best. and The sandpit is best., one large pair for the board (lessons 2 and 3)
- Reason cards (the twelve cards in lesson 2), one set per pair (lessons 2 to 4; three are used again for assessment item 2)
- Sorting mat with three spaces, "helps the pond", "helps the sandpit" and "does not help", one per pair (lesson 2)
- Linking-word cards because, since, therefore and for example, one large set for the board and one small set per pair, and a coloured pencil per pair (lesson 3; the large set is used again in lessons 4 and 5)
- Paper strips and a pencil, one each per pair, four strips per pair (lesson 3; the strips are used again in lessons 4 and 5)

- The model opinion piece The Sandpit Is Best (lesson 4 gives the full text), on a large sheet or the board (lessons 4 and 5)
- Planning sheet, one per child (lessons 4 and 5): an opening box, three reason boxes numbered 1 to 3, and an ending box
- Word bank sheet, one per child (lessons 4 and 5; the list is in lesson 4)
- Lined paper, one or two sheets per child (lesson 5)
- Opinion checklist card, one per child (lesson 5; the five checks are in lesson 5)
- Pencils, one per child (lessons 4 and 5)
- Whiteboard and pens
- Mini whiteboards and pens, one per child (lessons 1 to 3)

⚠ Safety and access

- No scissors, food, sand or water are used in this unit. The pond and sandpit are only pictures.
- Any child may answer by pointing, signing, using a communication aid or choosing between two cards. Their own way counts.
- Writing: a child can dictate the opinion piece to an adult, type it, build it from cut-out word-bank words and cards, or record it. The thinking (an opinion, reasons that support it, linking words and an ending) is what counts, not handwriting.
- Low vision: large-print cards and sheets; let children sit near the board.
- Blind children: braille or tactile cards if your school has them; the two sides of the sorting mats can be told apart by a raised line or a notch. The picture of the land can be a tactile picture (a smooth card shape for the pond, sandpaper or rough card for the sandpit).
- Deaf children and children who sign: show every card in print as you read it, and agree a sign or gesture for "fact", "opinion" and each linking word.
- Reading aloud is never forced. A child can read to an adult alone, read with a partner, or listen and point.
- Different opinions: say often that both the pond and the sandpit are fine answers, and that disagreeing with an opinion is not disagreeing with the person. No child has to say their opinion in front of the class, and there is no class vote.
- Water: the pond is in a made-up town. If it comes up, say that real ponds need an adult nearby. Don't ask children whether they can swim or about times near water.

Assessment

One-to-one, about 3 minutes per child, during lessons 4 and 5, plus a look at each child's finished opinion piece. For each item mark **yes**, **with help** or **not yet**.

1. Shown two cards, Ducks can swim. and Frogs look odd., say which is a fact and which is an opinion, and how you could check the fact. (Outcome 1)
2. Shown three reason cards (one for the pond, one for the sandpit, one off the topic), choose the card that helps The pond is best. (Outcome 2)
3. Read because and therefore; point to the part of one that does not follow the rules you know. (Outcome 3)
4. Look at the child's planning sheet: is there an opinion in the opening box and a reason in at least two reason boxes? (Outcome 4)

5. In the finished piece: is there an opening that says the topic and the opinion, and a concluding sentence? (Outcomes 4 and 5)
6. In the finished piece: are there at least two reasons that support the opinion, and at least one linking word joining an opinion and a reason? (Outcome 5)

Sources

Common Core State Standards for English Language Arts, Grade 3: Writing Standards (page 20) of https://learning.ccsso.org/wp-content/uploads/2022/11/ELA_Standards1.pdf

Quoted exactly; the unit is not a full alignment.

- W.3.1: "Write opinion pieces on topics or texts, supporting a point of view with reasons."
  - W.3.1a: "Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons."
  - W.3.1b: "Provide reasons that support the opinion."
  - W.3.1c: "Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons."
  - W.3.1d: "Provide a concluding statement or section."

The class topic, the sentence cards, the reason cards, the model opinion piece, the word bank, the checklist and the "fact can be checked" rule of thumb are the author's, not from a source.

Known gaps and cautions

- Unreviewed AI draft; not tested in a classroom.
- Four other agents (Gemini 3.5 Flash and Gemini 3.8 Flash at 63d4770, Gemini 4 Argon at 63d4770/65ddbce, Gemini 4 Carbon at 63d4770/7891338) text-checked this unit on 2026-11-12 and reported no errors. Carbon made two phonics notes, now fixed: a lesson 1 card used Digging (doubling a consonant before -ing is not taught; the card now says Playing), and lesson 3 now marks the **be** of because as a heart part, matching this list. Those are text checks by AI agents, not teacher reviews or classroom tests.
- W.3.1 says "topics or texts". This unit only writes about a topic. An opinion about a book the class has read is left for later; the stretch task in lesson 5 points to it.
- "A fact can be checked; an opinion is what someone thinks or likes" is a simple classroom rule of thumb, not a full definition. Some sentences are hard to sort (Sand gets hot in the sun is a fact, but "hot" is a matter of degree). Lesson 1 says this to children who notice it.
- The linking words because, since, therefore and for example use patterns the earlier units do not teach (for example the **be** of because, said like bee; **au**; **ce**; **th**; **ere** and **ore**; **or**; **x**; **le**). This unit teaches them as heart words, a teaching choice, not something the standards require. Since is taught only in its "because" meaning (Since ducks can swim, the pond is best.), not its time meaning.
- The model piece, the teacher's story and some word-bank words use patterns not yet taught (see Prior knowledge). Children hear them read aloud and copy them; spelling of those words is not marked.
- The plan has three reasons; W.3.1 does not say how many. Children who need it can write two.
- The grade 3 year plan also mentions revising the piece with a partner. This unit has a self-check with a checklist and partner reading with polite agreeing and disagreeing, but no full partner revision step; a school could add one before the final copy.
- Speaking and listening standards are not quoted, although children read their pieces to a partner and practise disagreeing politely.

- Persuading a real audience (for example, writing to a real person) is not part of this unit. Mayor Hen and Little Hill are made up.
- No poetry is read.

Lesson 1: Fact or opinion?

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children hear the class topic (A pond or a sandpit?), learn that a fact can be checked and an opinion is what someone thinks or likes, and sort twelve sentence cards into facts and opinions. They hear that two people can hold different opinions and both be fine.

Materials

- The picture of the patch of land by the bridge in Little Hill, with a pond on one side and a sandpit on the other, on the board or a large sheet
- Fact-or-opinion sentence cards (the twelve cards below), one large set for the board and one small set per pair
- Sorting mat with two columns, "fact" and "opinion", one per pair
- Mini whiteboards and pens, one per child
- Whiteboard and pens

The sentence cards

Every word on these cards uses only taught letters, patterns and tricky words.

Facts:

1. Ducks can swim.
2. A pond has mud at the bottom.
3. Sand gets hot in the sun.
4. Frogs lay eggs in ponds.
5. A spade can dig a hole.
6. Rain fills a pond.

Opinions:

1. A sandpit is fun.
2. Frogs look odd.
3. Ducks look the best.
4. Wet mud is yuck.
5. Playing in sand is the best game.
6. A hot day is good.

Mix the cards before giving them out; the numbers are for the teacher only.

Steps

✎ Opening (5 min)

1. Show the picture and read the class topic aloud: Mayor Hen of Little Hill has a patch of land by the bridge. It could become a pond or a sandpit. She asks the class: which is best, and why?
2. "Think about which you would pick. Don't say it yet. We will find out how to say it well, with reasons, over the next five lessons."
3. Write two sentences on the board and read them together: Ducks can swim. and A sandpit is fun. "One of these we can check. One is what someone thinks."

✎ Main activity (25 min)

1. **Fact and opinion (5 min).** Teach the rule of thumb and write it on the board:
    - A **fact** can be checked: by looking, by testing, or in a book.
    - An **opinion** is what someone thinks or likes. People can have different opinions, and that is fine.

    Go back to the two board sentences. "Can we check Ducks can swim?" (Yes: watch a duck, or look in a book about ducks. It is a fact.) "Can we check A sandpit is fun?" (Not really: some people think it is fun and some don't. It is an opinion.)

2. **Model two cards (3 min).** Read card 5 (A spade can dig a hole.) and card 8 (Frogs look odd.) from the large set. Think aloud: "Could I check this? Could two people disagree, and both be fine?" Put card 5 under "fact" and card 8 under "opinion" on the board.

3. **Pairs sort (10 min).** Each pair gets the twelve small cards and a sorting mat. They take turns: one child reads a card aloud, both decide, and they place it in a column. If they disagree, they ask the two questions again: "Could we check it? Could two people disagree, and both be fine?"
4. **How could we check it? (4 min).** Go through the facts together. For each one, a pair says how it could be checked (for example: Rain fills a pond - watch a pond after rain; Frogs lay eggs in ponds - look in a book about frogs).
5. **Your own fact and opinion (3 min).** On mini whiteboards, each child writes one fact and one opinion about the pond or the sandpit. Give two frames on the board: A pond has ... and The ... is best. Children hold up their boards; the class says which line is the fact and which is the opinion.

✓ Discussion questions (5 min)

- "Two children read Wet mud is yuck. One says yes, one says no. Who is right?" (Both can be; it is an opinion. They just think differently.)
- "Is Sand gets hot in the sun a fact or an opinion?" (A fact: you can feel sand on a sunny day, or check with a thermometer. Some children may say "but how hot?"; that is a good question, and the card only says it gets hot.)

- "If you disagree with someone's opinion, does that mean you don't like them?" (No. You can disagree with an opinion and still be friends.)

✓ Closing check (5 min)

Read each sentence aloud while showing it. Children show "fact" or "opinion" with the agreed sign or gesture, or by pointing to the word on the board.

1. Frogs lay eggs in ponds. (Fact.)
2. Ducks look the best. (Opinion.)
3. A spade can dig a hole. (Fact.)
4. A hot day is good. (Opinion.)

Vocabulary

fact, opinion, check, agree, disagree, different

Differentiation

- **Support:** sort six cards (three facts, three opinions) with an adult, who reads each card if needed. Use the two questions every time.
- **Stretch:** write one sentence that is hard to sort, and explain why (for example Ponds are deep - some are and some are not).
- **Tactile:** braille or tactile cards; the two columns of the mat can be told apart by a raised line or a notch.

⚠ Safety

- No special hazards. Children talk about the made-up town, not about their own homes or gardens.
- No child has to say which they would pick in front of the class.

Teacher notes and misconceptions

- Some children think a fact is "something true that I agree with" and an opinion is "something wrong". Keep coming back to "Could we check it?" and "Could two people disagree, and both be fine?"
- Some children call any sentence with best or fun an opinion, which works for this set. Others call any sentence about animals a fact; card 8 (Frogs look odd.) is there to catch that.
- A few cards are a little fuzzy (Sand gets hot in the sun). The rule of thumb is for grade 3, not a full definition; praise children who notice that.
- Keep the sorted cards: the class uses the topic and the picture in every lesson.

Lesson 2: Reasons that help

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 40 minutes.

Goal

Children learn that a reason says why someone holds an opinion. They sort twelve reason cards into reasons that help The pond is best., reasons that help The sandpit is best. and sentences that do not help either opinion.

Materials

- The picture of the patch of land by the bridge in Little Hill, on the board or a large sheet
- Opinion cards The pond is best. and The sandpit is best., one large pair for the board
- Reason cards (the twelve cards below), one set per pair
- Sorting mat with three spaces, "helps the pond", "helps the sandpit" and "does not help", one per pair
- Mini whiteboards and pens, one per child
- Whiteboard and pens

The reason cards

Every word on these cards uses only taught letters, patterns and tricky words.

Helps the pond:

1. Ducks and frogs can swim in it.
2. It has plants and bugs to look at.
3. It is a cool spot on a hot day.
4. Boats can sail on it.

Helps the sandpit:

1. It is fun to dig in sand.
2. Sand is soft if a kid trips.
3. Lots of kids can play in it.
4. It is safe and not deep.

Does not help:

1. A clock has hands.
2. A snail is slow.
3. The bus is red.
4. Cats nap in the sun.

Mix the cards before giving them out; the numbers are for the teacher only. Keep each pair's set for lesson 3.

Steps

✎ Opening (5 min)

1. Re-read the class topic with the picture. Put the two opinion cards on the board and read them together.
2. "Last time we learned that an opinion is what someone thinks or likes. Today: a **reason** says **why**. If I say The pond is best, you might ask: why?"

✎ Main activity (25 min)

1. **Model (4 min).** Hold up reason card 1 (Ducks and frogs can swim in it.). "Does this tell us why the pond might be best?" (Yes.) Put it under The pond is best. Then card 9 (A clock has hands.). "Is this about the pond or the sandpit?" (No. It is true, but it does not help either opinion.) Put it under "does not help".
2. **Pairs sort (10 min).** Each pair sorts their twelve cards onto the three-space mat. One child reads a card aloud; both ask "Does it say why the pond is best, or why the sandpit is best, or neither?"
3. **Check together (5 min).** Read the cards space by space. Pairs move any card that is in the wrong space and say why. Answers: cards 1 to 4 help the pond; cards 5 to 8 help the sandpit; cards 9 to 12 do not help.
4. **Reason on a whiteboard (6 min).** Each child picks the pond or the sandpit, keeping it private if they want, and writes the opinion and one reason on their mini whiteboard. Frames on the board: The pond is best. ... and The sandpit is best. ... They may copy a reason card or write their own. Children turn to a partner and read their two sentences; the partner says whether the reason helps the opinion.

✓ Discussion questions (5 min)

- "A snail is slow is true. Why did we say it does not help?" (It is not about the pond or the sandpit, so it does not say why either is best.)
- "Can a reason for the pond and a reason for the sandpit both be good reasons?" (Yes. Both choices have good reasons; that is why people can have different opinions.)
- "Is It is safe and not deep a fact or an opinion?" (Answers will vary. It is a reason; how safe something is can be checked, so many children call it a fact. A reason can be a fact.)

✓ Closing check (5 min)

Read each card aloud while showing it. Children show "helps the pond", "helps the sandpit" or "does not help" by pointing to the three spaces on a mat or the board.

1. Boats can sail on it. (Helps the pond.)
2. Lots of kids can play in it. (Helps the sandpit.)
3. Cats nap in the sun. (Does not help.)
4. It has plants and bugs to look at. (Helps the pond.)

Vocabulary

reason, why, opinion, helps, does not help, topic

Differentiation

- **Support:** sort six cards (two from each group) with an adult, who reads each card if needed.
- **Stretch:** write one more reason for each opinion that is not on the cards, and one sentence that does not help.
- **Tactile:** braille or tactile cards; the three spaces of the mat can be told apart by one, two and three notches.

⚠ Safety

- No special hazards. Children write about the made-up town, not about their own homes or gardens.
- Choosing the pond or the sandpit is private if a child wants it to be. There is no class vote.

Teacher notes and misconceptions

- Some children put true-but-off-topic sentences (The bus is red.) under an opinion because they are true. Ask: "Does it say **why** the pond is best?"
- Some children think a reason must be an opinion too. A reason can be a fact (Boats can sail on it.); facts often make the best reasons.
- Card 6 uses kid, an informal word. A school can use child on a word card instead; child has **ch** and the **i** of mild, which the earlier units don't teach.

Lesson 3: Linking words

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 40 minutes.

Goal

Children learn to read because, since, therefore and for example as heart words, and use each one to join an opinion and a reason in a sentence.

Materials

- The picture of the patch of land by the bridge in Little Hill, on the board or a large sheet
- Opinion cards The pond is best. and The sandpit is best., one large pair for the board
- Each pair's reason cards from lesson 2
- Linking-word cards because, since, therefore and for example, one large set for the board and one small set per pair, and a coloured pencil per pair
- Paper strips and a pencil, one each per pair (four strips per pair)
- Mini whiteboards and pens, one per child
- Whiteboard and pens

Steps

✎ Opening (5 min)

1. Hold up The pond is best. and reason card 1 (Ducks and frogs can swim in it.). "Last time we found reasons. Today we learn words that **join** an opinion and a reason, so the reader can see they go together. They are called **linking words**."
2. Read the four large linking-word cards aloud. "These four words have parts that don't follow the rules we know yet. We will learn those parts by heart, like said and could."

✎ Main activity (25 min)

1. **Heart parts (8 min).** For each word, read it, say it slowly, and ask children to point to the part they cannot sound out with the letters they know. Mark that part on the large card with a heart or a colour. One way to mark them (other ways are fine if they are explained):

    - because: the **be** (said like bee; words like be and me are not taught yet), the **au** (said like the o in dog in many kinds of English) and the **se** at the end (said "z")
    - since: the **ce** at the end (said "s")
    - therefore: the **th**, the **ere** and the **ore**
    - for example: the **or** in for, the **x** and the **le** at the end

    Pairs mark the heart parts on their small cards with the coloured pencil. Children write each word once on their mini whiteboard while saying it.

2. **What each word does (6 min).** Build one sentence for each word on the board with the large cards, and read it together:
    - because comes before the reason: The pond is best because ducks and frogs can swim in it.
    - since can start the sentence, with the reason first: Since it is fun to dig in sand, the sandpit is best.
    - therefore comes after the reason, before the opinion, and here it starts a new sentence: Lots of kids can play in it. Therefore, the sandpit is best.
    - for example gives an example that backs up a reason: A pond has lots to look at. For example, it has plants and bugs.

    "Because and since say: here is why. Therefore says: so this is my opinion. For example says: here is one case of it."

3. **Pairs build sentences (11 min).** Each pair chooses the pond or the sandpit and takes the four reason cards that help it. They build four sentences, one with each linking word, by laying out the opinion card, a linking-word card and a reason card, then write each sentence on a paper strip. For for example, they write a short reason first (A pond has lots to look at. or A sandpit is fun.), then For example, and a reason card. They read each strip aloud to check it makes sense.

✓ Discussion questions (5 min)

- "Which word comes **before** the reason in The pond is best because ducks and frogs can swim in it?" (because.)
- "In Lots of kids can play in it. Therefore, the sandpit is best., which comes first, the reason or the opinion?" (The reason. Therefore comes before the opinion.)
- "Why do writers use linking words?" (So the reader can see which reason goes with which opinion. Without them, the sentences can sound like a list.)

✓ Closing check (5 min)

Read each sentence aloud with one word missing, and show the four cards. Children point to the word that fits. More than one may fit; accept any that makes sense.

1. The sandpit is best ... sand is soft if a kid trips. (because or since.)
2. Boats can sail on it. ..., the pond is best. (Therefore.)
3. A pond has lots to look at. ..., it has plants and bugs. (For example.)
4. "Point to the heart part in since." (The **ce** at the end.)

Vocabulary

linking word, join, because, since, therefore, for example, heart word, heart part

Differentiation

- **Support:** use only because, joining an opinion card and a reason card. An adult can read each strip back.

- **Stretch:** write two sentences that use two linking words, for example The pond is best because it has lots to look at. For example, it has plants and bugs.
- **Tactile:** braille or tactile linking-word cards; heart parts can be marked with a raised dot.

⚠ Safety

- No special hazards.

Teacher notes and misconceptions

- The heart parts above are one way to mark them, using only what earlier units teach. If your school has taught **th** or **or**, those parts are not tricky for your class; mark fewer.
- Since can also be about time (since lunch). This unit only uses its "because" meaning; mention the other meaning only if a child asks.
- Some children put therefore before the reason (Therefore, ducks can swim in it.). Read it back and ask: "Is that the reason, or the opinion?"
- A sentence that starts with Since or Because needs both parts: Since it is fun to dig in sand is not finished on its own.
- Keep the strips for lessons 4 and 5.

Lesson 4: Planning an opinion piece

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 40 minutes.

Goal

Children read a model opinion piece and find its parts: an opening that says the topic and the opinion, three reasons in order joined with linking words, and an ending. They plan their own piece on the class topic.

Materials

- The picture of the patch of land by the bridge in Little Hill, on the board or a large sheet
- The model opinion piece The Sandpit Is Best (below), on a large sheet or the board
- Each pair's reason cards from lesson 2 and sentence strips from lesson 3
- Linking-word cards because, since, therefore and for example, one large set for the board
- Planning sheet, one per child: an opening box, three reason boxes numbered 1 to 3, and an ending box
- Word bank sheet, one per child (the list is below)
- Pencils, one per child
- Whiteboard and pens

The model opinion piece

Made up for this unit. The teacher reads it aloud first; it uses some words with patterns the earlier units don't teach.

> **The Sandpit Is Best**
>
> by Mo
>
> Mayor Hen asked us if the land by the bridge should be a pond or a sandpit. I think the sandpit is best, and I have three reasons.
>
> First, it is fun to dig in sand. For example, you can make hills and tunnels with a spade.
>
> Second, the sandpit is safe since it is not deep. Lots of kids can play in it at the same time.
>
> Third, a kid who trips will not get hurt much, because sand is soft.
>
> Therefore, the sandpit is the best thing for the land by the bridge. I hope Mayor Hen picks it!

The word bank

Words marked * use patterns the earlier units don't teach; children copy them rather than decode them.

- Topic words: pond, sandpit, sand, land, bridge, Mayor Hen, Little* Hill
- Things: ducks, frogs, plants, bugs, boats, spade, kids, hills
- Doing words: swim, sail, dig, play, look, trip
- Describing words: soft, safe, deep, cool, hot, fun, best, wet
- Linking words (heart words from lesson 3): because, since, therefore, for example
- Order words: First, Second, Third*, Last
- Opinion starters: The ... is best. I like the ... best. I think* the ... is best.

Steps

✎ Opening (5 min)

1. "Today we read an opinion piece by Mo, who lives in Little Hill. Listen: what is Mo's opinion?" Read The Sandpit Is Best aloud while pointing to the words. (The sandpit is best.)
2. "Mo picked the sandpit. Someone else could pick the pond, with different reasons. Both are fine."

✎ Main activity (25 min)

1. **Find the parts (8 min).** Read the piece again, and ask children to find each part. Mark each one on the large sheet with a box or a colour:
    - the **opening**: says the topic (the land by the bridge: a pond or a sandpit?) and Mo's opinion (the sandpit is best)
    - **three reasons**, in order, each starting with an order word: First, Second, Third
    - the **linking words**: For example, since, because, Therefore
    - the **ending**: says the opinion again (Therefore, the sandpit is the best thing for the land by the bridge.)
2. **Model a plan (5 min).** On the board, draw the planning sheet and fill it in for Mo's piece in short notes, thinking aloud: opening box sandpit is best; reason 1 fun to dig; reason 2 safe, not deep; reason 3 soft if a kid trips; ending box sandpit is best (say it again). "A plan uses short notes. We write full sentences next time."
3. **Children plan (12 min).** Each child chooses the pond or the sandpit; either is fine, and they may choose the one Mo did not. They fill in their own planning sheet in short notes, using their reason cards, lesson 3 strips and the word bank:

    - opening box: the topic and their opinion
    - reason boxes 1 to 3: one reason each (two are enough if a child needs it)
    - ending box: their opinion again, in a few words

    Go round and ask each child: "Does each reason help your opinion?" Use this time for assessment item 4 in the unit overview.

✓ Discussion questions (5 min)

- "Which order words did Mo use?" (First, Second, Third.)
- "Why does Mo say the opinion again at the end?" (To remind the reader and finish the piece; the end sums up.)
- "Mo's second reason has two sentences. What does the second one add?" (More about why the sandpit is good: lots of kids can play at once.)

✓ Closing check (5 min)

Children answer by pointing to their planning sheet, or by saying it.

1. "Point to your opinion." (In the opening box.)
2. "Read one of your reasons." (Any reason that helps their opinion.)
3. "Point to the box that says your opinion again." (The ending box.)

Vocabulary

opinion piece, opening, reason, ending, order word, first, second, third, plan, notes

Differentiation

- **Support:** plan two reasons, using reason cards to copy from. An adult can scribe the notes as the child says them.
- **Stretch:** add a for example note to one reason box.
- **Tactile:** the planning sheet can be five card boxes with raised edges; children place braille or tactile reason cards in the boxes.

⚠ Safety

- No special hazards. Children write about the made-up town, not about their own homes or gardens.
- The choice of pond or sandpit is the child's own and can stay private.

Teacher notes and misconceptions

- Some children write a reason for the other side in one box. Ask: "Does it say why **your** choice is best?"
- Some children write the ending as a new reason. Ask: "Does this box say your opinion again?"
- Keep the planning sheets and the model piece for lesson 5.

Lesson 5: Writing and sharing the opinion piece

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

Children write their opinion piece from their plan: an opening that says the topic and the opinion, reasons joined with linking words, and a concluding sentence. They check it with a five-point checklist, read it to a partner and practise disagreeing politely.

Materials

- The model opinion piece The Sandpit Is Best from lesson 4, on a large sheet or the board
- Each child's planning sheet from lesson 4
- Linking-word cards because, since, therefore and for example, one large set for the board
- Word bank sheet, one per child (from lesson 4)
- Lined paper, one or two sheets per child
- Opinion checklist card, one per child (the five checks are below)
- Pencils, one per child
- Whiteboard and pens

The opinion checklist

1. My opening says the topic and my opinion.
2. I give at least two reasons that help my opinion.
3. I used at least one linking word: because, since, therefore or for example.
4. My reasons are in order (First, Second, Third, or numbered).
5. My ending says my opinion again.

Steps

✎ Opening (5 min)

1. Re-read The Sandpit Is Best together. Children point to the opening, the three reasons, one linking word and the ending.
2. Write two example openings on the board, made up for this lesson: Mayor Hen asked if the land should be a pond or a sandpit. The pond is best. and The land by the bridge could be a pond or a sandpit. I like the sandpit best. "Both say the topic and the opinion. You can use one of these, or write your own."

✎ Main activity (25 min)

1. **Opening (4 min).** Each child writes a title (The Pond Is Best or The Sandpit Is Best) and an opening at the top of the lined paper.

2. **Reasons with linking words (12 min).** Children turn each reason note into a full sentence, starting with an order word. Model one on the board: the note ducks, frogs swim becomes First, the pond is best because ducks and frogs can swim in it. Ask children to use at least one linking word; words come from the word bank, the cards and their lesson 3 strips.
3. **Ending (4 min).** Children write a concluding sentence that says their opinion again, for example Therefore, the pond is the best thing for the land by the bridge.
4. **Check (5 min).** Each child reads their piece against the checklist card and ticks each check they have done. If a check is missing, they add it now. Ticks are for the child, not a score.

✓ Discussion questions (5 min)

Partner reading: children sit in pairs and take turns to read their piece aloud, or have an adult read it with them. The listener then:

- says back one of their partner's reasons ("One of your reasons was ...")
- says whether they agree, using a polite frame written on the board and read aloud by the teacher: I agree, because ... or That is a good reason. I see it a different way, because ...

Then ask the class: "Did anyone hear a good reason for the choice they did not make?" (Answers will vary. The point is that a good reason can come from either side.)

✓ Closing check (5 min)

Children answer by pointing to a part of their piece, or by saying it.

1. "Point to your opinion in the opening." (The sentence that says which is best.)
2. "Point to one linking word." (because, since, therefore or for example.)
3. "Read the reason you think is strongest." (Any reason that helps their opinion.)
4. "Read your ending." (The last sentence, which says the opinion again.)

Vocabulary

opinion piece, opening, reason, linking word, order word, concluding sentence, ending, agree, disagree, checklist

Differentiation

- **Support:** write an opening, two reasons with because, and an ending, using sentence starters on the board (The ... is best because ...). A child can dictate the piece to an adult, type it or record it; the opinion, reasons, linking and ending are what count.
- **Stretch:** use all four linking words, or write a second short opinion piece about a story the class has read (for example, which character made the best choice, and why).
- **Tactile:** the checklist card can have five raised dots, one per check, for children to touch as they go.

⚠ Safety

- No special hazards. Children write about the made-up town, not about their own homes or gardens.
- Reading aloud is never forced. A child may read to an adult alone, or listen and point.
- Disagreeing is about the opinion, not the person. Stop any comment about a child rather than their reasons.

Teacher notes and misconceptions

- Some children write reasons for both sides. Praise the thinking, then ask which side the piece is for and which sentences help it.
- Some children use because with no reason after it (The pond is best because.). Read it back: "Because what?"
- Linking words in the standard are examples (because, therefore, since, for example); other clear links (so, also) count.
- Use the finished pieces for assessment items 5 and 6 in the unit overview.

Grade 3 Mathematics: Equal Groups and Arrays (5 lessons, about 4 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 11 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check activities against your school's rules.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 1. Builds on grade 2: Adding and taking away within 100 and Hundreds, tens and ones to 1000

Big idea

When things come in equal groups, we can find the total without counting every one: 5 groups of 7 is 5 × 7. Putting the groups in rows makes an array, and turning an array round shows that 5 × 7 and 7 × 5 give the same total. Dividing works the other way: sharing 24 into 4 equal groups, or making groups of 4 from 24, and both can be found by asking "4 times what is 24?"

Outcomes

By the end of the unit most children can:

1. Read, write, compare and order numbers to 1000, and add or take away within 1000 with a method they can explain using hundreds, tens and ones.
2. Describe a collection of equal groups as "5 groups of 7" and write it as 5 × 7, and tell a short story that fits a multiplication like 5 × 7.
3. Build and draw arrays, write a multiplication for an array, and explain why turning an array round does not change the total (4 × 6 = 6 × 4).
4. Solve a division in both ways, sharing (24 shared into 4 equal groups is 6 in each group) and grouping (24 put into groups of 4 makes 6 groups), and write it as 24 ÷ 4 = 6.
5. Solve one-step story problems with equal groups and arrays within 100, and find the missing number in sentences like 8 × □ = 48 or □ = 18 ÷ 3.

Prior knowledge

The grade 2 units: hundreds, tens and ones to 1000; adding and taking away within 100 using tens and ones; skip-counting in 2s, 5s, 10s and 100s; odd and even numbers; and finding the total of a small array by adding equal rows (for example 4 + 4 + 4). Children still building these can use numbers to 30 and groups of 2, 5 and 10 in every lesson.

Lessons

Each lesson is about 45 minutes: a short whole-class start, paired work with counters or cubes, and a closing check. Split a lesson over two days if needed; the unit runs over about 4 weeks, so

each idea should come back in short daily practice (5 minutes of skip-counting, one array or one story problem).

1. Hundreds, tens and ones: a check of grade 2
2. Equal groups and the times sign
3. Arrays, and turning them round
4. Dividing: sharing and grouping
5. Story problems and missing numbers

Materials (whole class unless noted)

- Counters or linking cubes too large to swallow, about 60 per pair (every lesson), in two colours or two kinds of object so colour is not the only clue.
- Place-value blocks or bundles per pair: 6 hundreds (flats or ten towers of ten), 15 tens and 20 ones (lesson 1). Straw bundles wrapped with tape (no rubber bands, which may contain latex) work as well.
- A hundreds-tens-and-ones mat per pair, with raised lines (glued string) between the columns (lesson 1).
- Six paper plates or small trays per pair, for groups (lessons 2 and 4).
- Squared paper, 1 cm or larger, and a large-print or raised-line version (lessons 3 and 5); a sheet of card per pair for covering part of an array (lesson 3).
- A 10 by 10 pegboard or egg boxes per pair as an optional tactile array (lesson 3).
- Two sets of digit cards 0 to 9 per pair, so children can build and point to answers (every lesson).
- Story-problem cards for lesson 5 (see lesson 5), with a small picture on each card.
- Whiteboards and pens, or paper and pencils, for drawings and number sentences.

⚠ Safety and access

- Use counters and cubes too large to swallow; no rubber bands.
- Plates or trays, cube towers and raised lines let children who are blind or have low vision feel each group and each row; pegboards or egg boxes make arrays tactile.
- Pointing to digit cards, moving counters, sign, writing or a communication device all count as answers. Story problems are read aloud, so reading is not what is being checked.
- No public timing, races or times-table tests. Knowing products from memory is an end-of-year aim; this unit is about what multiplying and dividing mean.

Assessment

Observe during paired work and keep a class list with one column per outcome. A one-to-one check (about 5 minutes per child) during the fourth week:

- "What is 345 + 278? How did you work it out?" (623: 3 hundreds and 2 hundreds are 5 hundreds; 4 tens and 7 tens are 11 tens; 5 ones and 8 ones are 13 ones, which is 1 ten and 3 ones; so 6 hundreds, 2 tens and 3 ones.)
- Show 4 plates with 3 counters on each. "How many groups? How many in each group? Write it as a times sentence." (4 groups of 3; 4 × 3 = 12.)
- Show an array of 3 rows of 6. "Write a times sentence for it. What if I turn it round?" (3 × 6 = 18; turned round it is 6 rows of 3, 6 × 3 = 18, the same counters.)

- "Share 20 counters equally onto 5 plates. How many on each?" (4; 20 ÷ 5 = 4.) "Now put 20 counters into groups of 5. How many groups?" (4; 20 ÷ 5 = 4.)
- "Hen puts 6 eggs in each box. Hen fills 4 boxes. How many eggs?" (24; 4 × 6 = 24.) "What number goes in the box: 7 × □ = 35?" (5.)

Record yes, with help or not yet for each part. A child who gets the right total by counting in ones has the answer but not yet the equal-groups idea; note that rather than marking it wrong.

Sources

- Common Core State Standards for Mathematics, Grade 3 (read to check what is usually expected in grade 3, not to claim alignment), CCSSO PDF: https://learning.ccsso.org/wp-content/uploads/2022/11/Math_Standards1.pdf
    - Page 21, grade 3 introduction: the first critical area is "developing understanding of multiplication and division and strategies for multiplication and division within 100".
    - Page 23, 3.OA.A.1: "Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each."
    - 3.OA.A.2: interpret 56 ÷ 8 "as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each."
    - 3.OA.A.3: "Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities".
    - 3.OA.A.4: "Determine the unknown whole number in a multiplication or division equation relating three whole numbers."
    - 3.OA.B.5: "Apply properties of operations as strategies to multiply and divide", with the footnote "Students need not use formal terms for these properties."
    - 3.OA.B.6: "Understand division as an unknown-factor problem."
    - Page 24, 3.NBT.A.2: "Fluently add and subtract within 1000 using strategies and algorithms based on place value".

Known gaps and cautions

- 3.OA.C.7 (by the end of grade 3, know from memory all products of two one-digit numbers) is a whole-year aim; this unit starts it with skip-counting in 2s, 3s, 4s, 5s and 10s, and the year plan puts more times-table facts in term 2.
- Measurement quantities in story problems (3.OA.A.3), two-step problems (3.OA.D.8), the grouping property (associative) and splitting a times fact (distributive) are left for later terms. Rounding to the nearest 10 or 100 (3.NBT.A.1) is not taught here.
- Lesson 1 is a check of grade 2 work, not new teaching; if most children are secure, it can be shortened to one short session.
- The word "commutative" is the teacher's; children only need the idea and may say "turning it round". Children do learn the word "array".
- The names in story problems (Hen, Goat, Bear, Duck, Mouse, Crab) are the made-up Little Hill characters used in other units. Swap in names and objects that suit your class, but avoid real children's belongings or families.
- The lesson order, timings and examples are my choice, not taken from a source.
- Three other agents (Gemini 3.8 Flash at 4f59beb, reporting no errors; Gemini 4 Argon at 4f59beb and 4720d19, and Gemini 4 Carbon at 4720d19, each reporting the same two material-count errors) text-checked this unit on 2026-11-11. The errors (too few place-value blocks for 345 + 278, and 50 counters for 6 groups of 10) were fixed in ea1b95b, and Gemini 4 Argon and Gemini 4 Carbon re-checked that fix the same day and reported no

remaining errors. Those are text checks by AI agents, not a teacher review or classroom test.

Lesson 1: Hundreds, tens and ones: a check of grade 2

Unit overview - Next: Lesson 2

About 45 minutes.

Goal

Children show three-digit numbers with hundreds, tens and ones, compare them, and add or take away within 1000 with a method they can explain. This lesson checks the grade 2 work before multiplication starts; the teacher notes who needs more practice.

Materials

- Place-value blocks or bundles per pair: 6 hundreds, 15 tens and 20 ones.
- A hundreds-tens-and-ones mat per pair, with raised lines between the columns.
- Two sets of digit cards 0 to 9 per pair.
- Counters or linking cubes, for children who prefer to use them for ones.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Skip-counting. The class counts together in 10s from 40 to 150, then in 100s from 100 to 1000, then in 5s from 0 to 60. Children who prefer can tap the table or hold up digit cards instead of speaking.

✎ Main activity (32 min)

1. **Build and compare (10 min).** The teacher says a number; pairs build it on the mat with blocks, then make it with digit cards. Use 345, 278, 406 and 460. Ask: "Which is bigger, 406 or 460?" (460: both have 4 hundreds, and 6 tens is more than 0 tens.) "Put 345, 278 and 406 in order, smallest first." (278, 345, 406.)
2. **Add with blocks (12 min).** Pairs build 345 and 278 and push them together. Ones: 5 + 8 = 13, so swap 10 ones for 1 ten, leaving 3 ones. Tens: 4 + 7 + 1 = 12 tens, so swap 10 tens for 1 hundred, leaving 2 tens. Hundreds: 3 + 2 + 1 = 6. Total 623. Then pairs do 156 + 238 (394; one swap of ones) on their own and write how they did it in numbers or a drawing.
3. **Take away with blocks (10 min).** Pairs build 532 and take away 217. There are only 2 ones, so swap 1 ten for 10 ones (12 ones); 12 - 7 = 5 ones; 2 - 1 = 1 ten; 5 - 2 = 3 hundreds. Answer 315. Check by adding: 315 + 217 = 532. Then 400 - 150 (250) for pairs who are ready.

✓ Discussion questions (with answers)

- Why do we swap 10 ones for 1 ten? Ten ones and one ten are the same amount; the swap keeps the number the same but makes it easier to read.
- How can adding check a take-away? If 532 - 217 = 315, then 315 + 217 must make 532 again.
- Is 406 the same as 460? No: 406 has no tens and 6 ones; 460 has 6 tens and no ones.

✓ Closing check (8 min, with answers)

Each child answers on a whiteboard, with digit cards or by pointing on the mat: "Show 507 with blocks" (5 hundreds, 0 tens, 7 ones); "Which is bigger, 389 or 398?" (398); "345 + 278" (623). One child at a time quietly tells the teacher how they did the adding.

Vocabulary

hundreds, tens, ones, digit, swap (exchange), compare, add, take away

Differentiation

- **Support:** work within 100 with tens and ones only, then add hundreds.
- **Stretch:** find two different three-digit numbers that add to 623 with one swap, and explain how you know.
- The mat's raised lines let children feel the columns. Blocks can be counted by touch; digit cards can be read aloud by a partner or made in large print or braille.

⚠ Safety

Use blocks and counters too large to swallow. Tape bundles rather than using rubber bands, which may contain latex.

Teacher notes and misconceptions

- Some children read 406 as "forty-six". Building it with blocks and leaving the tens column empty helps them see the zero.
- Taking the smaller digit from the larger in each column (writing 532 - 217 as 325) is a common mistake. Checking by adding shows it is wrong.

Lesson 2: Equal groups and the times sign

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 45 minutes.

Goal

Children make equal groups, describe them as "4 groups of 3", write them as 4 × 3, find the total by skip-counting or repeated adding, and tell a short story that fits a multiplication.

Materials

- Six paper plates or small trays per pair.
- Counters or linking cubes, about 60 per pair, in two colours or two kinds of object.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Skip-counting in 2s to 20, in 5s to 50 and in 10s to 100. Children can say the numbers, tap them, or hold up digit cards.

✎ Main activity (32 min)

1. **Groups of (10 min).** The teacher puts 3 counters on each of 4 plates. "How many plates? How many on each plate?" Children say "4 groups of 3". Count in 3s together, touching each plate: 3, 6, 9, 12. Write 3 + 3 + 3 + 3 = 12, then show the short way: 4 × 3 = 12, read as "4 groups of 3" or "4 times 3". Then put 3 counters on one plate and 5 on another and ask: "Is this equal groups?" (No; the groups are not the same size.)

2. **Make it, write it (12 min).** Pairs build each of these with plates and counters, find the total and write the multiplication:

   - 5 groups of 2 (5 × 2 = 10).
   - 3 groups of 5 (3 × 5 = 15).
   - 6 groups of 10 (6 × 10 = 60).
   - 4 groups of 4 (4 × 4 = 16).

   Then the teacher writes 2 × 6 and pairs build it (2 plates of 6 = 12).

3. **Story time (10 min).** The teacher tells an example story, not from a source: "Duck has 3 baskets. Each basket has 5 apples. How many apples?" (3 × 5 = 15.) Pairs pick a multiplication from step 2 and make up their own short story about Little Hill characters, telling it aloud, drawing it or acting it with counters. The partner builds the story with plates to check it fits.

✓ Discussion questions (with answers)

- What makes groups "equal"? Every group has the same number of things.
- In 4 × 3, what does the 4 tell us and what does the 3 tell us? In this lesson, 4 is the number of groups and 3 is the number in each group.
- Why is 6 × 10 quick to work out? Counting in 10s six times is 10, 20, 30, 40, 50, 60.

✓ Closing check (8 min, with answers)

The teacher puts 3 counters on each of 4 plates in front of each child (or pair) in turn. The child says or shows how many groups (4), how many in each (3), the total (12) and the multiplication (4 × 3 = 12), with digit cards or on a whiteboard. Then: "Write 5 groups of 2 with the times sign" (5 × 2 = 10).

Vocabulary

equal groups, groups of, times, multiply, total, skip-count

Differentiation

- **Support:** use groups of 2, 5 and 10 only, and count every counter if needed before skip-counting.
- **Stretch:** find all the ways to put 12 counters into equal groups (1 × 12, 2 × 6, 3 × 4, 4 × 3, 6 × 2, 12 × 1).
- Plates with raised rims let children feel each group. Stories can be told, signed, drawn or acted; the child's own way counts.

⚠ Safety

Use counters too large to swallow.

Teacher notes and misconceptions

- Some children add the two numbers (4 × 3 = 7). Going back to plates and counters, and saying "4 groups of 3", usually fixes this.
- Different books read 4 × 3 as "4 groups of 3" or "3, 4 times". This unit uses "groups of" first; lesson 3 shows that both orders give the same total.

Lesson 3: Arrays, and turning them round

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 45 minutes.

Goal

Children build and draw arrays, write a multiplication for an array, and explain why turning an array round gives the same total, so 4 × 6 = 6 × 4.

Materials

- Counters or linking cubes, about 60 per pair, in two colours or two kinds of object.
- Squared paper, 1 cm or larger, and a large-print or raised-line version.
- A sheet of card per pair, for covering part of an array.
- Optional: a 10 by 10 pegboard or egg boxes per pair, as a tactile array.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Skip-counting in 3s to 30 and in 4s to 40, together. Children can say, tap or show the numbers with digit cards.

✎ Main activity (32 min)

1. **Rows of (10 min).** The teacher builds 3 rows of 6 counters. "How many rows? How many in each row?" This is an array: equal groups set out in rows. Count in 6s along the rows: 6, 12, 18, so 3 × 6 = 18. Now turn the whole array a quarter turn. "How many rows now? How many in each?" (6 rows of 3.) Count in 3s: 3, 6, 9, 12, 15, 18. Same counters, same total: 6 × 3 = 18.

2. **Build, turn and draw (12 min).** Pairs build each array, write both multiplications, then colour it on squared paper:

   - 2 rows of 5 (2 × 5 = 10 and 5 × 2 = 10).
   - 4 rows of 6 (4 × 6 = 24 and 6 × 4 = 24).
   - 3 rows of 7 (3 × 7 = 21 and 7 × 3 = 21).

   Children can use the pegboard or egg boxes instead of counters.

3. **What's under the card? (10 min).** One child builds an array and hides it under the card, then slides the card to show just one row and says how many rows there are. The partner works out the total (for example, one row of 5 showing and 4 rows altogether: 4 × 5 = 20), then lifts the card to check by counting. Swap roles.

✓ Discussion questions (with answers)

- Why does turning an array round not change the total? No counters are added or taken away; they are only looked at another way.
- If you know 3 × 7 = 21, what else do you know? 7 × 3 = 21.
- Is 5 × 2 the same as 5 + 2? No: 5 × 2 is 5 groups of 2, which is 10.

✓ Closing check (8 min, with answers)

Each child builds 3 rows of 6 (or the teacher builds it in front of them). The child says or shows the multiplication (3 × 6 = 18), then turns it round and gives the other one (6 × 3 = 18), with digit cards, a whiteboard or by pointing. Then: "2 × 9 = 18. What is 9 × 2?" (18).

Vocabulary

array, row, column, turn round, multiply, same total

Differentiation

- **Support:** use arrays with rows of 2, 5 or 10 and count along each row.
- **Stretch:** find every array that uses exactly 24 counters (1 × 24, 2 × 12, 3 × 8, 4 × 6 and each one turned round).
- The pegboard, egg boxes and raised-line squared paper let children feel rows and columns. Counters come in two colours or two kinds, so colour is not the only clue when rows are marked.

⚠ Safety

Use counters and pegs too large to swallow.

Teacher notes and misconceptions

- The idea that order does not change the answer is called the commutative property. This is the teacher's word only; the standards say children need not use formal terms for these properties.
- Some children count every counter each time. Ask them to count one row, then skip-count by rows.

Lesson 4: Dividing: sharing and grouping

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 45 minutes.

Goal

Children solve a division in two ways, sharing (how many in each group?) and grouping (how many groups?), write it with the division sign, and link it to a multiplication they know.

Materials

- Six paper plates or small trays per pair.
- Counters or linking cubes, about 60 per pair, in two colours or two kinds of object.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Quick multiplication from lesson 3: the teacher says "4 rows of 6"; children show the total (24) with digit cards, fingers or a whiteboard. Repeat with 3 rows of 5 (15) and 2 rows of 10 (20).

✎ Main activity (32 min)

1. **Sharing (10 min).** The teacher puts out 4 plates and 24 counters. "Share these fairly onto 4 plates." Deal one at a time onto each plate until none are left. Each plate has 6. Write 24 ÷ 4 = 6, read as "24 shared into 4 groups is 6 in each". Pairs then share 15 onto 3 plates (5 each) and 20 onto 5 plates (4 each).
2. **Grouping (10 min).** Start again with 24 counters, but now the question is different: "Put them in groups of 4. How many groups?" Make groups of 4 on plates until none are left: 6 groups. Write 24 ÷ 4 = 6 again, read as "24 in groups of 4 makes 6 groups". Pairs then make groups of 5 from 20 (4 groups) and groups of 2 from 12 (6 groups).
3. **Times or divide? (12 min).** For each division pairs find the answer both ways if they can, and write the multiplication that checks it:

    - 20 ÷ 5 = 4, because 5 × 4 = 20.
    - 18 ÷ 3 = 6, because 3 × 6 = 18.
    - 30 ÷ 10 = 3, because 10 × 3 = 30.
    - 16 ÷ 4 = 4, because 4 × 4 = 16.

    Then ask: "24 ÷ 4: what number times 4 makes 24?" (6.)

✓ Discussion questions (with answers)

- What is different about sharing and grouping? In sharing we know how many groups and find how many in each; in grouping we know how many in each and find how many groups.
- Why do both give the same answer for 24 ÷ 4? Both are about the same array: 4 groups of 6 and 6 groups of 4 both make 24.
- How can multiplying check a division? If 18 ÷ 3 = 6, then 3 × 6 must make 18.

✓ Closing check (8 min, with answers)

Each child (or pair, with the teacher watching) is given 20 counters and 5 plates. "Share 20 onto 5 plates. How many on each?" (4.) Then "Put 20 in groups of 5. How many groups?" (4 groups.) The child shows 20 ÷ 5 = 4 with digit cards or on a whiteboard.

Vocabulary

share, fairly, equal groups, divide, division sign, how many in each, how many groups

Differentiation

- **Support:** divide numbers to 20 by 2, 5 and 10, dealing one counter at a time.
- **Stretch:** share 13 counters onto 4 plates and explain what happens (3 each, with 1 left over; leftovers come in a later grade).
- Plates with raised rims let children feel each group. Children can deal counters by touch and count each plate aloud or by signing.

⚠ Safety

Use counters too large to swallow.

Teacher notes and misconceptions

- The same sign, ÷, is used for sharing and grouping. Children do not need to name which one they used, but should be able to show either with counters.
- Some children think the bigger number must go second (4 ÷ 24). Reading it aloud as "24 shared into 4" helps.

Lesson 5: Story problems and missing numbers

Unit overview - Previous: Lesson 4

About 45 minutes.

Goal

Children solve one-step story problems with equal groups and arrays within 100, choosing to multiply or divide, and find the missing number in sentences like 8 × □ = 48 or □ = 18 ÷ 3.

Materials

- Story-problem cards per pair, each with a small picture and the answer written small on the back. Six cards (examples written for this unit, not from a source; the characters live in the made-up town of Little Hill):
    1. Hen has 4 boxes. Each box holds 6 eggs. How many eggs?
    2. Goat plants carrots in 3 rows with 8 in each row. How many carrots?
    3. Bear shares 30 berries onto 5 plates. How many berries on each plate?
    4. Duck puts 28 crackers into bags of 4. How many bags?
    5. Mouse sets out 5 rows of chairs with 9 in each row. How many chairs?
    6. Crab has 40 shells and puts 10 in each bucket. How many buckets?
- Counters or linking cubes, about 60 per pair, in two colours or two kinds of object.
- Squared paper, 1 cm or larger, and a large-print or raised-line version.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

The teacher says a fact; children show the answer with digit cards, fingers or a whiteboard: 5 × 3 (15), 2 × 8 (16), 20 ÷ 4 (5), 10 × 7 (70).

✎ Main activity (32 min)

1. **Solve together (8 min).** Read card 1 aloud. "Is it equal groups? How many groups? How many in each?" (4 groups of 6.) Children solve it with counters, a drawing or skip-counting: 4 × 6 = 24 eggs. Then read card 3: "Do we know how many groups, or how many in each?" (5 groups; find how many in each), so 30 ÷ 5 = 6 berries.
2. **Story cards (14 min).** Pairs solve the other cards in any order, using counters, squared paper or a drawing, and write the number sentence. Answers: card 2, 3 × 8 = 24 carrots; card 4, 28 ÷ 4 = 7 bags; card 5, 5 × 9 = 45 chairs; card 6, 40 ÷ 10 = 4 buckets. The partner checks the back. A partner can read the cards aloud.

3. **Missing numbers (10 min).** The teacher writes a sentence with a box. Pairs find the missing number with counters or arrays and show it with digit cards:
    - 8 × □ = 48 (6).
    - 4 × □ = 20 (5).
    - □ × 3 = 27 (9).
    - □ = 18 ÷ 3 (6).
    - 35 ÷ 7 = □ (5).

    Ask: "How can a times fact help with 8 × □ = 48?" (Count in 8s until you reach 48: 8, 16, 24, 32, 40, 48 is six 8s.)

✓ Discussion questions (with answers)

- How do you know whether to multiply or divide? If we know how many groups and how many in each, we multiply to find the total; if we know the total and one of the others, we divide.
- What does the box mean in 8 × □ = 48? It stands for a number we do not know yet; here it is 6.
- Is card 2 about groups or an array? An array: rows of carrots. Rows work just like groups.

✓ Closing check (8 min, with answers)

One child at a time, with the teacher. The teacher reads aloud: "Hen has 4 boxes with 6 eggs in each. How many eggs?" (24.) Then shows 7 × □ = 35 and asks for the missing number (5). The child answers by saying, signing, pointing to digit cards, writing or using counters, and shows or tells how they got it.

Vocabulary

story problem, number sentence, multiply, divide, missing number, unknown

Differentiation

- **Support:** use cards 1, 3 and 6 with counters or a drawing; missing numbers with 2, 5 and 10 only.
- **Stretch:** write a story card of your own for 6 × 7 and one for 42 ÷ 6 (both use 42), and swap with another pair.
- Cards can be read aloud by a partner or made in large print or braille. Raised-line squared paper lets children feel rows of an array.

⚠ Safety

Use counters too large to swallow.

Teacher notes and misconceptions

- Children often look for a key word ("each", "share") instead of thinking about the story. Ask them to act it out or draw it first.
- Children may write 4 ÷ 28 for card 4. Reading it aloud as "28 in bags of 4" helps.
- Fluency with all times facts within 100 is a whole-year aim; keep up short daily practice after this unit.

Grade 3 Mathematics: Fractions (5 lessons, about 4 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check activities against your school's rules.
>
> Text-checked by two other agents (Gemini 3.8 Flash and Gemini 4 Argon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on grade 2 Measuring, time, money and shapes (halves, thirds and fourths of shapes) and grade 3 Equal groups and arrays

Big idea

A fraction is a number made from equal parts of one whole. Split a strip into 4 equal parts and each part is one quarter, written 1/4; three of those parts make 3/4. Fractions sit on the number line between whole numbers, two fractions can name the same amount (1/2 = 2/4), and we can only compare fractions fairly when they are parts of the same whole.

Outcomes

By the end of the unit most children can:

1. Explain that a fraction needs equal parts of one whole, and name one half, one third, one quarter, one sixth and one eighth (1/2, 1/3, 1/4, 1/6, 1/8) of a strip or a shape.
2. Build, read and write fractions such as 3/4 as "3 parts of size 1/4", and know that 4/4 is one whole and that 3 wholes can be written 3/1.
3. Place fractions on a number line from 0 to 1, and from 0 to 2 in quarters, by marking off equal lengths from 0.
4. Compare two fractions with the same top number or the same bottom number, write the result with >, < or =, explain it with strips, and say why the comparison only works when both fractions are parts of the same whole.
5. Find simple equal fractions, such as 1/2 = 2/4 and 2/3 = 4/6, and show why with strips or a number line.
6. Give more times-table facts within 100 (2s, 3s, 4s, 5s, 6s, 8s and 10s), from memory or with a quick strategy such as doubling.

Prior knowledge

The grade 2 shapes lesson: splitting circles and rectangles into two, three or four equal shares and calling them halves, thirds and fourths. The grade 3 term 1 unit: equal groups, arrays and skip-counting in 2s, 3s, 4s, 5s and 10s. Children who are not yet secure can work with halves and quarters only in every lesson.

Lessons

Each lesson is about 45 minutes: a 5-minute times-table start, paired work with paper strips or fraction strips, and a closing check. Split a lesson over two days if needed; the unit runs over

about 4 weeks, so each idea should come back in short daily practice (one times-table fact, one fraction to build or one comparison).

1. Equal parts and unit fractions
2. Counting in unit fractions
3. Fractions on a number line
4. Comparing fractions
5. Equal fractions and fraction stories

Materials (whole class unless noted)

- Counters or linking cubes too large to swallow, about 60 per pair (every lesson, for the times-table start).
- Two sets of digit cards 0 to 9 per pair (every lesson).
- Whiteboards and pens, or paper and pencils (every lesson).
- Plain paper strips 24 cm long and about 4 cm wide, 5 per child, two of them pre-marked with pencil lines in thirds (every 8 cm) and sixths (every 4 cm) (lesson 1).
- Paper squares about 15 cm across, 3 per child (lesson 1) and 1 more per child (lesson 5).
- Three check strips made by the teacher, each 24 cm long, with the lines drawn in thick marker and gone over with glued string so they can be felt (lesson 1, and the assessment): strip A split into 4 equal parts with one part marked by a shaded square and a sticker; strip B split into 4 parts of different sizes; strip C split into 3 equal parts.
- A fraction-strip set per pair (lessons 2 to 5): one whole, 2 halves, 3 thirds, 4 quarters, 6 sixths and 8 eighths, all cut from 24 cm card strips so the pieces line up. Write the fraction on every piece in large print and add a raised mark (a glued string line or a puffy-paint dot pattern) for each kind of piece, so colour is not the only clue.
- Three extra whole card strips, 24 cm long, per pair (lesson 2).
- A number-line sheet per pair (lesson 3): four blank lines from 0 to 1, each 24 cm long, and one line from 0 to 2, 48 cm long (two sheets taped end to end), with a large-print or raised-line version. Rulers and pencils.
- A check line per child (lesson 3): a 24 cm line from 0 to 1 with tick marks at each quarter and no labels, in print and raised-line versions. One more check line marked in thirds, for the assessment.
- A short card strip 12 cm long and a long card strip 48 cm long, for the teacher (lesson 4).
- A set of 11 fraction cards per pair, with raised numbers (lesson 4; see lesson 4).
- Large >, < and = cards per pair, with raised outlines (lessons 4 and 5).
- Six story cards for lesson 5 (see lesson 5), each with a small picture.

⚠ Safety and access

- Use counters and cubes too large to swallow. Paper and card only; no scissors are needed, because the strip sets are cut in advance by an adult.
- Raised lines on the check strips, check lines and number lines, and raised marks on every strip piece, let children who are blind or have low vision feel the parts. Laying pieces end to end is a way to compare by touch.
- Folding can be hard for some hands: a partner or adult can fold while the child says where the fold goes, or the child uses pre-marked strips.
- Pointing to digit cards or strips, moving pieces, sign, writing or a communication device all count as answers. Story cards are read aloud, so reading is not what is being checked.

- No public timing, races or times-table tests. The times-table start is a short shared practice, and knowing every fact from memory is an end-of-year aim.
- No real food: the loaves, crackers and cakes in story cards are pretend.

Assessment

Observe during paired work and keep a class list with one column per outcome. A one-to-one check (about 5 minutes per child) during the fourth week, with the fraction-strip set, digit cards and the comparison cards to hand:

- Show check strips A and B. "Which strip shows quarters? Why not the other one?" (Strip A: its 4 parts are equal. Strip B has 4 parts, but they are not the same size.)
- "Build 5/6 with your strips. How many sixths make one whole? What is 4/4 the same as?" (5 sixth pieces; 6; one whole.)
- Give the check line in thirds. "Point to where 2/3 goes." (The second tick from 0.)
- "Which is bigger, 3/8 or 3/4? Put the sign between them." (3/4 is bigger: 3/8 < 3/4, because eighths are smaller pieces than quarters.)
- "Use quarter pieces to make a fraction equal to 1/2." (2/4.)
- "What is 4 × 6? What is 8 × 6? How did you work it out?" (24; 48, for example by doubling 24.)

Record yes, with help or not yet for each part. A child who says "3/8 is bigger because 8 is bigger than 4" is using whole-number thinking; note it and come back to laying the pieces side by side.

Sources

- Common Core State Standards for Mathematics, Grade 3 (read to check what is usually expected in grade 3, not to claim alignment), CCSSO PDF: https://learning.ccsso.org/wp-content/uploads/2022/11/Math_Standards1.pdf
  - Page 21, grade 3 introduction: the second critical area is "developing understanding of fractions, especially unit fractions (fractions with numerator 1)", and "Students understand that the size of a fractional part is relative to the size of the whole."
  - Page 24, 3.NF.1: "Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b."
  - 3.NF.2: "Understand a fraction as a number on the number line; represent fractions on a number line diagram."
  - 3.NF.3a: "Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line."
  - 3.NF.3b: "Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3."
  - 3.NF.3c: "Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers."
  - 3.NF.3d: "Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole."
  - Page 24, footnote 5: "Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8."
  - Page 26, 3.G.2: "Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole."

    - Page 23, 3.OA.C.7: "By the end of Grade 3, know from memory all products of two one-digit numbers."

Known gaps and cautions

- Times-table facts get only the 5-minute start of each lesson. The 7s and 9s are not practised here, and division facts appear only once (lesson 5), so 3.OA.C.7 still needs daily practice through the rest of the year.
- Splitting shapes into equal areas (3.G.2) is touched on in lessons 1 and 5 with folded paper squares; the year plan gives it more time in term 3, together with area.
- Fractions greater than one go only as far as 8/4 on the 0-to-2 line. Mixed numbers and adding fractions are not taught; they usually come in grade 4.
- Comparing fractions with neither the same top nor the same bottom number is left out, as the standard only asks for the two simpler cases.
- "Top number" and "bottom number" are my choice of words for children; the standards use "numerator" and "denominator", and teachers may introduce those words if they wish.
- The names in story cards (Hen, Goat, Bear, Duck, Mouse, Crab) are the made-up Little Hill characters used in other units. Swap in names and objects that suit your class.
- The lesson order, timings, strip sizes and examples are my choice, not taken from a source.
- Two other agents text-checked this unit on 2026-11-12 and reported no errors: Gemini 3.8 Flash (at 0b7f2b9) and Gemini 4 Argon (at 8c474d7). Those are text checks by AI agents, not a teacher review or classroom test.

Lesson 1: Equal parts and unit fractions

Unit overview - Next: Lesson 2

About 45 minutes.

Goal

Children learn that a fraction needs equal parts of one whole, fold strips into halves, quarters and eighths, mark thirds and sixths, and name one part of each as 1/2, 1/4, 1/8, 1/3 or 1/6.

Materials

- Counters or linking cubes, about 60 per pair.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.
- Plain paper strips 24 cm long and about 4 cm wide, 5 per child, two of them pre-marked with pencil lines in thirds (every 8 cm) and sixths (every 4 cm).
- Paper squares about 15 cm across, 3 per child.
- Three check strips made by the teacher (see the unit Materials): strip A in 4 equal parts with one part shaded and marked with a sticker; strip B in 4 parts of different sizes; strip C in 3 equal parts.

Steps

✎ Opening (5 min)

Times-table start: the 2s. "Two times a number is double the number." Pairs make 3 groups of 2 with counters, then 7 groups of 2 and 9 groups of 2, and show the totals with digit cards (2 × 3 = 6, 2 × 7 = 14, 2 × 9 = 18).

✎ Main activity (32 min)

1. **Is it fair? (8 min).** The teacher folds one paper strip in half, opens it and lays the two parts against each other: the same size. Each part is one half, written 1/2. The bottom number says how many equal parts the whole is split into; the top number says how many of those parts we mean. Now show check strip B. "This strip has 4 parts. Is each part a quarter?" (No: the parts are not the same size.) Then strip A: "Is each part a quarter now?" (Yes: 4 equal parts.)

2. **Fold and name (14 min).** Each child folds and labels their strips, writing the fraction on each part:

    - Fold once: 2 equal parts, each 1/2.
    - Fold in half, then in half again: 4 equal parts, each 1/4.
    - Fold in half three times: 8 equal parts, each 1/8.
    - On the strip marked in thirds, fold along the lines: 3 equal parts, each 1/3.
    - On the strip marked in sixths, fold along the lines: 6 equal parts, each 1/6.

Children line the strips up and say what they notice. (The more parts the whole is split into, the smaller each part is.)

3. **Same square, different quarters (10 min).** Each child folds one paper square into 4 equal parts in three ways: in half and in half again the same way (4 long rectangles); in half one way and then the other way (4 small squares); and corner to corner twice (4 triangles). The parts look different, but in each square every part is 1/4 of the square, because the square is split into 4 equal parts.

✓ Discussion questions (with answers)

- Which is bigger, 1/2 or 1/8 of the same strip? 1/2: the strip is split into fewer parts, so each part is bigger.
- If I cut a strip into 3 pieces of different sizes, is each piece a third? No: thirds have to be 3 equal parts.
- Is a long rectangle quarter the same amount of paper as a triangle quarter of the same square? Yes: each is 1 of 4 equal parts of the same square.

✓ Closing check (8 min, with answers)

Show the three check strips. Each child points to the strip that shows quarters (strip A), names the marked part ("one quarter", 1/4) and names one part of strip C ("one third", 1/3), by saying, signing, pointing to a written fraction or writing it on a whiteboard. Then: "2 × 7?" (14).

Vocabulary

equal parts, whole, fraction, half, third, quarter, sixth, eighth, top number, bottom number

Differentiation

- **Support:** fold halves and quarters only, and compare each part against the whole strip.
- **Stretch:** fold a strip into sixths by first folding in half and then into thirds, and check it against the pre-marked strip.
- Check strips have glued-string lines and a sticker on the marked part, so the parts can be felt. A partner or adult can fold while the child says where the fold goes.

⚠ Safety

Use counters too large to swallow. Paper only; no scissors.

Teacher notes and misconceptions

- Some children call any piece a "half", for example the bigger half. Keep asking "Are the parts equal?"

- Some children think 1/8 is bigger than 1/2 because 8 is bigger than 2. The folded strips are the answer: lay them side by side.
- The standards use "numerator" (top number) and "denominator" (bottom number). Use those words too if your school does.

Lesson 2: Counting in unit fractions

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 45 minutes.

Goal

Children build fractions such as 3/4 from unit fractions ("3 parts of size 1/4"), see that 4/4 makes one whole, and write whole numbers as fractions such as 3 = 3/1.

Materials

- Counters or linking cubes, about 60 per pair.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.
- A fraction-strip set per pair: one whole, 2 halves, 3 thirds, 4 quarters, 6 sixths and 8 eighths, each piece labelled in large print with a raised mark.
- Three extra whole card strips, 24 cm long, per pair.

Steps

✎ Opening (5 min)

Times-table start: the 4s, by doubling the 2s. "2 × 3 = 6, so 4 × 3 is double 6, which is 12." Pairs check with counters, then do 4 × 6 (double 12 is 24) and 4 × 8 (double 16 is 32), showing answers with digit cards.

✎ Main activity (32 min)

1. **Counting quarters (10 min).** The teacher lays the whole strip down and puts quarter pieces on top of it one at a time, and the class counts: "one quarter, two quarters, three quarters, four quarters". Write 1/4, 2/4, 3/4 and 4/4. "3/4 means 3 parts, and each part is 1/4." Four quarters cover the whole strip exactly, so 4/4 = 1.
2. **Build it (12 min).** Pairs build each fraction on top of their whole strip, say how many of which piece they used, and write it:
    - 2/3 (2 third pieces).
    - 5/6 (5 sixth pieces).
    - 3/8 (3 eighth pieces).
    - 6/6 (6 sixth pieces, which cover the whole: 6/6 = 1).
    - 2/2 (2 half pieces, which cover the whole: 2/2 = 1).
3. **Wholes as fractions (10 min).** Pairs lay their three extra whole strips in a row. "How many wholes?" (3.) "If each part is one whole, we have 3 parts of size one whole: 3/1." So 3 = 3/1. Ask: "What would 6/1 be?" (6 wholes, so 6.) "How many eighths make one whole?" (8, so 8/8 = 1.)

✓ Discussion questions (with answers)

- Is 4/4 more than, less than or the same as 1? The same: four quarters cover the whole.
- How many sixths make one whole? 6.
- What does the 3 in 3/8 tell us, and what does the 8 tell us? 3 is how many parts we have; 8 is how many equal parts make the whole.

✓ Closing check (8 min, with answers)

With the fraction-strip set in front of them, each child shows 3/4 (three quarter pieces), answers "How many eighths make one whole?" (8) and "What is 2/2 the same as?" (one whole, 1), and writes "three quarters" as a fraction on a whiteboard or picks the digit cards 3 and 4 (3/4). Then: "4 × 6?" (24).

Vocabulary

unit fraction, whole, three quarters, five sixths, count in quarters

Differentiation

- **Support:** build only with halves and quarters, and count the pieces aloud while touching each one.
- **Stretch:** "Which is more, 7/8 or one whole? How many more eighths would make one whole?" (one whole; 1 more eighth.)
- Raised marks on each piece let children check the piece by touch; pieces can be laid end to end and felt against the whole strip.

⚠ Safety

Use counters too large to swallow.

Teacher notes and misconceptions

- Some children read 3/4 as "three and four" or "three fours". Model the words "three quarters" every time.
- Some children think a fraction must always be less than 1. 4/4, 6/6 and 3/1 show that is not true; lesson 3 puts fractions past 1 on a number line.

Lesson 3: Fractions on a number line

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 45 minutes.

Goal

Children place fractions on a number line by treating the length from 0 to 1 as the whole and marking off equal lengths from 0, go past 1 in quarters, and see that two fractions at the same point are equal.

Materials

- Counters or linking cubes, about 60 per pair.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.
- A fraction-strip set per pair: one whole, 2 halves, 3 thirds, 4 quarters, 6 sixths and 8 eighths, each piece labelled in large print with a raised mark.
- A number-line sheet per pair: four blank lines from 0 to 1, each 24 cm long, and one line from 0 to 2, 48 cm long, in print and raised-line versions.
- Rulers and pencils.
- A check line per child: a 24 cm line from 0 to 1 with tick marks at each quarter and no labels, in print and raised-line versions.

Steps

✎ Opening (5 min)

Times-table start: the 10s and 5s. "5 times a number is half of 10 times it." 10 × 7 = 70, so 5 × 7 = 35; 10 × 4 = 40, so 5 × 4 = 20; then 6 × 5 = 30. Pairs show answers with digit cards and can check 5 × 4 with counters.

✎ Main activity (32 min)

1. **From strip to line (10 min).** The teacher lays the whole strip along a 0-to-1 line: 0 at the start, 1 at the end. "The whole is the distance from 0 to 1." Lay quarter pieces along the line from 0 and make a tick at the end of each one: 1/4, 2/4, 3/4 and 4/4, which lands on 1. "The number 1/4 is the point at the end of the first quarter: it is 1/4 of the way from 0 to 1."

2. **Make your own lines (14 min).** Pairs mark their four 0-to-1 lines by laying pieces from 0 and ticking the end of each piece:

    - Line 1 in halves: 1/2, 2/2.
    - Line 2 in quarters: 1/4, 2/4, 3/4, 4/4.
    - Line 3 in thirds: 1/3, 2/3, 3/3.
    - Line 4 in eighths: 1/8 to 8/8.

Then the 0-to-2 line in quarters: lay the 4 quarter pieces from 0 to 1, tick each end, then move them along to go from 1 to 2. Label 0, 1/4, 2/4, 3/4, 4/4 (also 1), 5/4, 6/4, 7/4, 8/4 (also 2). "5/4 is one quarter more than 1."

3. **Same point (8 min).** Pairs put the halves line under the quarters line with the 0s lined up. "What is at the same point as 1/2?" (2/4.) So 1/2 and 2/4 are equal: the same point on the line. Do the same with the quarters and eighths lines (1/4 and 2/8; 2/4 and 4/8). Also 4/4, 3/3 and 1 are all at the same point.

✓ Discussion questions (with answers)

- Where is 4/4 on the line? At 1.
- Is 5/4 more or less than 1? More: it is one quarter past 1.
- Which is further from 0, 1/3 or 1/8? 1/3, because thirds are longer pieces than eighths.

✓ Closing check (8 min, with answers)

Give each child a check line. The child points to where 3/4 goes (the third tick from 0) and where 1/4 goes (the first tick), then answers "What other fraction is at the same point as 1?" (4/4), by pointing, saying, signing or writing on a whiteboard. Then: "5 × 7?" (35).

Vocabulary

number line, point, tick mark, distance from 0, past 1, equal, same point

Differentiation

- **Support:** mark only halves and quarters, laying each piece from 0 every time.
- **Stretch:** on the 0-to-2 line, where would 3/2 go? (At 6/4, half way between 1 and 2.)
- Raised-line sheets let children feel each line and tick. Laying the strip pieces along the line works by touch as well as by sight.

⚠ Safety

Use counters too large to swallow. Rulers and pencils stay on the desk.

Teacher notes and misconceptions

- Some children write 1/4 at 0. Remind them that 0 is the start and 1/4 is the end of the first piece.
- Some children count tick marks including 0, so they put 3/4 at the second tick. Count the pieces (spaces), not the marks.
- The lines must all be the same length as the whole strip, or the pieces will not fit; this is the "same whole" idea that lesson 4 comes back to.

Lesson 4: Comparing fractions

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 45 minutes.

Goal

Children compare two fractions with the same bottom number or the same top number by reasoning about the size of the pieces, record the result with >, < or =, and explain why the comparison only works for parts of the same whole.

Materials

- Counters or linking cubes, about 60 per pair.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.
- A fraction-strip set per pair: one whole, 2 halves, 3 thirds, 4 quarters, 6 sixths and 8 eighths, each piece labelled in large print with a raised mark.
- Large >, < and = cards per pair, with raised outlines.
- A short card strip 12 cm long and a long card strip 48 cm long, for the teacher.
- A set of 11 fraction cards per pair, in large print with the numbers also raised (glued string or puffy paint): 1/2, 1/3, 1/4, 1/6, 1/8, 2/3, 2/8, 3/4, 3/8, 5/6, 5/8.

Steps

✎ Opening (5 min)

Times-table start: the 3s and 6s. "6 times a number is double 3 times it." 3 × 4 = 12, so 6 × 4 = 24; 3 × 7 = 21, so 6 × 7 = 42. Pairs show answers with digit cards and can build 3 × 4 and 6 × 4 with counters.

✎ Main activity (32 min)

1. **Same bottom number (8 min).** Pairs build 3/8 and 5/8 side by side. "The pieces are the same size, so more pieces is more." 5/8 is bigger than 3/8, written 5/8 > 3/8, and 3/8 < 5/8. Children place the > or < card between the two rows of pieces. Recall the signs from grade 1: the open side faces the bigger number.
2. **Same top number (10 min).** Pairs build 1/3 and 1/6 side by side. "Which piece is longer?" (1/3.) "The bigger the bottom number, the more pieces the whole is cut into, so the smaller each piece is." 1/3 > 1/6. Then 2/3 and 2/8: two pieces each, but thirds are longer, so 2/3 > 2/8.
3. **Same whole? (4 min).** The teacher folds the short strip in half and the long strip into quarters, and holds up one half of the short strip next to one quarter of the long strip. "1/2 is bigger than 1/4, isn't it? So why is this quarter longer?" (The wholes are different sizes: half of 12 cm is 6 cm, a quarter of 48 cm is 12 cm.) We can only compare fractions fairly when they are parts of the same whole.

4. **Compare game (10 min).** The fraction cards go face down. A child turns over two cards. If the two fractions share a top number or a bottom number, the pair builds both with their strips, puts the right sign card between the two fraction cards and says why. If they share neither, put one card back, mix the cards and turn over another. Swap turns.

✓ Discussion questions (with answers)

- Why is 1/6 smaller than 1/3 when 6 is bigger than 3? The whole is cut into 6 pieces instead of 3, so each piece is smaller.
- 3/4 or 3/8: which is bigger, and why? 3/4: both have 3 pieces, and quarters are bigger pieces than eighths.
- Is half always bigger than a quarter? Only when both are parts of the same whole.

✓ Closing check (8 min, with answers)

Each child may use their strips. "Which is bigger, 1/6 or 5/6?" (5/6.) "Put the sign card between 1/4 and 1/8." (1/4 > 1/8.) "Hen eats half of a small pretend cake and Goat eats a quarter of a very big pretend cake. Hen says, 'I ate more, because 1/2 is more than 1/4.' Is Hen sure to be right?" (No: the cakes are different sizes, so we cannot tell without seeing them.) Answers can be said, signed, pointed to or written. Then: "6 × 4?" (24).

Vocabulary

compare, bigger, smaller, greater than, less than, equal to, same whole, same top number, same bottom number

Differentiation

- **Support:** compare only unit fractions (1/2, 1/3, 1/4, 1/6, 1/8), always building both.
- **Stretch:** "Put 1/2, 1/3, 1/4, 1/6 and 1/8 in order from smallest to biggest and explain the pattern." (1/8, 1/6, 1/4, 1/3, 1/2: the bigger the bottom number, the smaller the piece.)
- Fraction cards and sign cards have raised numbers and outlines. Pieces laid side by side from the same starting edge can be compared by touch.

⚠ Safety

Use counters too large to swallow.

Teacher notes and misconceptions

- The most common error is "1/8 is bigger than 1/3 because 8 is bigger than 3". Building both is the answer, every time.
- The 11 fraction cards were chosen so that any allowed pair can be built with one strip set (for example 5/8 and 3/8 need exactly 8 eighths).

- Comparing fractions with different top and bottom numbers, such as 2/3 and 3/4, is left for later grades.

Lesson 5: Equal fractions and fraction stories

Unit overview - Previous: Lesson 4

About 45 minutes.

Goal

Children find simple equal fractions, such as 1/2 = 2/4 = 4/8 and 2/3 = 4/6, by matching lengths, and use fractions to solve short story problems.

Materials

- Counters or linking cubes, about 60 per pair.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.
- A fraction-strip set per pair: one whole, 2 halves, 3 thirds, 4 quarters, 6 sixths and 8 eighths, each piece labelled in large print with a raised mark.
- Large >, < and = cards per pair, with raised outlines.
- Six story cards (below), each with a small picture.
- Paper squares about 15 cm across, 1 per child.

Steps

✎ Opening (5 min)

Times-table start: the 8s, by doubling the 4s. 4 × 6 = 24, so 8 × 6 = 48; 4 × 7 = 28, so 8 × 7 = 56. Then one division from a fact: "8 × 5 = 40, so what is 40 ÷ 5?" (8.) Pairs show answers with digit cards and can check 8 × 5 with counters.

✎ Main activity (32 min)

1. **Same length, different names (12 min).** Pairs lay one half piece on the table, then find other pieces that make exactly the same length: 2 quarters, then 4 eighths. They put = cards between them and write 1/2 = 2/4 = 4/8. Then:

    - 1/3 = 2/6 (2 sixth pieces match 1 third piece).
    - 2/3 = 4/6.
    - 3/4 = 6/8.

    "Equal fractions are the same size, even though the numbers are different."

2. **Fraction stories (14 min).** The teacher reads each story card aloud. Pairs build it with strips or draw it, then answer:

    - Card 1: Hen cuts a long pretend loaf into 4 equal pieces. Goat eats 1 piece. What fraction of the loaf did Goat eat? How much is left? (1/4; 3/4.)
    - Card 2: Bear's fence has 8 equal parts. Bear paints 5 parts. What fraction is painted? What fraction is not painted yet? (5/8; 3/8.)

- Card 3: Duck and Mouse have two ribbons the same length. Duck cuts one ribbon into 3 equal pieces, and Mouse cuts the other into 6 equal pieces. Each gives away 1 piece. Who gave away more ribbon? (Duck: 1/3 > 1/6.)
- Card 4: Crab walks 2/4 of the way along the path. Goat walks 1/2 of the way along the same path. Who walked further? (Neither: 2/4 = 1/2.)
- Card 5: The school garden has 6 equal beds, and all 6 beds have flowers. What fraction of the garden has flowers? (6/6, which is one whole garden.)
- Card 6: Mouse has 3 whole pretend crackers. Write 3 as a fraction. (3/1.)

3. **Half of a square (6 min).** Each child folds a paper square in half, then in half again. "The first fold made halves. What are the parts now?" (Quarters.) "How many quarters cover one half?" (2.) So 1/2 of the square = 2/4 of the square.

✓ Discussion questions (with answers)

- Is 1/2 equal to 2/4 even though the numbers are different? Yes: they are the same length, and the same point on the number line.
- How many eighths are the same as 3/4? 6.
- Card 4: why is it fair to compare Crab and Goat? They walk along the same path, so it is the same whole.

✓ Closing check (8 min, with answers)

With the fraction-strip set, each child shows a fraction equal to 1/3 (2/6) and shows 1/2 using eighths (4/8). The teacher then lays 3 quarter pieces on the whole strip: "What fraction of the strip is covered?" (3/4.) Answers can be shown with pieces, said, signed, pointed to or written. Then: "40 ÷ 5?" (8).

Vocabulary

equal fractions, same size, same length, the same as, story problem

Differentiation

- **Support:** find only 1/2 = 2/4, and use cards 1, 4 and 6 with an adult reading each step.
- **Stretch:** find every fraction in the strip set that is equal to 1/2 (2/4, 3/6, 4/8), and explain why there is no number of thirds equal to 1/2. (Thirds do not line up with the half mark: one third is too short and two thirds are too long.)
- Matching lengths works by touch: lay the pieces from the same starting edge and feel whether the ends line up.

⚠ Safety

Use counters too large to swallow. The loaf, crackers and garden are pretend; no real food.

Teacher notes and misconceptions

- Some children think equal fractions must use the same numbers. Keep going back to "Is it the same length?"
- Avoid rules such as "multiply top and bottom by the same number" at this stage; the standards ask children to explain equal fractions with a model.
- Story names are the made-up Little Hill characters used in other units.

Grade 3 Mathematics: Area and Shapes (5 lessons, about 4 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check activities against your school's rules.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on grade 2 Measuring, time, money and shapes (measuring in centimetres and metres; naming flat shapes) and grade 3 Equal groups and arrays and Fractions

Big idea

Area is how much flat space a shape covers. We measure it by covering the shape with equal squares, with no gaps and no overlaps, and counting them. When the squares sit in rows, as in a rectangle, we do not need to count them one by one: 4 rows of 6 squares is $4 \times 6 = 24$ squares. A shape can be split into rectangles and the areas added. Shapes can also be sorted by what they have in common, and a shape can be split into parts with equal areas, each part a fraction of the whole.

Outcomes

By the end of the unit most children can:

1. Explain area as the amount of flat space a shape covers, and measure it by covering the shape with equal squares, with no gaps and no overlaps.
2. Find areas by counting square centimetres on squared paper, and use the words "square centimetres" and "square metres".
3. Find the area of a rectangle by tiling it, explain why it is the same as multiplying the two side lengths, and multiply side lengths to solve story problems.
4. Find the area of a shape made of rectangles (such as an L shape) by splitting it into rectangles and adding their areas, and show that a 6 by 7 rectangle can be split into a 6 by 5 and a 6 by 2 rectangle.
5. Sort four-sided shapes, explain that squares, rectangles and rhombuses are all quadrilaterals, and draw a quadrilateral that is none of these.
6. Split a shape into parts with equal areas and name each part as a unit fraction of the whole, such as 1/4.

Prior knowledge

Grade 2: measuring lengths with a ruler in centimetres, and naming triangles, squares, rectangles, pentagons and hexagons. Grade 3 term 1: arrays, rows and columns, and multiplication as equal groups. Grade 3 term 2: unit fractions as equal parts of one whole. Children who are not yet secure with multiplication can count the squares in rows (skip-counting) in every lesson; the tiles are always there.

Lessons

Each lesson is about 45 minutes: a 5-minute times-table start, paired work with paper squares, tiles or squared paper (32 minutes, ending with a short class discussion), and an 8-minute closing check. Split a lesson over two days if needed; the unit runs over about 4 weeks, so each idea should come back in short daily practice (one rectangle to tile, one area to work out, or one shape to sort).

1. Covering a shape: what is area?
2. Square centimetres and square metres
3. Rows of squares: area and multiplying
4. Splitting shapes and adding areas
5. Sorting four-sided shapes and sharing areas fairly

Materials (whole class unless noted)

- Counters or linking cubes too large to swallow, about 60 per pair (every lesson, for the times-table start).
- Whiteboards and pens, or paper and pencils (every lesson).
- Three card rectangles per pair, cut in advance by an adult and labelled on the back (lesson 1): A, 16 cm by 12 cm; B, 24 cm by 8 cm; C, 20 cm by 12 cm.
- 20 paper squares per pair, each 4 cm by 4 cm, cut in advance (lesson 1).
- 10 paper circles per pair, each 4 cm across, cut in advance (lesson 1).
- Centimetre squared paper, 2 sheets per child (lessons 2 and 4), and a shape sheet per pair with five shapes drawn on centimetre squared paper (lesson 2; see lesson 2).
- One 4 cm paper square from lesson 1 per pair (lesson 2).
- Four metre sticks and masking tape to stick down a 1 m by 1 m square on the floor (lesson 2).
- Square tiles 2 cm across (plastic or card, too large to swallow), about 50 per pair (lessons 3 and 4).
- A set of four rectangle cards per pair, each the right size to be covered by the 2 cm tiles (lesson 3; see lesson 3).
- Six Little Hill garden cards (lesson 3; see lesson 3).
- Coloured pencils, two colours per child (lesson 4).
- An L-shape sheet per pair, drawn on centimetre squared paper with the side lengths written along the edges (lesson 4; see lesson 4).
- A set of twelve shape cards per pair, cut in advance (lesson 5; see lesson 5).
- Two sorting hoops or two large loops of string per pair, and two label cards: "4 square corners" and "4 sides the same length" (lesson 5).
- For the assessment: a card 6 cm by 10 cm, and two check shapes drawn on centimetre squared paper (see Assessment).
- Paper squares 15 cm across, 3 per child, and rulers (lesson 5).
- For blind or low-vision children (all lessons): squares, tiles and circles that can be felt; raised-line squared paper (or a grid of glued string lines) with large-print numbers; shape cards with raised outlines and a Braille or large-print label.

⚠ Safety and access

- Tiles, counters and cubes must be too large to swallow. All cards, squares and circles are cut in advance by an adult, so no scissors are needed.

- The 1 m square in lesson 2 is made with masking tape stuck down flat on the floor, so nobody trips on loose sticks. Metre sticks are carried upright and put down, never waved.
- Nobody measures a person, and nobody's body, desk space or home is used as an example. The stories use made-up Little Hill gardens.
- Raised-line squared paper, tactile tiles and raised shape outlines let children who are blind or have low vision count squares and sides by touch. Laying tiles in rows is a way to "see" a rectangle's area with the hands.
- Placing tiles can be hard for some hands: a partner or adult can place them while the child says where they go, or the child counts squares already drawn on paper.
- Pointing, placing tiles, sign, writing or a communication device all count as answers. Story cards are read aloud, so reading is not what is being checked.
- No public timing, races or times-table tests. The times-table start is a short shared practice.

Assessment

Observe during paired work and keep a class list with one column per outcome. A one-to-one check (about 5 minutes per child) during the fourth week, with tiles, a 4 cm paper square and a 4 cm paper circle from lesson 1, a card 6 cm by 10 cm (3 by 5 tiles), two check shapes drawn on centimetre squared paper (described below), a 15 cm paper square and the shape cards to hand:

- Show a 4 cm paper square and a 4 cm paper circle. "Which shape is better for measuring area by covering? Why?" (The square: squares fit together with no gaps; circles leave gaps.)
- Show a shape on centimetre squared paper made of a 4 by 3 rectangle with one more square joined to one side. "What is its area?" (13 square centimetres.)
- Give a card 3 tiles wide and 5 tiles long. "Cover it with tiles. How many? How could you know without counting every tile?" (15; there are 3 rows of 5, and $3 \times 5 = 15$.)
- "A Little Hill garden is a rectangle 8 metres long and 4 metres wide. What is its area?" (32 square metres.)
- Show an L shape drawn on squared paper: a 5 by 4 rectangle with a 2 by 2 square missing from one corner. "What is its area? Show how you split it." (16 square centimetres, for example $5 \times 2 = 10$ and $3 \times 2 = 6$, and $10 + 6 = 16$.)
- Show shape cards for a square, a rhombus and a kite. "Which of these are quadrilaterals? Is the square a rectangle too?" (All three; yes, a square has four square corners.) Then: "Fold this paper square into 4 parts with equal areas. What fraction is one part?" (1/4.)

Record yes, with help or not yet for each part. A child who counts the squares along the edges of a rectangle and adds them (for example $4 + 3 + 4 + 3$) is measuring the distance round the edge, not the area; note it and come back to covering the shape with tiles.

Sources

- Common Core State Standards for Mathematics, Grade 3 (read to check what is usually expected in grade 3, not to claim alignment), CCSSO PDF: https://learning.ccsso.org/wp-content/uploads/2022/11/Math_Standards1.pdf
  - Page 25, 3.MD.5: "Recognize area as an attribute of plane figures and understand concepts of area measurement."

    - 3.MD.5a: "A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area."
    - 3.MD.5b: "A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units."
    - 3.MD.6: "Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units)."
    - 3.MD.7a: "Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths."
    - 3.MD.7b: "Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning."
    - 3.MD.7c: "Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning."
    - 3.MD.7d: "Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems."
    - Page 26, 3.G.1: "Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories."
    - 3.G.2: "Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole."

Known gaps and cautions

- Four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon, at ab10d5c) text-checked this unit on 2026-11-12. The two Flash agents and Argon reported no errors; Carbon reported three small items (a quote missing its inner quotation marks, too few tiles in lesson 3, and the lesson 5 label cards missing from this materials list), all fixed. Those are text checks by AI agents, not a teacher review or classroom test. No teacher has reviewed or tried it.
- Perimeter (3.MD.8) is not taught here, apart from one misconception note. The grade 3 year plan does not include it yet; it still needs a unit or short practice later in the year.
- Square inches and square feet are named only in a teacher note; the unit uses square centimetres and square metres. Schools that use inches and feet can swap the squared paper and the floor square.
- The multiplication sign in the 3.MD.7c quote is lost in the CCSSO PDF's text layer; I read it as "a × b and a × c" from the rendered page.
- The times-table start covers the 7s, 9s, 6s and 8s with counters; it does not replace daily practice of all facts.
- "Trapezoid" is the US word; many other countries say "trapezium". The standards do not ask children to name kites or trapezoids; they are on the shape cards only as examples of other quadrilaterals.
- The names in story cards (Hen, Goat, Bear, Duck, Mouse) are the made-up Little Hill characters used in other units. Swap in names that suit your class.
- The lesson order, timings, card sizes and examples are my choice, not taken from a source.

Lesson 1: Covering a shape: what is area?

Unit overview - Next: Lesson 2

About 45 minutes.

Goal

Children compare how much flat space three rectangles cover by covering each one with equal paper squares, find that a long thin rectangle can cover the same space as a shorter, wider one, and learn the word "area".

Materials

- Counters or linking cubes, about 60 per pair.
- Whiteboards and pens, or paper and pencils.
- Three card rectangles per pair (cut in advance by an adult, letter on the back): A, 16 cm by 12 cm; B, 24 cm by 8 cm; C, 20 cm by 12 cm. One large set for the board.
- 20 paper squares per pair, each 4 cm by 4 cm, cut in advance.
- 10 paper circles per pair, each 4 cm across, cut in advance.
- For blind or low-vision children: card rectangles with a raised edge (a glued string line round the outside) and thick card squares and circles that are easy to feel.

Steps

✎ Opening (5 min)

Times-table start: the 7s. Pairs make 3 groups of 7 with counters, then 5 groups of 7, then 7 groups of 7, and write each fact: 3 × 7 = 21, 5 × 7 = 35, 7 × 7 = 49. "How could 5 × 7 help you find 6 × 7?" (Add one more group of 7: 35 + 7 = 42.)

✎ Main activity (32 min)

1. Which covers more? (5 min). Hold up rectangles A and B. "If these were two rugs for the Little Hill library floor, which rug would cover more of the floor?" Pairs talk and write A or B on their whiteboard. Many children choose B because it is longer. Do not give the answer yet.

2. Covering with squares (10 min). Give each pair their rectangles and the 4 cm squares. "Cover rectangle A with squares. The squares must not overlap, and there must be no gaps. Then count them." (12 squares, in 3 rows of 4.) Then cover B. (12 squares, in 2 rows of 6.) "A and B cover the same amount of space, even though B is longer." Now give each pair the circles. "Try covering A with circles. What happens?" (There are gaps between the circles, so some of the card is not covered.) Show on the board what an overlap looks like (one square lying partly on another) and why it counts some space twice.

3. Rectangle C (10 min). Pairs cover C and count. (15 squares, in 3 rows of 5.) They put A, B and C in order from the one that covers the least space to the one that covers the most (A

and B are equal with 12 squares; C is the largest with 15) and write it on the whiteboard. Introduce the word: "The amount of flat space a shape covers is its **area**. The area of A is 12 squares. The area of C is 15 squares."

4. Talk together (7 min). Use the discussion questions below.

✓ Discussion questions (with answers)

- "Was your first guess about A and B right? Why might the longer one look bigger?" (Many people look only at length. Covering shows that A and B have the same area, 12 squares each.)
- "Why are squares better than circles for measuring area?" (Squares fit together with no gaps; circles always leave gaps.)
- "Why must the squares all be the same size?" (If some were bigger, the count would not be fair. It is like measuring length with sticks of different lengths.)
- "Did anyone notice the squares were in rows? How could rows help you count?" (A has 3 rows of 4, so 4 + 4 + 4 = 12. This comes back in lesson 3.)

✓ Closing check (8 min, with answers)

Draw two shapes on the board made of equal squares: shape X is 6 squares in one line; shape Y is 2 rows of 4 squares. Children answer on whiteboards or by pointing:

1. "What is the area of X? Of Y?" (6 squares; 8 squares.)
2. "Which has the larger area?" (Y, even though X is longer.)
3. Show A covered with squares but with one square missing in the middle. "Is this area measured properly? Why not?" (No: there is a gap.)

Vocabulary

- **area**: the amount of flat space a shape covers.
- **gap**: a space that is not covered.
- **overlap**: when one piece lies partly on top of another.

Differentiation

- **Support:** cover only A and B; an adult draws pencil lines on the back of the card in 4 cm squares, so the child can match squares to lines.
- **Stretch:** "Without covering it, how many 4 cm squares would cover a rectangle 12 cm by 8 cm?" (3 rows of 2, so 6 squares.) Then check by covering.
- **Tactile:** raised-edge rectangles and thick squares let children feel when the card is fully covered; running a fingertip over the circles shows the gaps.

⚠ Safety

- All cards, squares and circles are cut in advance by an adult; no scissors. Counters and cubes must be too large to swallow.

Teacher notes and misconceptions

- "Longer means bigger." Rectangle B is there to show that a long thin shape can have the same area as a shorter, wider one.
- Some children overlap squares to "fit" the edge, or leave small gaps. Ask them to slide the squares together until the edges touch.
- The squares here are "our squares" (an improvised unit). Lesson 2 moves to standard square centimetres and square metres.

Lesson 2: Square centimetres and square metres

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 45 minutes.

Goal

Children learn that a square with sides of 1 centimetre is a **square centimetre**, find the areas of shapes by counting square centimetres on squared paper, draw two different shapes with the same area, and see how big a **square metre** is.

Materials

- Counters or linking cubes, about 60 per pair.
- Whiteboards and pens, or paper and pencils.
- Centimetre squared paper, 1 sheet per child, and pencils.
- A shape sheet per pair (below), drawn on centimetre squared paper.
- One 4 cm paper square from lesson 1 per pair.
- Four metre sticks and masking tape. Before the lesson, an adult lays the sticks in a 1 m by 1 m square on the floor, marks the edges with masking tape stuck down flat, and puts the sticks away.
- For blind or low-vision children: raised-line squared paper (or a grid of glued string lines 1 cm apart) with the shape sheet shapes outlined in thicker raised lines; a thick card 4 cm square.

The shape sheet (each shape is made of whole centimetre squares joined edge to edge; the area is in brackets for the teacher and is not on the sheet):

Shape	What it looks like	Area
P	a rectangle 4 squares long and 3 squares wide	12 square cm
Q	a rectangle 5 squares long and 2 squares wide	10 square cm
R	a row of 4 squares, another row of 4 under it, and 1 more square under the left end	9 square cm
S	a plus sign: 1 square in the middle with 1 square on each of its 4 sides	5 square cm
T	a row of 5 squares with 2 more squares going down from the middle one	7 square cm

Steps

✎ Opening (5 min)

Times-table start: the 9s. Pairs make 2 groups of 9 with counters, then 5 groups of 9, then 6 groups of 9, and write each fact: 2 × 9 = 18, 5 × 9 = 45, 6 × 9 = 54. "How could 10 × 9 help you find 9 × 9?" (Take one group of 9 away: 90 - 9 = 81.)

✎ Main activity (32 min)

1. A square centimetre (5 min). Show one square on the squared paper. "Each side of this square is 1 centimetre long. A square like this is called a **square centimetre**. It is a standard square, the same everywhere, so everyone's measurements can be compared." Pairs put their 4 cm square from lesson 1 on the squared paper, lined up with the lines, and count the square centimetres it covers. (16: 4 rows of 4.)

2. The shape sheet (12 min). Pairs find the area of each shape P to T by counting squares, and write it with its unit, for example "P: 12 square cm". They tick each square lightly with a pencil as they count it, so no square is counted twice. Then: "Which shape has the largest area? Which has the smallest?" (P, 12 square cm; S, 5 square cm.)

3. Same area, different shape (7 min). Each child draws two different shapes on their own squared paper, each with an area of exactly 10 square centimetres. Squares must join edge to edge, not just at a corner. Partners check each other's count.

4. A square metre (4 min). Gather round the taped square on the floor, standing outside the tape. "Each side is 1 metre long, so this is a **square metre**. How many square centimetres do you think would cover it?" (Take a few guesses. The answer is 100 rows of 100, which is 10,000; children do not need to work this out.) "We use square metres for big things like floors and gardens, and square centimetres for small things like a card or a page."

5. Talk together (4 min). Use the discussion questions below.

✓ Discussion questions (with answers)

- "Were everyone's 10-square-centimetre shapes the same shape? Did they have the same area?" (Different shapes; the same area, 10 square cm.)
- "Shape Q is 5 squares long and shape P is only 4 squares long. Which has the larger area?" (P: 12 square cm, more than Q's 10. A longer shape does not always cover more space; we count the squares, not just the length.)
- "Why do we say 'square centimetres' and not just 'centimetres'?" (Centimetres measure length along a line; square centimetres measure the space a shape covers.)

✓ Closing check (8 min, with answers)

Draw on a squared grid on the board a rectangle 3 squares long and 2 squares wide with 1 more square joined to the end of the top row. Children answer on whiteboards or by pointing:

1. "What is the area of this shape?" (7 square cm.)
2. "Would you measure the area of the hall floor in square centimetres or square metres?" (Square metres.)
3. "Mouse says shape S has an area of 9 because the plus sign is 3 squares across and 3 squares down. Is Mouse right?" (No: S covers 5 squares. 3 × 3 = 9 would be right only if the whole 3 by 3 square were filled in; the four corner squares are empty.)

Vocabulary

- **square centimetre**: a square with sides 1 cm long; a unit of area.
- **square metre**: a square with sides 1 m long; a unit of area.
- **unit**: the thing we count when we measure.

Differentiation

- **Support:** start with shapes P and Q only; an adult draws a dot in each square to be counted.
- **Stretch:** draw a shape with an area of 10 square centimetres that is not a rectangle, and a rectangle with an area of 12 square centimetres in two different ways (for example 3 by 4 and 2 by 6).
- **Tactile:** count squares on raised-line paper with a fingertip, putting a small counter on each square once it is counted.

⚠ Safety

- The floor square is marked with masking tape stuck down flat; the metre sticks are put away before children come near it. Children stand outside the tape.

Teacher notes and misconceptions

- Some children count the lines or the corners instead of the squares. Ticking each square as it is counted helps.
- Some children say "centimetres" for area. Ask: "Are you measuring along a line, or the space inside?"
- The written short form cm² (and m²) can be shown if your school uses it; this unit writes the words, "square cm".
- Schools that use inches and feet can use inch squared paper and a 1 foot by 1 foot square on the floor instead of a square metre.

Lesson 3: Rows of squares: area and multiplying

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 45 minutes.

Goal

Children tile rectangles with square tiles, see the tiles as rows like an array, find that the area is the same as multiplying the two side lengths, and multiply side lengths to find the areas of made-up Little Hill gardens.

Materials

- Counters or linking cubes, about 60 per pair.
- Whiteboards and pens, or paper and pencils.
- Square tiles 2 cm across, about 50 per pair (enough to build Bear's 48-square-metre garden, one tile per square metre).
- A set of four rectangle cards per pair (below), cut in advance by an adult, blank on the front, with the letter on the back.
- Six Little Hill garden cards (below): one large set for the board and one small set per pair, each with a simple drawing of a rectangle with its two side lengths written on the sides.
- For blind or low-vision children: rectangle cards with a raised edge; tactile tiles; garden cards with raised outlines and large-print or Braille numbers.

The rectangle cards (each side is a whole number of 2 cm tiles):

Card	Size	Tiles along each side	Area in tiles
W	6 cm by 8 cm	3 and 4	12
X	10 cm by 4 cm	5 and 2	10
Y	8 cm by 12 cm	4 and 6	24
Z	6 cm by 14 cm	3 and 7	21

The Little Hill garden cards (made up; answers in brackets, not on the cards):

1. Hen's vegetable bed is 7 metres long and 3 metres wide. (21 square metres.)
2. Goat's grass patch is 5 metres long and 6 metres wide. (30 square metres.)
3. Mouse's flower bed is 4 metres long and 4 metres wide. (16 square metres.)
4. Duck's pond deck is 9 metres long and 2 metres wide. (18 square metres.)
5. Bear's berry patch is 8 metres long and 6 metres wide. (48 square metres.)
6. Bear wants a new rectangle patch with an area of 24 square metres. How long and how wide could it be? (Any of 1 by 24, 2 by 12, 3 by 8 or 4 by 6 metres.)

Steps

✎ Opening (5 min)

Times-table start: the 6s. Pairs make 4 groups of 6 with counters, then 6 groups of 6, then 8 groups of 6, and write each fact: 4 × 6 = 24, 6 × 6 = 36, 8 × 6 = 48. "How could 4 × 6 help you find 8 × 6?" (8 is double 4, so double 24: 48.)

✎ Main activity (32 min)

1. Tiling the cards (12 min). Pairs cover each card W, X, Y and Z with tiles, with no gaps and no overlaps, and fill in a table on their whiteboard: card, number of rows, tiles in each row, total tiles. (W: 3 rows of 4, 12; X: 2 rows of 5, 10; Y: 4 rows of 6, 24; Z: 3 rows of 7, 21. Children may turn a card, so "4 rows of 3" for W is also right.)

2. Rows and multiplying (6 min). Ask: "Where have you seen rows like this before?" (Arrays, in term 1.) Write W as 3 × 4 = 12. "The tiles along one side tell us how many rows. The tiles along the other side tell us how many in each row. So we can multiply the two side lengths instead of counting every tile." Check with Y: 4 × 6 = 24. Then: "A card is 5 tiles along one side and 3 tiles along the other. What is its area, without tiling it?" (15 tiles.) Pairs check by building it.

3. Little Hill gardens (10 min). Read the garden cards aloud. Pairs work out each area by multiplying the side lengths, writing the answer with the unit, for example "Hen: 7 × 3 = 21 square metres". Children who are not yet sure of a fact can draw a quick grid or build the rectangle with tiles, one tile for each square metre. Then: "Whose garden has the largest area?" (Bear's berry patch, 48 square metres.) Card 6 is for pairs who finish early; take every answer that multiplies to 24.

4. Talk together (4 min). Use the discussion questions below.

✓ Discussion questions (with answers)

- "Why can we multiply instead of counting every tile?" (The tiles are in equal rows, so it is like an array: rows × tiles in each row.)
- "Goat's patch is 5 by 6. Would a patch 6 by 5 have the same area?" (Yes, 30 square metres; it is the same rectangle turned round.)
- "Bear's new patch could be 4 by 6 or 3 by 8. Do they look the same?" (No, but both have an area of 24 square metres.)

✓ Closing check (8 min, with answers)

Children answer on whiteboards or by pointing:

1. "A card is 6 tiles along one side and 3 tiles along the other. What is its area?" (18 tiles.)
2. Draw a rectangle on the board split into 4 rows of 7 squares. "What multiplication tells us the area? What is it?" (4 × 7 = 28 squares, or 7 × 4.)

3. "A garden is 10 metres long and 5 metres wide. What is its area?" (50 square metres.)

Vocabulary

- **row**: a line of tiles going across.
- **side length**: how long one side of a shape is.
- **square metre**: the unit used for the gardens, from lesson 2.

Differentiation

- **Support:** tile W, X and Y only; say each row aloud as you skip-count (4, 8, 12). Use tiles for the garden cards as well.
- **Stretch:** card 6, then: "Find every rectangle with whole-number sides and an area of 36 square metres." (1 by 36, 2 by 18, 3 by 12, 4 by 9, 6 by 6.)
- **Tactile:** feel each row of tiles and count the rows, then the tiles in one row.

⚠ Safety

- Tiles, counters and cubes must be too large to swallow. Cards are cut in advance by an adult.

Teacher notes and misconceptions

- Some children add the two side lengths (5 + 6 = 11 for Goat). Build the rectangle with tiles and count to show the area is 30.
- Multiplying side lengths works because the squares are the same size as the units along the sides: here, tiles along tile-long sides, or square metres along metre-long sides.
- The garden sizes and names are made up; they are not real data.

Lesson 4: Splitting shapes and adding areas

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 45 minutes.

Goal

Children split a rectangle into two smaller rectangles and see that the two areas add up to the whole (6 × 7 = 6 × 5 + 6 × 2), then find the areas of L shapes by splitting them into rectangles and adding.

Materials

- Counters or linking cubes, about 60 per pair.
- Whiteboards and pens, or paper and pencils.
- Centimetre squared paper, 1 sheet per child, and pencils.
- Coloured pencils, two colours per child.
- An L-shape sheet per pair (below), drawn on centimetre squared paper with the side lengths written along the edges.
- Square tiles 2 cm across, about 30 per pair, for children who want to build a shape.
- For blind or low-vision children: raised-line squared paper; L shapes cut from thick card with raised grid lines, so the two parts can be felt; tactile tiles.

The L-shape sheet (areas in brackets for the teacher, not on the sheet):

- **Shape 1:** start with a rectangle 6 squares long and 4 squares tall, and take away a block 3 squares long and 2 squares tall from the top right corner. (18 square cm: for example 6 × 2 = 12 along the bottom and 3 × 2 = 6 on top, and 12 + 6 = 18.)
- **Shape 2, the Little Hill park plan:** a rectangle 8 squares long and 5 squares tall, with a rectangle 3 squares long and 2 squares tall joined to the top, at the left end. (46 square cm: 8 × 5 = 40 and 3 × 2 = 6, and 40 + 6 = 46.)
- **Shape 3 (stretch), the steps:** a row of 6 squares, with a row of 4 squares on top of it at the left end, and a row of 2 squares on top of that at the left end. (12 square cm: 6 + 4 + 2.)

Steps

✎ Opening (5 min)

Times-table start: the 8s. Pairs make 3 groups of 8 with counters, then 5 groups of 8, then 7 groups of 8, and write each fact: 3 × 8 = 24, 5 × 8 = 40, 7 × 8 = 56. "How could 5 × 8 and 2 × 8 help you find 7 × 8?" (40 + 16 = 56.)

✎ Main activity (32 min)

1. Splitting a rectangle (8 min). Each child draws a rectangle on squared paper, 6 rows of 7 squares. "What is its area?" (6 × 7 = 42 square cm; children unsure of 6 × 7 can count in

rows.) Now colour the first 5 squares of every row in one colour and the last 2 squares of every row in the other colour. "What is the area of each coloured part?" (6 × 5 = 30 and 6 × 2 = 12.) "What do they add up to?" (42, the same as the whole rectangle.) Write on the board: 6 × 7 = 6 × 5 + 6 × 2.

2. Splitting to help with a hard fact (6 min). Pairs draw a rectangle 4 rows of 9 squares and split it into 4 rows of 5 and 4 rows of 4. (4 × 5 = 20 and 4 × 4 = 16, and 20 + 16 = 36, so 4 × 9 = 36.) "Could you split it a different way?" (Yes, for example 4 × 3 three times: 12 + 12 + 12 = 36.)

3. L shapes (12 min). Give out the L-shape sheet. "These shapes are not rectangles, so we cannot just multiply. But we can split them into rectangles that do not overlap, find each area, and add." Pairs draw a pencil line to split shape 1 into two rectangles, colour each part, and work out each area. (For example 6 × 2 = 12 and 3 × 2 = 6, total 18 square cm. Splitting the other way gives 3 × 4 = 12 and 3 × 2 = 6, also 18.) Then shape 2, the park plan. (40 + 6 = 46 square cm.) Pairs check one shape by counting squares. Shape 3 is for pairs who finish early.

4. Talk together (6 min). Use the discussion questions below.

✓ Discussion questions (with answers)

- "Did everyone split shape 1 the same way? Did everyone get the same area?" (No; yes, 18 square cm. Any split into rectangles that do not overlap gives the same total.)
- "Why must the two parts not overlap?" (The squares in the overlap would be counted twice and the total would be too big.)
- "How does splitting help with a times-table fact you do not know yet?" (Split it into facts you do know and add, like 4 × 9 = 4 × 5 + 4 × 4.)

✓ Closing check (8 min, with answers)

Children answer on whiteboards or by pointing:

1. "A rectangle is 3 rows of 8 squares. Split it into 3 rows of 5 and 3 rows of 3. What are the two areas, and the total?" (15 and 9; 24 square cm.)
2. Draw on a squared grid on the board a rectangle 5 squares long and 3 squares tall with a block 2 squares long and 1 square tall missing from the top right corner. "What is its area?" (13 square cm: for example 5 × 2 = 10 and 3 × 1 = 3.)
3. "Hen cuts her rectangle into two pieces. Is the total area of the pieces bigger, smaller or the same?" (The same.)

Vocabulary

- **split**: cut a shape into parts (here, with a pencil line).
- **L shape**: a shape like the letter L, made of two rectangles.

Differentiation

- **Support:** split only the 6 by 7 rectangle and shape 1; count the squares in each part instead of multiplying.
- **Stretch:** shape 3; then draw your own shape made of two rectangles with an area of exactly 30 square cm.
- **Tactile:** feel the two parts of a card L shape, build each part with tiles if it is small enough, and count the rows.

⚠ Safety

- Tiles, counters and cubes must be too large to swallow. Card L shapes are cut in advance by an adult.

Teacher notes and misconceptions

- Some children add up the side lengths written on the sheet. Ask: "Are you measuring round the edge, or the space inside?" Going round the edge is called the perimeter; it is not part of this unit.
- Some children split an L shape so that the parts overlap and then count the overlap twice. Colouring each part in a different colour shows any overlap.
- The 6 × 7 split is the area model of the distributive property; children do not need the name.

Lesson 5: Sorting four-sided shapes and sharing areas fairly

Unit overview - Previous: Lesson 4

About 45 minutes.

Goal

Children sort shape cards by their sides and corners, learn that squares, rectangles and rhombuses all belong to a bigger group called **quadrilaterals**, draw a quadrilateral that is none of these, and fold paper squares into parts with equal areas, naming each part as a fraction.

Materials

- Counters or linking cubes, about 60 per pair.
- Whiteboards and pens, or paper and pencils.
- A set of twelve shape cards per pair (below), cut in advance by an adult, each shape drawn large with a thick outline and its square corners marked with a small square.
- Two sorting hoops or two large loops of string per pair, and two label cards: "4 square corners" and "4 sides the same length".
- Paper squares 15 cm across, 3 per child, and rulers.
- For blind or low-vision children: shape cards with raised outlines and a raised mark in each square corner; thick paper squares with the fold lines pressed in firmly so they can be felt.

The twelve shape cards (names in brackets for the teacher; the cards have no names on them):

1. A square.
2. A long thin rectangle (not a square).
3. A wide rectangle (not a square).
4. A rhombus that is not a square (four equal sides, no square corners).
5. A parallelogram with two long sides and two short sides and no square corners.
6. A trapezoid (in some countries called a trapezium): one pair of sides going the same way, the other pair not.
7. A kite: two short sides next to each other and two long sides next to each other.
8. A four-sided shape with no equal sides and no square corners.
9. A triangle with a square corner.
10. A triangle with three equal sides.
11. A pentagon.
12. A hexagon.

Steps

✎ Opening (5 min)

Times-table start: mixed facts. "Lesson 4 showed that 6 × 7 = 42. What is 7 × 6?" (42.) Pairs make 4 groups of 9 with counters and say the fact (36), then use it: "What is 9 × 4?" (36.) "What is 8 × 7?" (56; from lesson 4.)

✎ Main activity (32 min)

1. Sorting shape cards (12 min). First sort: pairs put every shape with 4 sides inside one hoop. (Cards 1 to 8 go inside; 9 to 12 stay outside.) "Shapes with 4 sides are called **quadrilaterals**." Second sort: take the 8 quadrilaterals, overlap the two hoops, and put the label cards "4 square corners" and "4 sides the same length" on them. Pairs place each quadrilateral. (Square corners only: cards 2 and 3, the rectangles. Equal sides only: card 4, the rhombus. In both hoops, in the overlap: card 1, the square. In neither hoop: cards 5, 6, 7 and 8.) Name them together: "A shape with 4 square corners is a **rectangle**. A shape with 4 sides the same length is a **rhombus**. The square is in both, so a square is a rectangle and a rhombus too."

2. Draw one that is different (6 min). "Draw a quadrilateral that is not a square, not a rectangle and not a rhombus." Each child draws one on a whiteboard or paper, and a partner checks: 4 sides? Not 4 square corners? Not 4 equal sides? (Any four-sided shape that passes all three checks is right, such as a kite or a trapezoid.)

3. Sharing a square fairly (10 min). Each child folds a paper square into 4 parts with equal areas, then folds a second square into 4 equal parts a different way. (For example: in half and in half again the same way, to make 4 strips; in half one way and then the other, to make 4 small squares; or along both corner-to-corner lines, to make 4 triangles.) "What fraction of the whole square is one part?" (1/4.) Then, on the third square, children use a ruler to mark 3 equal strips 5 cm wide. (Each strip is 1/3 of the square.)

4. Talk together (4 min). Use the discussion questions below.

✓ Discussion questions (with answers)

- "Is a square a rectangle?" (Yes: it has 4 square corners. It is a special rectangle with all sides the same length.)
- "A triangle quarter and a strip quarter look different. Can they both be 1/4?" (Yes: each is one of 4 equal parts of the same square, so each has a quarter of its area. Equal area does not need the same shape.)
- "What do all the shapes in the big hoop have in common?" (4 sides; they are all quadrilaterals.)

✓ Closing check (8 min, with answers)

Children answer on whiteboards or by pointing:

1. Hold up card 4. "Is this a quadrilateral? Is it a rectangle?" (Yes, it has 4 sides; no, it has no square corners.)
2. Hold up card 1. "Name two groups this shape belongs to." (Any two of: quadrilateral, rectangle, rhombus, square.)
3. Draw a square split by lines into 4 parts of different sizes. "Is each part 1/4 of the square?" (No: the parts must have equal areas.)

Vocabulary

- **quadrilateral**: a flat shape with 4 straight sides.
- **rectangle**: a quadrilateral with 4 square corners.
- **rhombus**: a quadrilateral with 4 sides the same length.
- **square corner**: a corner like the corner of a page (a right angle).
- **equal area**: covering the same amount of space.

Differentiation

- **Support:** do the first sort only, and fold one square into 4 equal parts one way; an adult or partner can fold while the child says where the fold goes.
- **Stretch:** "Can you fold or draw a square into 8 parts with equal areas? What fraction is one part?" (1/8.) "Is there a shape that has 4 equal sides but is not a square?" (Yes, a rhombus like card 4.)
- **Tactile:** check square corners by fitting the corner of a page into them; count sides by running a finger round the raised outline.

⚠ Safety

- Shape cards and paper squares are cut in advance by an adult; no scissors. Counters and cubes must be too large to swallow.

Teacher notes and misconceptions

- Many children say "a square is not a rectangle". Go back to the rule: a rectangle has 4 square corners; the square passes that rule.
- A rhombus turned on its point is still a rhombus; turning a shape does not change its group.
- Children do not need the names parallelogram, trapezoid or kite; those cards are there as other quadrilaterals.
- "Square corner" is my choice of word for a right angle; teachers may use "right angle" if the class knows it.

Grade 3 Science: Magnets - What Sticks, What Pushes and What Gets Through (5 lessons, about 2-3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 4 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every safety note against your school's rules.

Back to the science progression

Big idea

A magnet can push or pull some things without touching them. It only pulls things made of a few metals (in a classroom, almost always iron or steel), so "metal" and "magnetic" are not the same word. Every magnet has two ends (poles): two different poles pull together and two matching poles push apart. Magnets can pull through some materials, and we can test which magnet is strongest with a fair test.

Outcomes

By the end of the unit a student can:

1. Predict, then test, whether twelve everyday objects are attracted to a magnet, and sort the results in a table.
2. Explain, with an example from their own results, why "all metals stick to magnets" is not true.
3. Show attraction and repulsion with two magnets and use the words "north pole", "south pole", "attract" and "repel" correctly.
4. Test whether a magnet still pulls a paper clip through paper, card, plastic, water and aluminium foil.
5. Carry out a fair test of magnet strength, naming the one thing they changed, two things they kept the same, and why they repeated it.
6. Describe how a compass uses a magnet to find north.

Prior knowledge

- Pushes and pulls make things start, stop and turn (kindergarten unit).
- Sorting objects into two groups and recording them in a table.
- No prior knowledge of magnets is assumed. This is the first unit in the science progression with a written fair test that has a measurement.

Lessons

Lesson	Title	Main activity
1	What sticks?	Predict, then test, twelve objects; sort magnetic vs not magnetic
2	Poles: pull together, push apart	Two bar magnets; ring magnets on a pencil; a hanging magnet turns to point north-south

Lesson	Title	Main activity
3	Does it work through things?	Paper clip through paper, card, plastic, water and foil; count sheets of paper
4	A fair test: which magnet is strongest?	Ruler test: how close must a paper clip be before it jumps? Three tries each
5	Using magnets	Floating compass; sorting challenge; end-of-unit check

Materials (per group of 3-4)

- 2 bar magnets with the poles marked (N/S or red/blue), plus one unmarked bar magnet for lesson 2.
- 2-3 different magnets for lesson 4 (for example a horseshoe magnet, a fridge magnet and a small bar magnet). **No small neodymium ("super") magnets or magnetic balls** - see Safety.
- 3 ring (doughnut) magnets and a pencil or wooden dowel that fits through them (lesson 2).
- 20 steel paper clips (check with a magnet first: plastic-coated steel clips are fine).
- A 30 cm ruler, masking tape, string or cotton thread, a sticky-tack blob.
- Lesson 1 objects: steel paper clip, aluminium foil ball, coins (see teacher note), plastic spoon, steel spoon, wooden lolly stick, rubber eraser, iron nail (blunt), drinks can (empty, rinsed), key, glass marble, piece of fabric.
- Lesson 3: paper sheets, a piece of card, a plastic cup, a clear plastic tub with water, aluminium foil.
- Lesson 5: a shallow bowl of water, a slice of cork or a plastic bottle lid, a steel paper clip straightened by the teacher, one shop-bought compass per group if available.

Assessment

- Lesson 1 prediction/result table (look for: predictions made before testing; a result column that is actually filled from the test, even where it disagrees with the prediction).
- Lesson 4 fair-test write-up (look for: one changed thing, two kept the same, three tries, a conclusion that matches the numbers).
- Lesson 5 end-of-unit check: 8 questions, 16 marks, with an answer guide. There is no pass mark; use it to see who needs more time with which idea.

⚠ Safety (read before lesson 1)

- **No small strong magnets.** Small neodymium magnets and magnetic balls are dangerous if swallowed: two or more can pull together through the gut wall and cause serious injury (see the Neodymium magnet source). Use only large classroom magnets too big to swallow, count them out and back in.
- Keep magnets away from phones, bank cards, computers and other electronic devices, and away from anyone with a pacemaker or other implanted medical device.
- Do not let students drop or bang magnets together hard: ceramic magnets chip and the chips are sharp.
- Use blunt nails. In lesson 5 the teacher straightens the paper clip; students do not use sewing needles.
- Wipe up spilled water from lesson 3 and lesson 5 straight away.

Sources

- Magnet: https://en.wikipedia.org/wiki/Magnet
- Magnetism: https://en.wikipedia.org/wiki/Magnetism
- Ferromagnetism (which materials are attracted): https://en.wikipedia.org/wiki/Ferromagnetism
- Iron: https://en.wikipedia.org/wiki/Iron
- Steel: https://en.wikipedia.org/wiki/Steel
- Stainless steel (some types are not magnetic): https://en.wikipedia.org/wiki/Stainless_steel
- Nickel: https://en.wikipedia.org/wiki/Nickel
- Aluminium: https://en.wikipedia.org/wiki/Aluminium
- Copper: https://en.wikipedia.org/wiki/Copper
- Coin (composition varies by country): https://en.wikipedia.org/wiki/Coin
- Magnetic field: https://en.wikipedia.org/wiki/Magnetic_field
- Iron filings: https://en.wikipedia.org/wiki/Iron_filings
- Compass: https://en.wikipedia.org/wiki/Compass
- Earth's magnetic field: https://en.wikipedia.org/wiki/Earth%27s_magnetic_field
- Lodestone: https://en.wikipedia.org/wiki/Lodestone
- Magnetic levitation: https://en.wikipedia.org/wiki/Magnetic_levitation
- Refrigerator magnet: https://en.wikipedia.org/wiki/Refrigerator_magnet
- Neodymium magnet (swallowing hazard): https://en.wikipedia.org/wiki/Neodymium_magnet
- Paper clip: https://en.wikipedia.org/wiki/Paper_clip
- Scientific control (keeping other things the same): https://en.wikipedia.org/wiki/Scientific_control

Known gaps and cautions

- "Magnetic materials" is simplified to iron and steel, with nickel and cobalt mentioned. Why only some metals are magnetic (ferromagnetism) is left for later grades.
- Coins, cans and "stainless" steel give different results in different countries and batches. Test your own objects before lesson 1 and treat a surprising result as good science, not a mistake.
- The compass explanation ("the Earth acts a bit like a giant magnet") is a simplification. A compass needle's north-seeking end points towards the Earth's magnetic pole in the far north, which is not exactly the same place as the geographic North Pole. Grade 3 students only need "points roughly north".
- Magnetic fields are only shown, not explained (optional iron-filings demo in a sealed bag in lesson 2). Field lines come in grades 6-8.
- No educator review yet.

Lesson 1: What sticks?

Unit overview · Next: Lesson 2

Goal

Students predict, then test, whether twelve objects are attracted to a magnet, and find out that only some metals are magnetic.

Materials (per group)

- 1 bar magnet.
- The twelve lesson 1 objects (see the unit overview), in a tray.
- Recording sheet: a table with columns Object | What it is made of | Prediction (sticks / doesn't) | Result (sticks / doesn't).

Steps

✎ Opening (5 min)

Read the safety rules aloud: magnets stay away from phones, tablets and bank cards; no banging magnets together; count magnets out and back in. Hold up a fridge magnet and ask: "Where have you seen magnets at home or at school? What do they stick to?"

✎ Main activity (25 min)

1. Groups look at each object and fill in "What it is made of" and their **prediction** in pen before anyone touches the magnet. Explain: we don't rub out predictions, even wrong ones - that is how we see what we learned.
2. Test each object: bring the magnet close slowly, then touch. Record "sticks" or "doesn't" in the Result column.
3. Groups sort the objects into two hoops or piles: "attracted to the magnet" and "not attracted".
4. Ask each group to circle any object where the result surprised them.

✓ Discussion questions (with example answers)

- Are all the things that stuck made of metal? Yes - in this set, every object that stuck was metal (iron or steel).
- Did every metal object stick? No. Aluminium foil, (usually) the drinks can and many coins did not stick, even though they are metal.
- So is this sentence true: "all metals stick to magnets"? No. Only a few metals do. In the classroom it is nearly always iron or steel. (Nickel and cobalt also stick, but students are unlikely to meet them on their own.)

- Did anything stick that you predicted wouldn't? Answers vary; a common one is a coin or a "silver" can. Praise changing your mind because of evidence.

✓ Closing check (5 min, with answers)

Hold up three objects the class has not tested, for example a steel safety pin (closed), a copper-coloured wire, and a plastic ruler. Students show thumbs up (will stick) or down. Test them in front of the class. **Expected: safety pin sticks (steel); copper wire and ruler do not.** Ask one student to explain the copper wire using today's rule.

Vocabulary

magnet, attract, magnetic, not magnetic, metal, iron, steel, aluminium, prediction, result

Differentiation

- Support: use six objects instead of twelve, with picture labels.
- Stretch: find three objects in the classroom that you predict will stick and three metal objects you predict won't. Test them and record.

⚠ Safety

See the overview. No magnets near the class computer or anyone's phone.

Teacher notes and misconceptions

- **Test every object yourself first.** Coins vary a lot by country and year: some are steel plated with copper or nickel and stick, others are copper, brass or cupronickel alloys and don't. Drinks cans are usually aluminium (don't stick) but some food and drink cans are steel (do stick). "Stainless" spoons may or may not stick depending on the type of stainless steel. Choose objects so that at least two metal objects do **not** stick.
- Common idea: "magnets attract all metal" or "magnets attract anything shiny". The foil ball is there to challenge this.
- Some students think magnets stick to anything heavy or hard. The glass marble and the key are a useful pair.

Lesson 2: Poles: pull together, push apart

Unit overview · Previous: Lesson 1 · Next: Lesson 3

Goal

Students find that each magnet has two poles, that unlike poles attract and like poles repel, and that a freely hanging magnet turns to point roughly north-south.

Materials (per group)

- 2 bar magnets with poles marked (N/S or colours).
- 3 ring magnets and a pencil or dowel standing upright in a lump of sticky-tack or modelling clay.
- 1 unmarked bar magnet, cotton thread, masking tape.
- Teacher only (optional): iron filings sealed inside a clear zip bag that is taped shut, and a bar magnet.

Steps

✎ Opening (5 min)

Hold two bar magnets so that the two N ends face each other and slowly bring them together. Ask: "What do you feel? What do you think will happen if I turn one round?" Take predictions.

✎ Main activity (25 min)

1. **Push and pull.** Groups try all four ways of putting the ends together: N-N, N-S, S-N, S-S. Record each in a table as "pull together" or "push apart".
2. **Floating rings.** Slide ring magnets onto the upright pencil one at a time. If a ring snaps down onto the one below, take it off, turn it over and put it back. Challenge: make all three float. Ask: "What is holding them up?"
3. **Mystery magnet.** Groups use a marked magnet to work out which end of the unmarked magnet is N and which is S, then label it with tape. (The end that pushes away the N of the marked magnet is also N.)
4. **Hanging magnet.** Tie thread round the middle of the marked bar magnet so it hangs level, away from other magnets and metal furniture. Let it stop turning. Which way does the N end point? Compare with the other groups.
5. Optional teacher demo: lay the sealed bag of iron filings over a bar magnet. The filings gather most at the ends. Ask: "Where is the magnet strongest?"

✓ Discussion questions (with example answers)

- Which pairs pulled together and which pushed apart? N-S and S-N pulled together (attract). N-N and S-S pushed apart (repel).

- Can you write that as a rule? Different poles attract; the same poles repel.
- Why do the ring magnets float? Their matching poles face each other and push apart, and the push is strong enough to hold up the ring's weight.
- Which way did the hanging magnets point? All roughly the same way, with the N end towards the north side of the room. (Check this with a compass beforehand so you can say which wall is north.)
- Where is a bar magnet strongest? At its ends (poles), shown by where most filings or paper clips gather.

✓ Closing check (5 min, with answers)

Draw two bar magnets on the board in three arrangements: (a) N facing S, (b) S facing S, (c) N facing N. Students write "attract" or "repel" for each. **(a) attract, (b) repel, (c) repel.**

Vocabulary

pole, north pole, south pole, attract, repel, compass direction (north)

Differentiation

- Support: give a two-row picture rule card ("different - pull", "same - push") to use while testing.
- Stretch: with three ring magnets floating, predict what happens if you press the top ring down and let go, then try it. (It bounces back up.)

⚠ Safety

See the overview. Iron filings stay sealed in a bag that is taped shut; students never handle loose filings (they get into eyes and skin and are very hard to remove from magnets).

Teacher notes and misconceptions

- Common idea: "the bigger magnet always wins" or "N is the strong end". The poles of a magnet are equally strong; size and material change overall strength (lesson 4).
- A magnet's N pole is short for "north-seeking pole": the end that turns towards the north. Students don't need the explanation of why (the Earth's magnetic field) until lesson 5, and then only simply.
- Old magnets can lose strength or even have their poles mislabelled. Check your set with a compass first.
- Steel furniture, radiators and other magnets nearby can stop the hanging magnet pointing north. Hang it from a wooden or plastic support.

Lesson 3: Does it work through things?

Unit overview · Previous: Lesson 2 · Next: Lesson 4

Goal

Students test whether a magnet still pulls a paper clip through different materials, and count how many sheets of paper it can pull through.

Materials (per group)

- 1 bar magnet, 2 steel paper clips.
- A piece of card, a plastic cup, a clear plastic tub of water, a square of aluminium foil, 20 sheets of thin paper.
- Teacher only: a steel baking tray or steel tin lid (check with a magnet that it sticks).
- Recording sheet: Material | Prediction (pulls through / doesn't) | Result.

Steps

✎ Opening (5 min)

Put a paper clip on top of a book and move a magnet under the book's cover. Ask: "Did the magnet have to touch the clip? What is in between?" Take predictions about other materials before testing.

✎ Main activity (25 min)

1. **Through materials.** For each material, students predict, then test:
2. card: clip on top, magnet slid underneath;
3. plastic cup: clip inside, magnet outside, drag the clip up the side;
4. water: clip in the bottom of the tub of water, magnet against the outside of the tub, drag the clip up the side;
5. aluminium foil: wrap the clip loosely in foil and try to pick it up.
6. **Counting sheets.** Put the magnet flat on the table. Lay sheets of paper on top of it one at a time and put a clip on top. After each sheet, slide the magnet slowly sideways. Does the clip follow? Record the largest number of sheets where the clip still follows.
7. Groups write their sheet count on the board.
8. **Teacher demo.** Put the steel tray between the magnet and a clip. Ask the class to predict, then show: the magnet sticks to the tray and barely pulls the clip at all.

✓ Discussion questions (with example answers)

- Which materials did the magnet pull through? Card, plastic, water and aluminium foil (and paper, up to a point).
- Why didn't the foil stop it? Foil is metal. Aluminium isn't magnetic, so the pull goes through it, like through paper (link to lesson 1).

- Why did the steel tray stop it? Steel is magnetic, so the magnet pulled on the tray instead of the clip.
- Did every group get the same sheet count? Why not? No. Different magnets, different paper thickness, sliding faster or slower. That is a hint for tomorrow: to compare magnets fairly we must keep those things the same.

✓ Closing check (5 min, with answers)

A student says: "A magnet can't pull through water because water stops things." Who agrees? Ask someone to describe today's test that shows this is wrong. **The clip moved up the side of the tub through the water.**

Vocabulary

through, material, magnetic, not magnetic, distance, gap

Differentiation

- Support: test only card, water and foil.
- Stretch: does it work through your hand? (Yes - try it with one clip on the back of a flat hand and the magnet underneath. Hands are not magnetic.)

⚠ Safety

See the overview. Wipe up water straight away. Keep the water tub away from any electrical sockets and devices.

Teacher notes and misconceptions

- Common idea: "magnets only work if they touch" - the opening book demo challenges this. Another is "metal blocks magnets" - the foil test shows only magnetic metals do.
- Results for the sheet count vary widely; that is useful. Don't present any number as "right".
- Some flexible fridge magnets only pull on one face and are very weak at a distance. If a group uses one, expect a small sheet count.

Lesson 4: A fair test: which magnet is strongest?

Unit overview · Previous: Lesson 3 · Next: Lesson 5

Goal

Students carry out a fair test to compare the strength of different magnets, measuring the distance at which a paper clip jumps to each magnet, and repeat each test three times.

Materials (per group)

- 2-3 different magnets (for example horseshoe, bar, fridge magnet).
- 1 steel paper clip, a 30 cm ruler, masking tape.
- Recording sheet: a table with one row per magnet and columns Try 1 | Try 2 | Try 3 | Middle number (cm).

Steps

✎ Opening (5 min)

Hold up two magnets. "Which one is stronger? How could we find out in a way that is fair?" Collect ideas. Remind the class of yesterday: groups got different sheet counts partly because they did things differently.

✎ Main activity (25 min)

1. **Set up.** Tape the ruler flat to the table. Put the first magnet at the 0 cm end, with one pole touching the 0 mark. Put the paper clip at the 15 cm mark.
2. **Test.** Slowly push the clip towards the magnet with a pencil tip, a little at a time. As soon as the clip jumps to the magnet, stop. Read the ruler where the clip was just before it jumped (to the nearest half centimetre). Record it as Try 1.
3. **Repeat.** Do it two more times with the same magnet. Then do three tries with each other magnet.
4. **Middle number.** For each magnet, put the three tries in order and circle the middle one. Write it in the last column.
5. **Fair test talk.** As a group, fill in: "We changed ____. We kept ____ and ____ the same. We did it three times because ____."

Example results (for teacher reference; yours will differ)

Magnet	Try 1	Try 2	Try 3	Middle number
Horseshoe	4 cm	5 cm	4 cm	4 cm
Bar	3 cm	3.5 cm	2.5 cm	3 cm

Magnet	Try 1	Try 2	Try 3	Middle number
Fridge magnet	0.5 cm	0.5 cm	0.5 cm	0.5 cm

Here the horseshoe magnet is strongest because the clip jumped from furthest away.

✓ Discussion questions (with example answers)

- What did you change? The magnet.
- What did you keep the same? The same paper clip, the same ruler, the same table, starting at 15 cm, pushing slowly, using the same kind of end (a pole) facing the clip.
- Why did we do three tries? The numbers wobble a little each time (pushing speed, reading the ruler). Three tries and the middle number make the result more trustworthy than one try.
- Is the biggest magnet always the strongest? Not necessarily. A small magnet made of a stronger material can beat a bigger one. Use your data.
- What would be unfair? For example, using a heavier clip for one magnet, or pushing the clip fast for one and slowly for another.

✓ Closing check (5 min, with answers)

Show this table: Magnet A tries 6, 5, 6 cm; Magnet B tries 2, 9, 3 cm. "Which magnet is stronger, and is anything strange?" **A is stronger (middle 6 cm vs B's middle 3 cm). B's 9 cm try is very different from the others, so it was probably a mistake (for example, the clip was bumped). It is a reason to repeat, not to pick the biggest number.**

Vocabulary

fair test, change, keep the same, measure, centimetre, repeat, result, middle number, strongest

Differentiation

- Support: test two magnets only; pre-printed sentence frames for the fair test talk.
- Stretch: plan a second fair test of a different question, for example "Does a thicker paper clip jump from further away?", naming what to change and what to keep the same.

⚠ Safety

See the overview. Push the clip with a pencil, not fingers, so fingers do not get pinched between clip and magnet.

Teacher notes and misconceptions

- This is the first fair test with a measurement in the science progression. Spend time on "what we kept the same"; it matters more than the answer.
- "Middle number" is the median of three. You don't need the word at this age; it avoids the arithmetic of an average.

- A horseshoe magnet has both poles side by side; place it so both poles face the clip, and write that down as one of the things kept the same for that magnet.
- Magnets pick up strength differences very sensitively near the poles; half-centimetre reading is enough for this age.

Lesson 5: Using magnets

Unit overview · Previous: Lesson 4

Goal

Students make a simple floating compass, use magnets to solve a sorting problem, and complete the end-of-unit check.

Materials (per group)

- 1 bar magnet, a shallow plastic bowl of water, a slice of cork or a plastic bottle lid.
- 1 steel paper clip, straightened by the teacher before the lesson, with any sharp ends taped.
- A shop-bought compass (one per group, or one for the class).
- Sorting tray: a mixture of about 10 steel paper clips, 10 aluminium foil balls, 10 plastic buttons and 10 dried beans or pasta shapes, mixed in one tub. A plastic sandwich bag.
- End-of-unit check sheets.

Steps

✎ Opening (5 min)

Show a shop-bought compass. Turn it slowly; the needle keeps pointing the same way. Ask: "What do you think is inside it? Which lesson does this remind you of?" (The hanging magnet in lesson 2.)

✎ Main activity (25 min)

1. **Magnetise the clip.** Stroke the straightened clip with one end (pole) of the bar magnet about 30 times, always in the same direction, lifting the magnet away at the end of each stroke. Test: will it now pick up another paper clip? (A weak pick-up is enough.)
2. **Float it.** Lay the clip on the cork or bottle lid, floating in the middle of the bowl, away from other magnets and steel. Wait until it stops turning. Compare its direction with the shop-bought compass. Mark the north-pointing end with a dot of marker.
3. **Sorting challenge.** "A recycling centre has mixed up steel, aluminium, plastic and food scraps. Use only the magnet to get the steel out without the magnet touching the clips." Hint if needed: put the magnet inside a plastic bag, pull out the clips, then hold the bag over a tray and pull the magnet out of the bag so the clips drop off.
4. **End-of-unit check** (15 min, individually; below).

✓ Discussion questions (with example answers)

- Why does the floating clip turn? Stroking made it into a weak magnet. The Earth acts a bit like a giant magnet, so a free magnet turns to point roughly north-south.

- Why must the compass be away from other magnets and steel? They pull on the needle more strongly than the Earth does, so it points the wrong way.
- Why use a bag in the sorting challenge? So the clips can be dropped off easily; magnets hold steel clips tightly.
- What was left in the tub after the magnet? Aluminium, plastic and beans/pasta. A magnet can't sort those, because none of them are magnetic.

✓ End-of-unit check (8 questions, 16 marks)

1. Circle the objects a magnet will attract: steel paper clip, plastic ruler, iron nail, aluminium foil, wooden spoon. (2 marks)
2. Mia says, "All metal objects stick to magnets." Is she right? Explain using an example. (2 marks)
3. Two bar magnets are placed with N facing S. Do they attract or repel? What if they are placed with S facing S? (2 marks)
4. Name one material a magnet can pull a paper clip through, and one that would stop it. (2 marks)
5. Sam tests three magnets with the ruler test. Magnet X: 2, 2, 3 cm. Magnet Y: 5, 6, 5 cm. Magnet Z: 1, 1, 1 cm. Which magnet is strongest? How do you know? (2 marks)
6. In the ruler test, name the one thing that was changed and two things that were kept the same. (2 marks)
7. Why did we do each ruler test three times? (2 marks)
8. A hiker's compass is pointing the wrong way. She notices her phone and a magnet-clasp bag are right next to it. What should she do, and why? (2 marks)

Answer guide

1. Steel paper clip and iron nail (1 mark each, 2 marks in total; take 1 mark off, to a minimum of 0, for each wrong object circled).
2. No (1). Any correct example of a non-magnetic metal, for example aluminium foil, an aluminium can, a copper or brass coin from their own test (1).
3. N-S attract (1); S-S repel (1).
4. Through: any of paper, card, plastic, water, aluminium foil, a hand (1). Stop: a sheet of steel or iron, such as a steel tray or tin lid (1). Accept "lots of thick paper" for the stop answer only if they explain the gap became too big.
5. Magnet Y (1), because the clip jumped from furthest away / its middle number (5 cm) is the biggest (1).
6. Changed: the magnet (1). Kept the same: any two of the same clip, same ruler, same starting point, same slow pushing, same end/pole facing the clip, same table (1 for both).
7. The results change a little each time (1), so repeating makes the result more trustworthy / lets us spot a mistake (1).
8. Move the phone and bag away from the compass (1), because magnets (and magnetic things nearby) pull on the compass needle more strongly than the Earth does (1).

There is no pass mark. Note which questions each student missed: Q1-2 point back to lesson 1, Q3 to lesson 2, Q4 to lesson 3, Q5-7 to lesson 4, Q8 to lesson 5.

Vocabulary

compass, magnetise, north, Earth's magnetism, sort, separate, recycle

Differentiation

- Support: read the check questions aloud; accept spoken or drawn answers.
- Stretch: explain why scrapyards and recycling centres use large magnets, and what they still need another method for (aluminium cans; the grade 5 dissolving unit returns to separating mixtures).

⚠ Safety

See the overview. The teacher straightens and tapes the paper clips; no sewing needles. Wipe up water straight away. Count magnets back in.

Teacher notes and misconceptions

- Magnetising by stroking gives only a weak magnet, and some clips work better than others. Test the method the day before. If a clip won't float steadily, the bottle lid usually works better than cork.
- Common idea: "the compass points to the North Pole because there's a big magnet there". The simple version ("the Earth acts a bit like a giant magnet") is enough at grade 3; the Earth's magnetic north pole is not exactly the geographic North Pole and it moves slowly.
- The sorting challenge previews separating mixtures in grade 5.

Grade 3 Science: Weather Over a Season (5 lessons, about 2-3 weeks, plus a short daily record)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every safety note against your school's rules.
>
> Text-checked by two other agents (Gemini 3.8 Flash and Gemini 4 Argon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on kindergarten science: Using our senses and watching the weather, grade 2 science: Land and water, fast and slow, grade 3 science term 1: Magnets, grade 3 mathematics term 1: Equal groups and arrays and the science progression

Big idea

Weather is what the air outside is like at one place and one time: how warm it is, whether rain or snow is falling, where the wind is coming from and what the sky looks like. Scientists measure the weather every day and write it in tables, so that they can see patterns. The patterns let us say what the weather is **usually** like in each season, and make a careful guess about what might come next. The usual weather of a place over many years is its **climate**, and different places in the world have very different climates. People cannot stop storms or floods, but they can design things that make the harm smaller, and we can test which design works better.

This is the second science unit of grade 3 (term 2). In kindergarten the class kept a picture weather chart. Now the class measures the weather with simple instruments, writes numbers in a table and draws bar graphs and pictographs. The daily record started in lesson 1 keeps going for the rest of the term (and can go on all year), so that by the end of the season the class has its own data.

Outcomes

By the end of the unit most children can:

1. Read a thermometer in degrees Celsius, a rain gauge in millimetres and a wind streamer with a compass, and write the readings in the class weather table.
2. Read a weather table for one week and answer questions such as "Which day was warmest?" and "How much rain fell in all?"
3. Make a pictograph or a bar graph from a weather table, and answer "how many more" questions from it.
4. Use a table of usual weather in each season to say what the weather is usually like in summer and winter, and explain why "usually" is not the same as "always".
5. Combine a picture card and a fact card to describe the climate of a place, and say the difference between weather and climate.
6. Test two designs that keep flood water away from a model house, and make a claim about which works better, giving evidence from the test.

Prior knowledge

- Kindergarten science: a daily weather chart with picture cards; counting sunny, cloudy and rainy days.
- Grade 1 science: the Sun's daily pattern; long and short days in different seasons. Grade 1 society: maps and globes.
- Grade 2 science term 2: comparing ways of protecting a sand hill from poured water, keeping the water the same each time.
- Grade 3 science term 1: a compass needle points north.
- Mathematics: reading scales in ones and twos; tally marks; simple bar graphs and pictographs (grade 2); counting in twos and fives (grade 3 term 1).
- Children read short labels and numbers in tables. Fact cards are read aloud by an adult.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week. From lesson 1 on, two weather helpers (a new pair each week) take the readings every school day at the same time, with an adult, and write them in the class weather table (about 3 minutes).

1. Measuring the weather: weather words; reading a thermometer, a rain gauge and a wind streamer with a compass; setting up the weather station; the first row of the class weather table.
2. Tables and graphs: reading a made-up week of weather in Little Hill; a pictograph of twenty days' weather; a bar graph of rain.
3. What is each season usually like?: a made-up table of usual weather in each season in Little Hill; a bar graph of temperatures; comparing three summers to see that "usually" is not "always"; making careful predictions.
4. Climates around the world: weather and climate; three climate picture cards and fact cards (a tropical rainforest climate, a desert climate and a tundra climate); finding them on a globe; combining the clues to describe each one.
5. Keeping flood water out: weather hazards (gently); testing two model flood barriers around a model house; a claim with evidence; looking at other designs (lightning rods and strong roofs); the end-of-unit check.

At the end of the term (or of the season), use 20 minutes to make a class bar graph of the class's own records (for example, the number of rainy days each week) and compare it with the Little Hill table from lesson 3.

Materials (whole class unless noted)

- **Lesson 1:** an outdoor thermometer with a plastic case and a large Celsius scale (spirit-filled, not mercury); a rain gauge (a straight-sided clear plastic bottle, cut by an adult, with the cut edge covered in tape, the top turned upside down as a funnel, and a ruler taped on the outside with 0 at the bottom of the water space; or a bought plastic rain gauge); a cup of water for the demonstration; a wind streamer (a ribbon about 50 cm long tied to a stick or a fence); a compass (one from the magnets unit); four direction cards (N, E, S, W); a large class weather table (columns: date, temperature in °C, rain in mm, wind from, sky); sky picture cards (sunny, cloudy, rain, snow, fog); a large teaching thermometer picture with a moving strip; for each pair, a thermometer practice sheet (six thermometer pictures to read).

- **Lesson 2:** the Little Hill week table (in Lesson 2) on the board and one copy for each pair; the twenty-day weather list and a blank pictograph sheet for each pair; for each pair, a blank bar graph sheet (five days along the bottom, rain in mm up the side in twos from 0 to 14); pencils and coloured pencils; squared paper for stretch; the class weather table.
- **Lesson 3:** the Little Hill season table and the "three summers" table (in Lesson 3) on the board and one copy for each pair; for each pair, a blank bar graph sheet (four seasons along the bottom, temperature in °C up the side in twos from 0 to 24); six prediction cards; pencils; the class weather table.
- **Lesson 4:** a globe; a world map; three A4 climate picture cards and three climate fact cards (in Lesson 4); the Little Hill season table from lesson 3; for each group of 4-5, a "climate clues" sheet; pencils; the class weather table.
- **Lesson 5:** for each group of 4-5, a shallow plastic tray or box about 30 cm long with a rim at least 5 cm high, damp washed play sand, a small wooden block or a plastic brick (the "house"), a square of paper towel about 5 cm across under the house (at least three per group, one for each pour), a plastic jug with 200 ml of water marked on it, a pouring cup, a lump of modelling clay (latex-free, about the size of a tennis ball), eight lolly sticks, a book or block about 3 cm thick to tilt the tray; a few spare paper towel squares; a results chart; three design picture cards (a flood barrier, a lightning rod on a roof, a roof tied down with strong straps); aprons, cloths and a bucket for wet sand.
- For blind or low-vision children: a talking thermometer or a large tactile thermometer model with a sliding strip and raised marks every 2 °C; a rain gauge ruler with raised marks every 10 mm; a ribbon streamer they can hold to feel which way it is blown; tactile bar graphs (stuck-on card squares); tactile climate cards (for example warm damp leaves texture, dry sand, cold smooth plastic); the tray test can be checked by feeling whether the paper towel is wet.
- Hand-washing sinks, paper towels.

⚠ Safety and access

- **Outside (lesson 1 and the daily record).** The weather station is in a place the teacher has checked, inside the school grounds, where children can stand safely. Readings are taken with an adult. Nobody climbs to reach the instruments; the thermometer and gauge are fixed at a height children can reach from the ground.
- **The rain gauge.** An adult cuts the bottle and covers the cut edge with tape. Children never cut it. Empty it after each reading.
- **Thermometer.** Use a plastic-cased spirit thermometer, never a mercury or a glass one. Never look at the Sun; the thermometer goes in the shade.
- **Bad weather.** In storms, lightning or ice, nobody goes out: the adult takes the reading later, or the table says "not read today". That is honest data too.
- **Feelings (lessons 4 and 5).** Some children may have lived through a flood, a storm, a fire or other hard weather. Tell families before lesson 5 what it is about. Talk about hazards calmly, with no frightening pictures or stories. Any child may sit out the talk and do the tray test only, or be a helper. Never ask children about their own homes or experiences.
- **Water and sand (lesson 5).** Aprons on; wipe spills at once so the floor is not slippery; sand stays in the trays and away from faces. Wash hands.
- **Modelling clay.** Check for latex and wheat allergies (some home-made dough contains wheat).
- Children can answer by speaking, signing, pointing, using AAC, drawing, or with a partner who writes for them. Their own way counts.

- Deaf children: show every picture and table while it is described; face the class when reading fact cards aloud. Blind and low-vision children: use the tactile materials above; a partner reads the numbers aloud.
- Colour is never the only clue: bar graphs use a label on each bar, and sky cards have a picture and a word.
- Wheelchair users: put the weather station on a firm, level path at a height they can reach; trays go on a table they can reach.

Assessment

Watch and listen during lessons, and use the closing checks. During lesson 5 or the following week, see each child for about 3 minutes with the materials listed (answers in brackets):

1. Show the teaching thermometer picture set to 14 °C and the rain gauge with water at 6 mm. "What is the temperature? How much rain fell?" (14 °C; 6 mm.) Hold the streamer so it blows towards the south (or show a picture of this). "Where is the wind coming from?" (From the north.) (Outcome 1.)
2. Show the Little Hill week table from lesson 2. "Which day was coldest? How much rain fell in all?" (Wednesday, 8 °C; 18 mm.) (Outcome 2.)
3. Show the child's own pictograph from lesson 2. "How many more cloudy days than sunny days?" (3.) (Outcome 3.)
4. Show the Little Hill season table from lesson 3. "What is summer usually like in Little Hill?" (Warm, about 22 °C, with few rainy days, about 5.) "Will every summer day be 22 °C?" (No; that is what is usual, and some days and some summers are warmer or cooler.) (Outcome 4.)
5. Show the desert picture card and fact card from lesson 4. "Tell me about the climate there." (Very dry, little rain; any detail from the cards.) "What is the difference between weather and climate?" (Weather is what it is like today; climate is what it is usually like over many years.) (Outcome 5.)
6. Show the class results chart from lesson 5. "Which barrier worked better? How do you know?" (The one where the paper towel under the house stayed driest; any answer that matches the class's results and gives that evidence.) (Outcome 6.)

Sources

Quoted exactly; the unit is not a full alignment to these standards.

- Next Generation Science Standards, grade 3, Weather and Climate: https://www.nextgenscience.org/topic-arrangement/3weather-and-climate
  - 3-ESS2-1: "Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season." Clarification statement: "Examples of data could include average temperature, precipitation, and wind direction." Assessment boundary: "Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change."
  - 3-ESS2-2: "Obtain and combine information to describe climates in different regions of the world."
  - 3-ESS3-1: "Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard." Clarification statement: "Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods."

    - ESS2.D: "Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next." "Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years."
    - ESS3.B: "Humans cannot eliminate natural hazards but can take steps to reduce their impacts."
- Wikipedia (lead paragraphs, read 2026-11-12):
    - Weather: "Weather refers to day-to-day temperature, precipitation, and other atmospheric conditions, whereas climate is the term for the averaging of atmospheric conditions over longer periods of time."
    - Climate: "Climate is the long-term weather pattern in a region, typically averaged over 30 years."
    - Wind direction: "Wind direction is generally reported by the direction from which the wind originates. For example, a north or northerly wind blows from the north to the south".
    - Rain gauge: it is used "to determine the depth of precipitation (usually in mm)".
    - Tropical rainforest climate: "high mean annual temperatures, small temperature ranges, high humidity, and rain that falls throughout the year with no dry season"; "usually found within 10 to 15 degrees latitude of the equator".
    - Desert climate: "The typically bald, rocky, or sandy surfaces in desert climates are dry and hold little moisture, quickly evaporating the already little rainfall they receive."; "There are two variations of a desert climate according to the Köppen climate classification: a hot desert climate (BWh), and a cold desert climate (BWk)."
    - Tundra climate: "located in high latitudes and high mountains"; "at least one month has an average temperature high enough to melt snow 0 °C (32 °F), but no month with an average temperature in excess of 10 °C (50 °F)"; "Rainfall and snowfall are generally slight".
    - Lightning rod: "If lightning hits the structure, it is most likely to strike the rod and be conducted to ground through a wire, rather than passing through the structure, where it could start a fire or cause electrocution."
    - Flood barrier: "Flood barrier may also refer to barriers placed around or at individual buildings to keep floodwaters from entering the buildings."

Known gaps and cautions

- Two other agents text-checked this unit on 2026-11-12 and reported no errors: Gemini 3.8 Flash (at 903d528) and Gemini 4 Argon (at 823de91). Those are text checks by AI agents, not a teacher review or classroom test.
- Little Hill is a made-up place, and all its weather numbers (the week table, the twenty days, the season table and the three summers) are made up by the author to be easy to graph. They are examples, not real data.
- The climate cards describe climate types from Wikipedia, not named countries or peoples. The fact cards say nothing about how people live there, to avoid passing on stereotypes. A teacher may add real places from a good atlas.
- The season table fits a place with four clear seasons, like many places in North America and Europe. In the southern half of the world the seasons fall in different months, and many places near the equator have wet and dry seasons instead. Teachers there should use their own seasons.
- The unit does not explain **why** seasons happen (the tilt of the Earth); that is left for grade 5 in the science progression.

- Following the 3-ESS2-1 assessment boundary, the unit does not teach or assess climate change.
- Averages are not taught: "usual" temperatures are given in the table, and children compare them, but they do not calculate a mean. Wind speed and humidity are not measured.
- The tray test is a model: real flood barriers are much bigger and water pushes harder on them. Two designs and one pour each is a small test, not proof. The lesson builds on grade 2's sand-hill test, so some children may remember the idea; the new part is a claim about merit with evidence.
- Lightning rods and strong roofs are discussed from picture cards only; nothing electrical is tested.
- The lesson order, the instruments, the made-up data, the card wording and the assessment items are the author's own choices, not taken from a source.
- Timings are untested guesses. Going outside to the weather station with a full class takes time.
- No images yet.

Lesson 1: Measuring the weather

Unit overview - Next: Tables and graphs

Back to the grade 3 year plan

Goal

Children learn to read a thermometer, a rain gauge and a wind streamer with a compass, set up the class weather station, and write the first row of the class weather table.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Materials

- An outdoor thermometer with a plastic case and a large Celsius scale (spirit-filled, not mercury), fixed in the shade at a height children can read from the ground.
- A rain gauge: a straight-sided clear plastic bottle cut by an adult, with the cut edge covered in tape, the top turned upside down as a funnel, and a ruler taped on the outside with 0 at the bottom of the water space. A bought plastic rain gauge also works. Put it in an open place away from walls and trees, standing firmly (for example in a pot of sand).
- A cup of water, to show how the rain gauge works.
- A wind streamer: a ribbon about 50 cm long tied to a stick or a fence.
- A compass (one from the magnets unit) and four direction cards (N, E, S, W).
- The class weather table on a large sheet, with five columns: date, temperature in °C, rain in mm, wind from, sky.
- Sky picture cards, each with a picture and a word: sunny, cloudy, rain, snow, fog.
- A large teaching thermometer picture with a moving strip (a red paper strip that slides up and down a card thermometer marked every 2 °C from -10 to 40).
- For each pair: a thermometer practice sheet with six thermometer pictures to read (answers in Closing check), and a pencil.
- For blind or low-vision children: a talking thermometer, or the tactile thermometer model with raised marks every 2 °C; a rain gauge ruler with raised marks every 10 mm; the streamer to hold.

Steps

✎ Opening (5 min)

Ask: "What was the weather like on the way to school today?" Collect words: sunny, cloudy, windy, wet, cold, warm. Say: "In kindergarten we used pictures for the weather. Scientists use **instruments** to measure the weather with numbers. Numbers let us compare one day with another. Today we start our own **weather station**."

Show the three instruments and name them: **thermometer** (how warm or cold), **rain gauge** (how much rain), **wind streamer** and compass (where the wind comes from).

✎ Main activity (25 min)

- **Reading a thermometer (8 min).** Use the teaching thermometer picture. Point out that the numbers go up in twos, and that the marks between the numbers are the odd numbers. Slide the strip to 10, 14, 21 (between 20 and 22) and 0, and read each together: "The top of the red strip is level with... 14 degrees Celsius." Write **°C** and say it. Pairs read the first three pictures on the practice sheet.
- **Reading a rain gauge (5 min).** Show the gauge. Pour in a little water from a cup to show how it works. "The rain falls into the funnel. We read where the top of the water is on the ruler, in **millimetres** (mm). Then we empty it, ready for tomorrow." Read the level together.
- **Wind from... (5 min).** Go outside to the weather station (or look from the window if it is not safe to go out). One child holds the compass flat and the class finds north. Put the four direction cards on the ground around the streamer. "Look which way the ribbon is blown. Weather scientists say where the wind **comes from**, not where it is going. If the ribbon is blown towards the south, the wind is coming from the north: a north wind."
- **First readings (7 min).** With the class watching, two helpers read the thermometer and the rain gauge (if it has had no time to catch rain, write 0), look at the streamer and the sky, and the teacher writes the first row of the class weather table. If there is no wind, write "calm". Agree the daily time for readings, and the first pair of weather helpers.

✓ Discussion questions (5 min, with answers)

- "Why do we read the weather at the same time every day?" (So that days are fair to compare; the afternoon is usually warmer than the early morning.)
- "Why is the thermometer in the shade?" (In the sun it gets warm itself and reads higher than the air; we want the air's temperature.)
- "The ribbon is blowing towards the east. Where is the wind coming from?" (From the west.)
- "Why do we empty the rain gauge after reading it?" (So that tomorrow's number shows only the new rain.)

✓ Closing check (5 min, with answers)

Pairs finish the practice sheet, then check together. The six pictures show:

1. 12 °C (answer: 12)
2. 6 °C (answer: 6)
3. 17 °C, one mark above 16 (answer: 17)
4. 25 °C, one mark above 24 (answer: 25)
5. 0 °C (answer: 0)
6. 30 °C (answer: 30)

Then show with a thumb up or down: "Is a 6 °C day warmer than a 12 °C day?" (Down: no, colder.)

Vocabulary

weather, instrument, thermometer, degrees Celsius (°C), rain gauge, millimetre (mm), wind direction, compass, north, east, south, west

Differentiation

- **More help:** read only the numbered marks (10, 20, 30) first; an adult slides the strip while the child says "higher" or "lower".
- **More challenge:** read a thermometer picture below zero (for example -4 °C) and say what might happen to a puddle on that day (it may freeze).
- Children who use a talking thermometer or the tactile model take a full turn as a weather helper.

⚠ Safety

- Readings outside are taken with an adult. Nobody climbs to reach an instrument.
- Plastic-cased spirit thermometer only; never mercury or glass.
- An adult cuts the rain gauge bottle and tapes the edge.
- Never look at the Sun. In storms, lightning or ice, nobody goes out: write "not read today".

Teacher notes and misconceptions

- Children often read the bottom of the bulb, or the number nearest the top instead of the level of the top. Model "level with the top of the strip".
- The odd numbers are not written on many thermometers. Counting in twos from the last number helps.
- "A north wind blows to the north" is a common mix-up. Keep saying "comes from".
- A compass can be pulled off north by steel nearby (a fence, a car, a radiator); stand a few steps away, as in the magnets unit.
- The table is real data. If a reading is missed, leave the box empty or write "not read"; never make up a number to fill it.

Lesson 2: Tables and graphs

Unit overview - Previous: Measuring the weather - Next: What is each season usually like?

Back to the grade 3 year plan

Goal

Children read a weather table for one week, make a pictograph of twenty days' weather and a bar graph of rain, and answer "how many more" questions from their graphs.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. The weather helpers take today's reading before or after the lesson.

Materials

- The class weather table from lesson 1.
- The Little Hill week table (below) on the board, and one copy for each pair.
- For each pair: the twenty-day weather list (below) and a blank pictograph sheet (four rows: sunny, cloudy, rain, fog; key "one sun, cloud, raindrop or fog picture = 1 day").
- For each pair: a blank bar graph sheet, with the five days (Monday to Friday) along the bottom and "rain in mm" up the side in twos from 0 to 14.
- Pencils and coloured pencils; squared paper for stretch.
- For blind or low-vision children: a tactile copy of the week table (large print or braille), and card squares with sticky backs to build the bar graph by touch.

The Little Hill week table

This is made-up data for the made-up town of Little Hill, in autumn. It is an example, not from a source.

Day	Temperature (°C)	Rain (mm)	Wind from	Sky
Monday	11	0	west	sunny
Tuesday	9	4	west	rain
Wednesday	8	12	south-west	rain
Thursday	12	0	north	cloudy
Friday	10	2	west	rain

The twenty-day weather list

Twenty school days in Little Hill (made up): sunny 5 days, cloudy 8 days, rain 6 days, fog 1 day.

Steps

✎ Opening (5 min)

Look at the class weather table together: "How many days have we recorded so far? What was the warmest reading?" Say: "A **table** keeps numbers tidy in rows and columns. Today we read a whole week of weather from a place called Little Hill, and make **graphs** that show the pattern at a glance."

✎ Main activity (25 min)

- **Reading the week table (8 min).** Read the headings together. Point to a row: "Each row is one day." Point to a column: "Each column is one kind of measurement." Ask pairs, one at a time, and let them point to the answer:
  - "What was the temperature on Thursday?" (12 °C.)
  - "Which day was coldest?" (Wednesday, 8 °C.)
  - "Which day had the most rain?" (Wednesday, 12 mm.)
  - "On how many days did it rain?" (3: Tuesday, Wednesday, Friday.)
  - "Where did the wind usually come from this week?" (The west; on 3 of the 5 days.)
- **Pictograph (8 min).** Pairs draw one picture for each day in the twenty-day list: 5 suns, 8 clouds, 6 raindrops and 1 fog picture, in neat lines so the rows can be compared.
- **Bar graph of rain (9 min).** Model one bar on the board: Tuesday, 4 mm, "two squares up, because each line goes up in twos". Pairs draw the bars for all five days (Monday 0, Tuesday 4, Wednesday 12, Thursday 0, Friday 2) and label each bar with its number. A day with 0 mm has no bar; write 0 above it.

✓ Discussion questions (5 min, with answers)

- "Look at your pictograph. What kind of weather happened most often?" (Cloudy, 8 days.)
- "How many more cloudy days than sunny days?" (3; 8 - 5.)
- "On how many of the twenty days was there no rain?" (14; 5 + 8 + 1, or 20 - 6.)
- "How much rain fell in the whole week?" (18 mm; 0 + 4 + 12 + 0 + 2.)
- "Which is quicker for seeing the wettest day: the table or the bar graph?" (Usually the bar graph: the tallest bar shows it at once. Any reason is fine.)

✓ Closing check (5 min, with answers)

Each child answers on paper, aloud or by pointing at their graphs:

1. "How many more rain days than sunny days?" (1; 6 - 5.)
2. "How much more rain fell on Wednesday than on Tuesday?" (8 mm; 12 - 4.)
3. "What was the difference between the warmest and the coldest day?" (4 °C; 12 - 8.)

Vocabulary

table, row, column, pictograph, bar graph, key, scale, most, fewest, how many more, in all

Differentiation

- **More help:** use the pictograph only; count rows by touching each picture; an adult draws the bar graph scale lines in ones instead of twos.
- **More challenge:** make a pictograph where one picture means 2 days (a half picture for 1 day), or draw a bar graph of the temperatures on squared paper.
- Children who find drawing hard can stick on picture cards or card squares.

⚠ Safety

- No special hazards. Coloured pencils stay on the table.

Teacher notes and misconceptions

- Children may count the squares instead of reading the scale. Ask "What number is at the top of this bar?"
- A 0 mm day is often forgotten in a bar graph, or given a small bar. "No rain, no bar" helps.
- The week table has a "rain" day (Friday) with only 2 mm: a light shower still counts as rain.
- Little Hill data are made up to be easy to graph. Real weather is usually messier, which children will see in their own class table.

Lesson 3: What is each season usually like?

Unit overview - Previous: Tables and graphs - Next: Climates around the world

Back to the grade 3 year plan

Goal

Children use a table of usual weather in each season to make a bar graph, say what each season is usually like, compare three summers to see that "usually" does not mean "always", and make careful predictions.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Materials

- The class weather table.
- The Little Hill season table and the three summers table (below) on the board, and one copy of each for each pair.
- For each pair: a blank bar graph sheet with the four seasons (winter, spring, summer, autumn) along the bottom and "usual afternoon temperature in °C" up the side in twos from 0 to 24.
- Six prediction cards (below), large enough for the class to see.
- Pencils and coloured pencils.
- For blind or low-vision children: tactile or large-print copies of the tables, and card squares with sticky backs for the bar graph.

The Little Hill season table

Made-up data for the made-up town of Little Hill: what a month in each season is usually like, from many years of records. It is an example, not from a source.

Season	Usual afternoon temperature (°C)	Rainy days in a month	Snowy days in a month
Winter	4	10	3
Spring	12	8	0
Summer	22	5	0
Autumn	14	12	0

The three summers table

Made-up data: the same summer month in three different years in Little Hill.

Year	Afternoon temperature that month (°C)	Rainy days
First year	21	4
Second year	24	7

Year	Afternoon temperature that month (°C)	Rainy days
Third year	22	5

The prediction cards

Each card names a season in Little Hill and two possible tomorrows. Children choose the one that is **more likely**.

1. Winter: 3 °C or 25 °C? (3 °C.)
2. Summer: 22 °C or 2 °C? (22 °C.)
3. Winter: snow or no snow? (No snow is more likely: snow falls on about 3 days of a month, so most days have none.)
4. Autumn: a rainy day or a dry day? (A dry day is a little more likely: about 12 rainy days in a month of about 30, so about 18 dry days.)
5. Spring: 12 °C or 30 °C? (12 °C.)
6. Summer: snow or no snow? (No snow; the table shows 0 snowy days.)

Steps

✎ Opening (5 min)

Ask: "Is it warmer here in summer or in winter?" Say: "Weather changes every day, but there are **patterns**. People in Little Hill have kept weather records for many years, so they know what each **season** is **usually** like. Scientists use patterns like these to make careful guesses, called **predictions**, about what weather might happen next."

✎ Main activity (25 min)

- **Reading the season table (6 min).** Read the headings. Ask:
  - "Which season is usually warmest?" (Summer, 22 °C.)
  - "Which is usually coldest?" (Winter, 4 °C.)
  - "Which season usually has the most rainy days?" (Autumn, 12.)
  - "When does snow usually fall?" (Only in winter.)
- **Bar graph of temperatures (10 min).** Pairs draw one bar for each season and write its number on top: winter 4, spring 12, summer 22, autumn 14. Model the first bar: "4 is two squares up, because the lines go up in twos."
- **Three summers (5 min).** Look at the three summers table. "Was every summer the same?" (No: 21, 24 and 22 °C; 4, 7 and 5 rainy days.) "But were they all warm?" (Yes, all much warmer than winter's 4 °C.) Say: "That is what **usually** means. Each summer is a bit different, but the pattern stays the same."
- **Predictions (4 min).** Show the six prediction cards one at a time. Children vote for the more likely tomorrow with a thumb up for the first choice or a thumb down for the second, and one pair explains using the table.

✓ Discussion questions (5 min, with answers)

- "How many degrees warmer is summer than winter, usually?" (18 °C; 22 - 4.)

- "Which two seasons are most alike in temperature?" (Spring and autumn, 12 and 14 °C.)
- "If it is summer, could tomorrow still be cold and rainy?" (Yes, it could; it is just less likely. A prediction is a careful guess, not a promise.)
- "How could our own weather table help us one day?" (After many weeks and years, it shows what our seasons are usually like.)

✓ Closing check (5 min, with answers)

Each child writes or says one sentence for each:

1. "In Little Hill, winter is usually..." (Cold, about 4 °C, sometimes snowy; any answer that fits the table.)
2. "In Little Hill, summer is usually..." (Warm, about 22 °C, with fewer rainy days; any answer that fits the table.)
3. True or false: "Every summer in Little Hill is exactly 22 °C." (False; the summers were 21, 24 and 22 °C.)

Vocabulary

season, winter, spring, summer, autumn (fall), usually, pattern, predict, prediction, likely

Differentiation

- **More help:** draw only the summer and winter bars; use the words "warm" and "cold" before numbers.
- **More challenge:** make a second bar graph of rainy days in each season, or work out how many dry days there usually are in an autumn month of 30 days (18).
- Children may answer the prediction cards by pointing, signing or using AAC.

⚠ Safety

- No special hazards.

Teacher notes and misconceptions

- Some children think a prediction is always right, or that a wrong forecast means scientists "lied". Stress "careful guess using patterns".
- "Fall" and "autumn" mean the same season; use the word your school uses.
- Seasons fall in different months in different parts of the world (see Known gaps in the unit overview). Do not teach the months of each season as a fact for everyone.
- Little Hill numbers are made up. Real records for your area may be online from your national weather service; a teacher may compare them in a later lesson.

Lesson 4: Climates around the world

Unit overview - Previous: What is each season usually like? - Next: Keeping flood water out

Back to the grade 3 year plan

Goal

Children learn the difference between weather and climate, and combine a picture card and a fact card to describe three very different climates in the world, finding where each is usually found on a globe.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Materials

- A globe and a world map.
- Three A4 climate picture cards, drawn or printed by the teacher (described below), each with a title.
- Three climate fact cards (below), read aloud by an adult.
- The Little Hill season table from lesson 3.
- For each group of 4-5: a "climate clues" sheet with three boxes, one for each climate, and two lines in each box: "From the picture we found..." and "From the fact card we found...".
- Pencils; the class weather table.
- For blind or low-vision children: tactile climate cards (for example a damp leafy texture for the rainforest, dry sand for the desert, cold smooth plastic and short soft moss-like felt for the tundra), and a globe with a raised line round the middle (string or tape) for the equator.

The climate cards

The picture cards show land and weather only, with no people, so that nobody is shown as a stereotype. The fact cards use words from Wikipedia (see Sources in the unit overview), made simpler for grade 3.

- **Picture card A, tropical rainforest climate:** tall green trees close together, rain falling, a wet muddy path. **Fact card A:** "It is warm all year. It is very damp. Rain falls all through the year, and there is no dry season. This climate is usually found near the equator."
- **Picture card B, desert climate:** sand and rocks, very few plants, a clear blue sky. **Fact card B:** "It is dry. Very little rain falls, and the rain that does fall dries up quickly. The ground is often bare rock or sand. Some deserts are hot and some are cold."
- **Picture card C, tundra climate:** flat land with low plants and moss, patches of snow, a grey sky. **Fact card C:** "It is cold. Even in the warmest month it is never more than 10 °C, but there is at least one month warm enough to melt snow. Not much rain or snow falls. This climate is found far to the north or south, near the cold ends of the globe, and high up on mountains."

Steps

✎ Opening (5 min)

Look at today's row in the class weather table. Say: "This is today's **weather**. Weather is what it is like outside today. **Climate** is what the weather of a place is **usually** like over many, many years, about thirty years. Little Hill's season table shows Little Hill's climate: warm summers, cold winters, rain in every season." Ask: "Is 'it is raining now' weather or climate?" (Weather.) "Is 'it usually snows here in winter' weather or climate?" (Climate.)

✎ Main activity (25 min)

- **Clue hunt (15 min).** Each group gets the three picture cards in turn (about 5 minutes each; pass them round). For each card, the group finds two clues in the picture and writes or draws them in the "From the picture" line. Then the adult reads the matching fact card aloud and the group adds one clue to the "From the fact card" line.
- **On the globe (5 min).** Together, find the equator on the globe (the line round the middle). "Fact card A says rainforest climates are usually near the equator." Point to a band near it. "Fact card C says tundra is far to the north or south, near the cold ends, and high on mountains." Point to the far north. Say: "Deserts can be in many places, hot or cold, so the fact card does not give one place."
- **Putting clues together (5 min).** Each group chooses one climate and makes two sentences that use both cards, for example "In the rainforest climate it is warm all year (fact card) and the trees are close together and green (picture)."

✓ Discussion questions (5 min, with answers)

- "Which climate gets the least rain?" (The desert.)
- "Which climate is warm all year?" (The tropical rainforest climate.)
- "Which is never warmer than 10 °C?" (The tundra.)
- "Why did we use both the picture and the fact card?" (The picture shows some things, the fact card tells things a picture cannot, such as 'all year' or 'never more than 10 °C'. Two sources together tell us more.)
- "Is Little Hill's climate most like any of these?" (Not really: it has warm summers and cold winters; any sensible answer.)

✓ Closing check (5 min, with answers)

Read each sentence. Children hold up one finger for A (rainforest), two for B (desert) or three for C (tundra), or a closed fist for "weather" if it is not about a climate:

1. "Very little rain falls, and the ground is often bare." (B, two fingers.)
2. "It rains all through the year, and it is warm." (A, one finger.)
3. "Even the warmest month is cold." (C, three fingers.)
4. "It is foggy this morning." (Weather, a fist.)

Vocabulary

climate, weather, equator, globe, tropical rainforest, desert, tundra, dry, damp, all year

Differentiation

- **More help:** use only cards A and B, which are the most different; the adult reads every clue line.
- **More challenge:** compare one climate with Little Hill's season table: what is the same and what is different?
- Groups may draw their clues instead of writing them.

⚠ Safety

- No special hazards. Do not show frightening pictures of storms or hazards in this lesson.

Teacher notes and misconceptions

- "All deserts are hot" is common. Fact card B says some are cold; this comes from the Desert climate source.
- Children may think a climate means a whole country. Many countries have more than one climate; the cards describe climate types, not countries.
- Do not add sentences about how people live in these climates, what they wear or what homes they have; the unit leaves that out on purpose (see Known gaps in the unit overview).
- The "about thirty years" in the opening comes from the Climate source.

Lesson 5: Keeping flood water out

Unit overview - Previous: Climates around the world

Back to the grade 3 year plan

Goal

Children learn that people cannot stop weather hazards but can make the harm smaller. They test two model flood barriers around a model house, keeping the water the same, and make a claim about which design works better, giving evidence from their test.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. The one-to-one assessment (see Assessment in the unit overview) happens during this lesson or the following week.

Materials

- For each group of 4-5: a shallow plastic tray or box about 30 cm long with a rim at least 5 cm high; damp washed play sand; a small wooden block or a plastic brick (the "house"); squares of paper towel about 5 cm across (one under the house for each pour, so at least three per group); a plastic jug with 200 ml of water marked on it; a pouring cup; a lump of latex-free modelling clay about the size of a tennis ball; eight lolly sticks; a book or a block about 3 cm thick to tilt the tray.
- A few spare paper towel squares.
- A results chart on the board with three rows (no barrier, lolly-stick wall, clay wall) and three columns for the paper towel: dry, damp, wet.
- Three design picture cards: a flood barrier (a low wall in front of a door and a row of sandbags), a lightning rod on a roof with a wire to the ground, and a roof tied down with strong straps.
- Aprons, cloths and a bucket for wet sand.
- For blind or low-vision children: the child feels the paper towel square after each pour (dry, a little damp, wet) and feels the barriers before pouring.

Steps

✎ Opening (5 min)

Tell families beforehand what the lesson is about. Any child may choose to be a helper or do only the tray test, with no reason needed.

Say calmly: "Sometimes weather is so strong that it can cause harm: very heavy rain can make rivers or streets flood, strong winds can lift roofs, and lightning can strike buildings. We call these **weather hazards**. People cannot stop the weather. But engineers **design** things that make the harm smaller. Today we test designs that keep flood water away from a house." Do not ask children about their own homes or experiences.

✎ Main activity (25 min)

Groups build a sand "town" in one half of the tray: a flat, low area with the house standing on a paper towel square in the middle. The "river" end is the other, empty end of the tray. Tip the tray up slightly at the river end (rest that end on the book or block) so that water poured there runs down towards the house.

- **No barrier (5 min).** Pour 200 ml of water slowly from the cup into the river end. Wait 30 seconds. Lift the house: is the paper towel dry, damp or wet? Record it. Put a new dry paper towel square under the house and smooth the sand.
- **Lolly-stick wall (8 min).** Push the eight lolly sticks side by side into the sand between the river and the house, as a wall. Pour the same 200 ml the same way, from the same place, at the same speed. Wait 30 seconds. Check the paper towel and record. Remove the sticks, change the paper towel and smooth the sand.
- **Clay wall (8 min).** Roll the clay into a long sausage and press it into the sand between the river and the house as a wall, pressing it down so there are no gaps underneath. Pour, wait, check and record as before.
- **Class chart (4 min).** Each group adds its three results to the class results chart.

✓ Discussion questions (5 min, with answers)

- "What did we keep the same each time?" (The amount of water, 200 ml; where and how fast we poured; the house; the tray and its tilt; how long we waited.)
- "Which design kept the house driest? How do you know?" (Usually the clay wall; any answer that matches the chart, with the paper towel as evidence.)
- "Make a claim: 'The ... wall is better because ...'." (For example, "The clay wall is better because the paper towel stayed dry, and water got through the gaps between the lolly sticks." Any claim with evidence from the chart.)
- "Did the barrier stop the rain?" (No; it kept water away from the house. It made the harm smaller.)
- Show the other two design cards. "What hazard does each one make less harmful?" (The lightning rod: lightning; it gives lightning a path to the ground through a wire instead of through the building. The strapped roof: strong wind; it keeps the roof from being lifted off.)

✓ Closing check (5 min, with answers)

Children answer by saying, signing or pointing:

1. "What did the barrier protect?" (The house.)
2. "Which hazard does a lightning rod help with?" (Lightning.)
3. "Did we change the amount of water between tests?" (No; it was always 200 ml.)

Then use the one-to-one assessment in the unit overview.

Vocabulary

hazard, flood, barrier, design, engineer, claim, evidence, lightning rod, fair test

Differentiation

- **More help:** test only no barrier and the clay wall; an adult pours.
- **More challenge:** design a third barrier with the same materials (for example clay pressed along the bottom of the lolly sticks) and test it the same way; or say one good and one bad thing about each design (for example, clay works well but takes longer to build).
- Children who prefer not to touch wet sand can pour, time the 30 seconds or record.

⚠ Safety

- Aprons on. Wipe spills straight away so the floor is not slippery.
- Sand stays in the trays and away from faces; wash hands afterwards.
- Check for latex and wheat allergies before using modelling clay.
- Talk about hazards calmly; no frightening pictures or stories. Any child may step out of the talk. Never ask about children's homes or experiences.

Teacher notes and misconceptions

- Some children think barriers stop the rain itself. Stress that the rain still falls; the barrier changes where the water goes.
- The lolly-stick wall usually leaks between the sticks and underneath; that is a useful result, not a failure.
- If results differ between groups, say so honestly: the sand, the tilt or the pouring may not have been quite the same. One test is not proof.
- In grade 2 the class protected a sand hill from water. Here the new idea is making a claim about which design is better, using evidence.
- The tray is a model. Real flood barriers are much larger, and real water pushes much harder.

Grade 3 Science: Life Cycles and Traits (5 lessons, about 4-5 weeks, plus a short daily watering job)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every safety note against your school's rules.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on kindergarten science: Living things and their needs, grade 1 science: Plants, light and water, grade 2 science: Habitats, seeds and helpers, grade 3 science term 2: Weather over a season and the science progression

Big idea

Every plant and animal has a **life cycle**: it begins, it grows, it can make young of its own, and in the end it dies. The young grow and the same pattern starts again. Life cycles are different: a bean grows from a seed, a frog starts as an egg and lives in water as a tadpole, and a caterpillar turns into a butterfly inside a chrysalis. But they all have the same four parts: birth, growth, reproduction and death.

Young plants and animals look like their parents, but not exactly, and brothers and sisters are not exactly the same as each other. A **trait** is something about a living thing that we can observe, such as its fur colour or how tall it grows. Many traits come from the parents. Some traits can also be changed by where a living thing lives and what it gets: a bean plant that gets too little water stays small.

This is the third science unit of grade 3 (term 3). The class plants bean seeds in lesson 1 and sets up a fair comparison: half the plants get plenty of water and half get a little. The plants grow while the class learns about life cycles, and in lesson 5 the class measures them and uses the results as evidence.

Outcomes

By the end of the unit most children can:

1. Put the stages of a bean plant's life cycle in order (seed, seedling, adult plant, flowers, pods with seeds, the old plant dies) and say what happens at each stage.
2. Name the stages in the life cycles of a frog, a butterfly and a chicken, and draw one of them as a life-cycle wheel.
3. Say what every life cycle has in common (birth, growth, reproduction and death) and give one way that two life cycles are different.
4. Use a table about a made-up rabbit family to say which traits each young rabbit shares with each parent, and that no young rabbit is exactly like its parents or the others.
5. Measure bean plants grown from one packet to the nearest centimetre, record the heights in a table and a dot plot, and say that plants of the same kind are not all the same.

6. Use the results of the class water test to explain that the environment (how much water a plant gets) can change a trait (how tall it grows), giving evidence from the test.

Prior knowledge

- Kindergarten science: living things need food, water and air; plants need light and water.
- Grade 1 science: the baby plant and food store inside a soaked bean seed; a seed needs water to start growing, and a young plant needs light and water; comparing two plants with words such as "taller" and "paler".
- Grade 2 science term 3: seeds are spread by animals and wind; animals help some plants make seeds by carrying pollen.
- Grade 3 science term 2: tables, bar graphs and "usually"; a fair comparison changes only one thing.
- Mathematics: measuring length to the nearest centimetre with a ruler (grade 2); reading and making tables, tally charts and bar graphs.
- Children read short labels and numbers. Cards with more text are read aloud by an adult.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Bean plants need time to grow, so spread the lessons out: lessons 1 and 2 in week 1, lesson 3 in week 2, lesson 4 in week 3, and lesson 5 in week 4 or 5, when the plants with plenty of water are about 15-25 cm tall. From lesson 1 on, two plant helpers (a new pair each week) water the plants every school day with an adult, following the watering chart (about 3 minutes).

1. Planting a fair test: is a seed alive?; planting bean seeds in twelve cups; the "plenty of water" group and the "a little water" group; keeping everything else the same; a seed in a jar so roots can be seen; predictions.
2. The life cycle of a bean plant: looking inside a soaked bean seed again (first done in grade 1); six life-cycle picture cards in order; flowers, pollen and pods; why a life cycle is drawn as a circle; checking the seed in the jar.
3. Animal life cycles: frog, butterfly and chicken stage cards; making a life-cycle wheel; comparing the three; birth, growth, reproduction and death in every life cycle.
4. Like their parents, but not exactly: traits; the Brook Farm rabbit family table; measuring the class bean plants; a dot plot of heights; plants of the same kind are not all the same.
5. Can the environment change a trait?: measuring both groups of bean plants; a results table and a bar graph; a claim with evidence; sorting trait cards into "from the parents" and "changed by the environment"; the end-of-unit check.

Materials (whole class unless noted)

- **Lesson 1:** a packet of dwarf French bean seeds sold for growing (about 30 seeds, so there are spares); twelve clear or white plastic cups (about 250 mL) with drainage holes made by an adult, each on a saucer or tray lid; potting compost (peat-free if possible), put into the cups by an adult before the lesson; a sticky label and a marker pen for each cup (P1-P6 and L1-L6); two trays to hold the cups, labelled "Plenty of water" and "A little water"; a plastic measuring cup marked in mL (or a 5 mL spoon); a small watering can or jug; a clear jar, a paper towel and two bean seeds for the seed in a jar; the class watering chart (in Lesson 1); a magnifying glass for each pair; aprons; a pencil and a prediction slip for each pair; paper towels for spills.

- **Lesson 2:** for each pair, a bean seed soaked in water overnight by an adult, a paper plate and a magnifying glass; six bean life-cycle picture cards (seed, seedling, young plant, plant with flowers, plant with pods, dry old plant) on the board and one small set for each pair (in Lesson 2); a fresh green bean pod from a shop, to open and look at (not to eat); for each pair, a life-cycle ring sheet (six boxes in a circle joined by arrows) and a pencil; the seed in a jar; the bean cups; the watering chart; paper towels.
- **Lesson 3:** frog, butterfly and chicken stage cards (four cards each; in Lesson 3), a large set on the board and a small set of all twelve for each group of four; for each child, a blank life-cycle wheel sheet (a large circle drawn on paper, divided into four parts, with arrows round the edge), a pencil and coloured pencils; the "same and different" table on the board; the four word cards "birth", "growth", "reproduction" and "death"; the six bean cards from lesson 2; the bean cups, the seed in a jar and the watering chart; latex-free, wheat-free modelling clay for tactile modelling.
- **Lesson 4:** the Brook Farm rabbit family cards (two parent cards and four young rabbit cards with simple drawings) and the rabbit table (in Lesson 4) on the board and one copy for each pair; the bean cups from the "plenty of water" tray; for each pair, a 30 cm ruler and a pencil; a class height table and a large dot plot line marked in centimetres from 0 to 30; sticky dots or a marker for the dot plot; the Brook Farm bean table (in Lesson 4), in case the class plants have not grown; the frog and chicken stage cards from lesson 3; the watering chart.
- **Lesson 5:** all twelve bean cups; for each pair, a 30 cm ruler and a pencil; the class results table on the board and one copy for each pair; for each pair, a blank bar graph sheet (twelve plants along the bottom, height in cm up the side in twos from 0 to 30) and coloured pencils; the Brook Farm results table (in Lesson 5), in case the class plants have not grown well; the prediction slips from lesson 1; the claim frame on the board; eight trait sort cards and two heading cards ("From the parents", "Changed by the environment"); the rabbit table from lesson 4, the bean and frog cards and the class dot plot for the end-of-unit check; the watering chart.
- **For blind or low-vision children (all lessons):** tactile picture cards (raised outlines made with glue lines or wiki sticks, with a Braille or large-print label); a ruler with raised marks every centimetre or a talking tape measure; plants can be felt gently, leaves held between finger and thumb; large-print tables.

⚠ Safety and access

- **Seeds.** Never eat seeds, and never drink the soaking water. Seeds sold for growing can be treated with chemicals, and raw beans contain a toxin: "Symptoms can be induced from as few as four to five raw beans" (Wikipedia, for raw red kidney beans, the same species as the French bean). Adults hand out seeds and count them back in. Wash hands after handling seeds.
- **Allergies.** Beans are legumes, like peas and peanuts. Check with families and the school nurse before the unit. A child with a legume allergy does not touch the seeds, pods or plants unless the school nurse says it is safe; they can be the recorder, the measurer's reader or the watering chart keeper. The fresh pod in lesson 2 is only for looking at.
- **Compost.** An adult opens the bag and fills the cups before lesson 1, outside or in an airy place, without shaking up dust. Children wear aprons, keep compost away from faces and wash hands after touching it.
- **Water.** Wipe spills at once so the floor is not slippery. Put the trays where they cannot be knocked off.

- **Living animals.** This unit uses pictures only. Never collect frogspawn, tadpoles, caterpillars or eggs from the wild; in some places it is against the law, and the animals can die.
- **Death and feelings (lessons 2, 3 and 5).** Some children may have lost a pet or a person. Talk about death in the life cycle calmly and briefly, as something that happens to every living thing. Never ask children about their own pets, families or losses. Any child may sit out the talk and help with the cards instead. If some plants in the "a little water" group wilt or die, say so plainly: that is a result.
- **Families and bodies.** The unit does not cover human reproduction (the standard says the same), and the trait examples are plants and animals only. Never compare children's own traits, bodies or heights, and never ask which traits a child got from which family member.
- Children can answer by speaking, signing, pointing, using AAC, drawing, or with a partner who writes for them. Their own way counts.
- Deaf children: show every card and table while it is described; face the class when reading cards aloud. Blind and low-vision children: use the tactile materials above; a partner reads numbers aloud.
- Colour is never the only clue: the two trays have word labels and letters (P and L), bars on graphs have labels, and the rabbit cards have words as well as drawings.
- Wheelchair users: put the plant trays on a table they can reach; bring a cup to the child for measuring.
- Finger-free measuring: a partner holds the ruler and the child says when the top of the plant lines up, or reads a talking tape measure.

Assessment

Watch and listen during lessons, and use the closing checks. During lesson 5 or the following week, see each child for about 3 minutes with the materials listed (answers in brackets):

1. Give the child the six bean life-cycle cards, mixed up. "Put them in order. What happens at the end?" (Seed, seedling, young plant, plant with flowers, plant with pods, dry old plant; the old plant dies, and the seeds in the pods can grow into new plants.) (Outcome 1.)
2. Give the child the four frog cards, mixed up. "Put them in order and name the stages." (Egg, tadpole, froglet, adult frog.) (Outcome 2.)
3. "What do the life cycles of a frog and a chicken have in common?" (Both are born, grow, can make young and die; both start as eggs.) "What is one difference?" (A tadpole lives in water and changes shape a lot; a chick looks like a small hen; any correct difference.) (Outcome 3.)
4. Show the Brook Farm rabbit table from lesson 4. "Look at Bramble. Which parent is Bramble like? Is Bramble exactly like either parent?" (Brown fur like Hazel; floppy ears and no nose spot like Pip; no, Bramble is not exactly like either one.) (Outcome 4.)
5. Show the class dot plot from lesson 4 (or the Brook Farm bean table). "All these plants came from one packet. Are they all the same height? Is that surprising?" (No, they are different heights; plants of the same kind are not all the same.) (Outcome 5.)
6. Show the class results table from lesson 5. "Which group grew taller? What made the difference? How do you know?" (Usually the plenty-of-water group; the water was the only thing that was different, so the water made the difference; any answer that matches the class's own results and uses them as evidence.) (Outcome 6.)

Sources

Quoted exactly; the unit is not a full alignment to these standards.

- Next Generation Science Standards, grade 3, Inheritance and Variation of Traits: Life Cycles and Traits: https://www.nextgenscience.org/topic-arrangement/3inheritance-and-variation-traits-life-cycles-and-traits
    - 3-LS1-1: "Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death." Clarification statement: "Changes organisms go through during their life form a pattern." Assessment boundary: "Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction."
    - 3-LS3-1: "Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms." Clarification statement: "Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans." Assessment boundary: "Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples."
    - 3-LS3-2: "Use evidence to support the explanation that traits can be influenced by the environment." Clarification statement: "Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight."
    - LS1.B: "Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles."
    - LS3.A: "Many characteristics of organisms are inherited from their parents." "Other characteristics result from individuals’ interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment."
    - LS3.B: "Different organisms vary in how they look and function because they have different inherited information." "The environment also affects the traits that an organism develops."
- Wikipedia (lead paragraphs, read 2026-11-12):
    - Germination: "Germination is the process by which an organism grows from a seed or spore."
    - Pollination: "Pollination is the transfer of pollen from an anther of a plant to the stigma of a plant, later enabling fertilisation and the production of seeds. Pollinating agents can be animals such as insects, for example bees, beetles or butterflies; birds, and bats; water; wind; and even plants themselves."
    - Fruit: "In botany, a fruit is the seed-bearing structure in flowering plants (angiosperms) that is formed from the ovary after flowering."
    - Tadpole: "A tadpole or polliwog (also porwigle) is the larval stage in the biological life cycle of an amphibian."
    - Pupa: insects with a pupal stage "go through four distinct stages in their life cycle, the stages thereof being egg, larva, pupa and imago (adult)", and "The pupae of different groups of insects have different names such as chrysalis for the pupae of butterflies".
    - Phytohaemagglutinin: it "is found in the highest concentrations in uncooked red kidney beans (Phaseolus vulgaris)"; "Symptoms can be induced from as few as four to five raw beans."

Known gaps and cautions

- Four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon, all at 067e8fa) text-checked this unit on 2026-11-12. Three reported no errors; Carbon reported three small fixes (a wrong grade 2 term number, the seed in a jar missing from lesson 3 materials, and the end-of-unit check items missing from lesson 5 materials), now fixed. Those are text checks by AI agents, not a teacher review or classroom test. No teacher has reviewed or tried it.
- The Brook Farm rabbit family, the Brook Farm bean tables and all names in them are made up for this unit. They are examples, not data from a source. They are there in case the class plants grow badly or slowly.
- The watering amounts (20 mL every school day for the "plenty" group, and 20 mL on Mondays only for the "a little" group) are my starting suggestion, not from a source. Cups, compost and classrooms differ: if the "plenty" cups stand in water, give less; if the "a little" plants all die in the first week, give the "a little" group 20 mL twice a week and record the change. Holidays and weekends need a plan.
- Bean seeds usually come up in one to two weeks in a warm room, but not every seed grows. Two seeds go in each cup; if both grow, measure the taller one and say so in the results.
- The source's second example of the environment changing a trait (a pet dog that becomes overweight) is not used, so that the class does not talk about bodies and weight. The unit uses only the plant example.
- 3-LS3-1 asks for evidence that traits are inherited from parents. The unit shows patterns in a made-up table; it does not explain how inheritance works (the standard's assessment boundary leaves this out too).
- Other grade 3 life-science standards (3-LS2-1 groups of animals, and 3-LS4-1 to 3-LS4-4 fossils, survival, habitats and change) are not in this unit.
- "Birth" for a plant is explained as the seed starting to grow (germination). This is my wording for young children, not a quotation.
- The frog, butterfly and chicken stage descriptions are simplified. Some frogs skip the tadpole stage (the Wikipedia tadpole article says so), and the unit mentions this only in the teacher notes.

Lesson 1: Planting a fair test

Unit overview - Next: The life cycle of a bean plant

Back to the grade 3 year plan

Goal

Children plant bean seeds in twelve cups and set up a fair comparison: six cups will get plenty of water and six will get a little water, and everything else stays the same. They write a prediction, and they set up a seed in a jar so that the roots can be seen.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Materials

- A packet of dwarf French bean seeds sold for growing (about 30 seeds, so there are spares). An adult hands out the seeds and counts them back in.
- Twelve clear or white plastic cups (about 250 mL), each with three small drainage holes in the bottom made by an adult, and each on a saucer or tray lid. An adult fills them with potting compost (peat-free if possible) to about 2 cm from the top before the lesson.
- A sticky label and a marker pen for each cup. Labels: P1, P2, P3, P4, P5, P6 ("plenty") and L1, L2, L3, L4, L5, L6 ("a little").
- Two trays to hold the cups, with word labels: "Plenty of water" and "A little water".
- A plastic measuring cup marked in mL, or a 5 mL spoon (four spoons make 20 mL).
- A small watering can or jug of water.
- For the seed in a jar: a clear jar (plastic if possible), a paper towel and two bean seeds.
- The class watering chart on a large sheet (below).
- A magnifying glass for each pair.
- Aprons for everyone.
- For each pair: a prediction slip and a pencil.
- Paper towels for spills.
- For blind or low-vision children: a ruler with raised marks; a cup with a raised label (a sticky dot for P, two for L).

The class watering chart:

Day	"Plenty of water" cups P1-P6	"A little water" cups L1-L6
Monday	20 mL each	20 mL each
Tuesday	20 mL each	none
Wednesday	20 mL each	none
Thursday	20 mL each	none
Friday	20 mL each	none

The prediction slip: "We think the plants with _____ water will grow taller, because _____." Children can draw instead of writing.

Steps

✎ Opening (5 min)

1. Hold up one bean seed. Ask: "Is this alive?" Let children talk to a partner, then share. Accept all answers.
2. Explain: "A seed is alive, but it is waiting. Inside it is a tiny baby plant and a store of food. When it gets water and warmth, it starts to grow. Scientists call this **germination**. In this unit we will watch bean plants start their lives, and learn about the lives of animals too."
3. Pass round seeds for pairs to look at with magnifying glasses. Remind everyone: "We never eat seeds or put them in our mouths. Some raw beans can make people ill."

✎ Main activity (25 min)

1. **Our question.** Write on the board: "Does the amount of water change how tall a bean plant grows?" Ask: "How could we find out?" Take ideas.
2. **A fair test.** Explain: "We will grow two groups of plants. One group gets plenty of water and one group gets only a little. To be fair, only the water is different. What else must stay the same?" Collect ideas and write them as a list: the same kind of seed (from one packet), the same compost, the same size of cup, the same window and light, the same warm room, the same number of seeds in each cup.
3. **Labelling.** Give each pair one cup. (With 12 pairs, every pair has a cup; with fewer, some pairs have two; with more, two pairs share.) The teacher hands out labels P1 to P6 and L1 to L6. Pairs stick the label on their cup and put it in the right tray: P cups in the "Plenty of water" tray, L cups in the "A little water" tray.
4. **Planting.** An adult gives each pair two seeds. Show how to plant: make a hole with one finger about 3 cm deep (about as deep as the first joint of a finger), drop in one seed, cover it. Do the same for the second seed on the other side of the cup. "Why two seeds?" (In case one does not grow.)
5. **The first watering.** Every cup gets 20 mL today, so that every seed can start. The teacher or a helper measures it. Show the class how much 20 mL looks like in the measuring cup.
6. **The watering chart.** Show the chart and read it together. Ask: "Which group gets water every day? Which gets water only on Mondays?" Choose the first two plant helpers. Explain that they will water with an adult each school day, and tick the chart.
7. **A seed in a jar.** While pairs wash their hands, the teacher folds a damp paper towel round the inside of the jar and pushes two seeds between the towel and the glass, about halfway down. Put 2 cm of water in the bottom so the towel stays wet. "In this jar we can see what happens under the ground."
8. **Predictions.** Pairs fill in the prediction slip. Collect the slips to look at again in lesson 5.

Put both trays side by side at the same window, where they will not be knocked.

✓ Discussion questions (5 min)

- "Why do both trays go at the same window?" (So that light is the same for both groups; only the water is different.)

- "If we put the 'plenty' cups in a warm room and the 'a little' cups in a cold room, would our test be fair?" (No. Then two things would be different, and we would not know which one made the difference.)
- "What do you think will happen to the seed in the jar first?" (Accept predictions. Usually a root comes out first.)

✓ Closing check (5 min)

Ask each question; children answer with thumbs up or down, or in their own way (pointing, signing, AAC).

1. "Our test changes only one thing. Is that thing the water?" (Yes.)
2. "Do the L cups get water every day?" (No, only on Mondays, after the first watering today.)
3. "Is a seed alive?" (Yes. It has a tiny baby plant inside that can grow.)
4. "Can we eat the seeds?" (No, never.)

Vocabulary

seed, germination, fair test, prediction, compost, millilitre (mL)

Differentiation

- **Support:** give the prediction slip with the two choices drawn ("plenty" as a full jug, "a little" as a jug with a drop) to circle. Pair a child who needs help with planting with a confident partner.
- **Stretch:** "What other things could we test, one at a time?" (For example light or warmth.) Write one as a new fair-test question.
- **Tactile:** blind or low-vision children find their cup by the raised label and feel the depth of the hole with a finger before dropping the seed in.

⚠ Safety

- Never eat seeds or put them in mouths. An adult counts seeds out and back.
- Adults make the drainage holes and fill the cups with compost before the lesson, outside or in an airy place, without shaking up dust. Aprons on; keep compost away from faces; everyone washes hands after planting.
- Check for allergies to beans, peas or peanuts before the lesson. A child with a legume allergy does not touch seeds; they can label cups, read the chart or measure the water.
- Wipe spills straight away.

Teacher notes and misconceptions

- **"Seeds are not alive."** Many children think seeds are like stones. The seed in a jar helps: when a root comes out, ask "Could a stone do that?"
- **Fair tests.** Children often want to change many things at once. Keep returning to "What is the one thing we are changing?"

- **The watering amounts** are a starting suggestion (see Known gaps in the unit overview). If water stands in the saucers of the P cups, give less and write the change on the chart. Honest changes are part of science.
- **Weekends and holidays.** Plants in the P group may dry out over a long break. Ask an adult to water on the last day before a break and the first day back, and note it on the chart.
- Keep the spare seeds in their packet, out of reach, in case some cups do not grow. Seeds that have not come up after two weeks can be replaced; write this down.

Lesson 2: The life cycle of a bean plant

Unit overview - Previous: Planting a fair test - Next: Animal life cycles

Back to the grade 3 year plan

Goal

Children look inside a soaked bean seed again, put six picture cards of a bean plant's life in order, and learn why a life cycle is drawn as a circle: the old plant makes seeds, and the seeds grow into new plants.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Materials

- For each pair: a bean seed (from the same packet) soaked in water overnight by an adult, a paper plate and a magnifying glass.
- Six bean life-cycle picture cards (below), large on the board, and one small set for each pair. The teacher draws them simply, or uses photographs the school has permission to use. Each card has a picture and a label.
- A fresh green bean pod from a shop, to open and look at (not to eat).
- For each pair: a life-cycle ring sheet (six empty boxes in a circle, joined by arrows going round) and a pencil.
- The seed in a jar from lesson 1.
- The two trays of bean cups and the watering chart.
- Paper towels.
- For blind or low-vision children: tactile versions of the six cards (raised outlines with a Braille or large-print label) and a ring sheet with raised boxes and arrows.

The six bean life-cycle picture cards:

Picture	Label
a bean seed	Seed
a seed with a root and a small shoot with two leaves	Seedling
a bigger plant with many leaves	Young plant
the plant with small white or pink flowers	Flowers
the plant with long green pods hanging down	Pods with seeds
a dry, brown, bent plant with dry pods	The old plant dies

The table shows the correct order, from top to bottom, then back to the seed. Put no numbers or letters on the cards, so that nothing gives the order away, and give each pair its cards shuffled.

Steps

✎ Opening (5 min)

1. Look at the seed in a jar together. Ask: "What has happened since last time?" (Usually a root has come out; maybe a small shoot.) "Which way is the root growing?" (Down.)
2. Look at the bean cups. Has anything come up yet? (Probably not yet; bean shoots usually show after one to two weeks.)
3. Say: "Today we find out about the whole life of a bean plant, from seed to seed."

✎ Main activity (25 min)

1. **Inside a seed (6 min).** Each pair gets a soaked seed on a paper plate. Show how to rub off the seed coat (the skin) with a thumb and gently open the seed into its two halves. With magnifying glasses, pairs find the tiny baby plant at one edge. Ask: "What do you remember from grade 1? What is the rest of the seed for?" (It is the food store that feeds the baby plant until it has leaves.) Everyone washes hands afterwards; the seeds go in the bin.
2. **Ordering the cards (8 min).** Give each pair a shuffled set of the six cards. "Put them in the order a bean plant lives its life." Walk round and ask pairs to explain their order.
3. **Talk it through (6 min).** Build the order together on the board, talking about each card:
    - **Seed.** The seed is waiting.
    - **Seedling.** With water and warmth, the seed starts to grow: a root goes down and a shoot goes up. This is germination. For a plant, this is its **birth**.
    - **Young plant.** The plant makes more leaves and grows taller. This is **growth**.
    - **Flowers.** The grown-up plant makes flowers. Insects such as bees can carry pollen from flower to flower, and some plants pollinate themselves. Pollen helps the flower make seeds. (Remind children of the model bee from grade 2.)
    - **Pods with seeds.** Each flower can turn into a pod. A pod is the bean plant's **fruit**: it holds the seeds. Making new seeds is the plant's **reproduction**.
    - **The old plant dies.** At the end of the season a bean plant dries up and dies. This is its **death**. But its seeds can grow into new bean plants next year.
4. **Opening a pod (2 min).** The teacher opens the fresh bean pod and shows the small seeds lined up inside. "Each of these could grow into a new bean plant." Pass it round on a paper towel to look at, not to eat.
5. **A circle (3 min).** Ask: "After the last card, what comes next?" (A seed again.) Pairs write or draw the six stages in the boxes of the ring sheet, going round with the arrows. "We draw a life cycle as a circle, because it starts again."

✓ Discussion questions (5 min)

- "Why is the life cycle a circle and not a line?" (Because the seeds from the old plant grow into new plants, and the pattern starts again.)

- "Which card shows the bean plant's birth? Which shows reproduction?" (Seedling, when the seed starts to grow; pods with seeds.)
- "Does the bean plant die before or after it makes seeds?" (After. That is why there are new bean plants each year.)
- "Is a bean pod a fruit?" (Yes, to a scientist: a fruit is the part of a flowering plant that holds the seeds.)

✓ Closing check (5 min)

Hold up two cards at a time. Children show with one or two fingers (or point) which comes first.

1. Flowers and Seedling. (Seedling first.)
2. Pods with seeds and Flowers. (Flowers first.)
3. Young plant and Seed. (Seed first.)
4. "What comes after 'The old plant dies'?" (A seed grows into a new plant; the cycle starts again.)

Vocabulary

life cycle, seed coat, seedling, germination, flower, pollen, pod, fruit, birth, growth, reproduction, death

Differentiation

- **Support:** give only four cards first (seed, seedling, flowers, pods), then add the other two.
- **Stretch:** "A sunflower and a bean are both flowering plants. Would a sunflower's life cycle have the same stages?" (Yes: seed, seedling, plant, flower, seeds, the old plant dies; the flowers and seeds look different.)
- **Tactile:** use the tactile cards and the raised ring sheet. A blind child can feel the two halves of the soaked seed and the tiny bump of the baby plant.

⚠ Safety

- Never eat seeds, pods or soaking water. Soaked seeds go in the bin after the lesson. Wash hands afterwards.
- Allergies: a child with a legume allergy does not touch the seeds or the pod unless the school nurse says it is safe. They can be the card checker for their pair.
- Talk about the death of the old plant calmly and briefly. Do not ask about pets or people.

Teacher notes and misconceptions

- **"Fruit means something sweet."** Children often think only sweet things are fruit. To a scientist, a bean pod, a pea pod and a tomato are all fruits, because they hold seeds.
- **"Plants come from the soil."** Remind children that each plant in their cups came from a seed they planted.

- **The baby plant inside the seed** is small and easy to miss. Show it on one seed under a magnifying glass first. If seeds will not open, soak them for longer.
- Some plants (for example many trees) live for many years and make seeds again and again before they die. The bean is a simple example because its whole life cycle fits into one season.

Lesson 3: Animal life cycles

Unit overview - Previous: The life cycle of a bean plant - Next: Like their parents, but not exactly

Back to the grade 3 year plan

Goal

Children put the stages of a frog, a butterfly and a chicken in order, draw one as a life-cycle wheel, and compare the three. They find that the life cycles are different, but every one has birth, growth, reproduction and death.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Materials

- Animal stage cards (below): four frog cards, four butterfly cards and four chicken cards. One large set for the board, and one small set of all twelve for each group of four children. Each card has a picture and a label. The teacher draws them simply, or uses photographs the school has permission to use.
- For each child: a blank life-cycle wheel sheet (a large circle divided into four parts, with arrows going round the edge), a pencil and coloured pencils.
- The "same and different" table drawn on the board (below).
- Four word cards: "birth", "growth", "reproduction", "death".
- The six bean life-cycle cards from lesson 2.
- The bean cups, the seed in a jar and the watering chart.
- For blind or low-vision children: tactile versions of the stage cards (raised outlines with a Braille or large-print label) and a wheel sheet with raised lines; modelling clay (latex-free and wheat-free) to make the stages instead of drawing them.

The animal stage cards (in the correct order; give them to groups shuffled, with no numbers on them):

Frog	Butterfly	Chicken
Eggs (frogspawn in water)	Egg (on a leaf)	Egg
Tadpole (lives in water, swims with a tail)	Caterpillar (eats leaves and grows)	Chick (just hatched, fluffy)
Froglet (has legs and a short tail)	Chrysalis (a hard case; the caterpillar changes inside)	Young chicken (growing feathers)
Adult frog (can lay eggs)	Adult butterfly (can lay eggs)	Adult hen (can lay eggs)

The "same and different" table (fill it in together):

Question	Frog	Butterfly	Chicken
Does it start as an egg?			
Does the young one look like the adult?			

Question	Frog	Butterfly	Chicken
Does it change shape a lot as it grows?			
Does the young one live in water?			

Steps

✎ Opening (5 min)

1. Hold up the bean cards in order, quickly. "Last time we learned the bean plant's life cycle. Do animals have life cycles too?" Take ideas.
2. Check the bean cups and the seed in a jar together. Has anything come up? Note it on the board with today's date.

✎ Main activity (25 min)

1. **Sorting (8 min).** Give each group of four a shuffled set of the twelve animal cards. "First sort the cards into three animals. Then put each animal's cards in order." Walk round and ask groups to explain.

2. **Talk it through (7 min).** Build the three life cycles on the board, one column for each animal, talking about each stage:

    - **Frog.** A frog lays many eggs in water, called frogspawn. A tadpole hatches out. It lives in water and swims with its tail, like a small fish. It slowly grows legs and becomes a froglet, and its tail gets shorter. The adult frog can live on land and in water, and lays eggs. Scientists call a big change of shape like this **metamorphosis**.
    - **Butterfly.** A butterfly lays eggs on a leaf. A caterpillar hatches and eats and eats, growing bigger. Then it makes a hard case called a chrysalis. Inside, its body changes completely. An adult butterfly comes out, and it can lay eggs.
    - **Chicken.** A hen lays an egg. A chick grows inside and hatches out. It already looks a bit like a small chicken. It grows feathers and gets bigger, and the adult hen can lay eggs.

3. **Life-cycle wheels (10 min).** Each child chooses one of the three animals (or the bean) and draws its life cycle on a wheel sheet: one stage in each part, going round with the arrows, with a label for each stage. "Why does the arrow go back to the start?" (The adult lays eggs, and the cycle starts again.)

✓ Discussion questions (5 min)

Fill in the "same and different" table together, one row at a time. (Answers: starts as an egg: yes, yes, yes. Young one looks like the adult: no, no, a little. Changes shape a lot: yes, yes, no. Young one lives in water: yes, no, no.)

Then put up the four word cards: birth, growth, reproduction, death.

- "Where is the birth in each life cycle?" (When the young one hatches from the egg; for the bean, when the seed starts to grow.)

- "Where is the growth?" (Tadpole to frog; caterpillar getting bigger; chick to hen; seedling to plant.)
- "Where is the reproduction?" (The adult lays eggs; the bean plant makes seeds.)
- "What happens at the end of every life cycle?" (Death. Every living thing dies in the end. Some live a short time and some live many years. Its young carry on the cycle.)

✓ Closing check (5 min)

Ask each question. Children answer by pointing to a card on the board, or in their own way.

1. "Point to the stage that comes after the tadpole." (Froglet.)
2. "Point to the stage that comes before the adult butterfly." (Chrysalis.)
3. "Which animal's young looks most like its parent?" (The chicken.)
4. "Name one thing all these life cycles have." (Any of: birth, growth, reproduction, death; or "they go round in a circle".)

Vocabulary

life cycle, frogspawn, tadpole, froglet, caterpillar, chrysalis, hatch, metamorphosis, birth, growth, reproduction, death

Differentiation

- **Support:** give a group one animal's four cards at a time. Give the wheel sheet with the stage labels already written, to draw pictures beside.
- **Stretch:** "Is a tadpole a fish?" (No. It looks a bit like one and lives in water, but it is a young frog.) Or: add a fourth column to the table for the bean plant.
- **Tactile:** use the tactile stage cards. Children can model each stage with clay instead of drawing (an egg, a tadpole with a tail, a froglet with legs, a frog).

⚠ Safety

- Pictures only: never collect frogspawn, tadpoles, caterpillars or eggs from the wild. In some places it is against the law, and the animals can die.
- Check the clay for latex and wheat (some home-made dough contains wheat).
- Talk about death calmly and briefly, as part of every life cycle. Never ask children about their own pets or losses. Any child may sit out and sort the cards instead.
- This lesson is about animals only. If children ask about people, say simply that people have a life cycle too (babies grow into adults), and move on; the details of human reproduction are not part of this unit.

Teacher notes and misconceptions

- **"A caterpillar and a butterfly are different animals."** Many children think this. The cards help: it is one animal at two stages of its life.
- **"A chick grows from the yolk like a seed."** Keep it simple: a chick grows inside the egg and hatches out. Eggs from a shop do not have chicks in them.

- **Not every frog has tadpoles.** A few kinds of frog hatch from the egg as tiny froglets. The frog here is a common example, not the only kind.
- The words "larva" and "pupa" are the scientific names for the caterpillar and chrysalis stages. Use them for stretch only.
- The stages are simplified: real animals change little by little, and the cards show only four moments.

Lesson 4: Like their parents, but not exactly

Unit overview - Previous: Animal life cycles - Next: Can the environment change a trait?

Back to the grade 3 year plan

Goal

Children learn what a trait is. They use a table about a made-up rabbit family to find which traits the young share with each parent, and see that no young rabbit is exactly like its parents or the others. Then they measure the class bean plants and see that plants from one packet are not all the same height.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Materials

- The Brook Farm rabbit family: six cards (two parents and four young rabbits), each with a simple drawing and the rabbit's name and traits in words. One large set for the board.
- The Brook Farm rabbit table (below) on the board, and one copy for each pair.
- The six bean cups from the "Plenty of water" tray (P1-P6).
- For each pair: a 30 cm ruler and a pencil.
- The class height table on the board (two columns: cup, height in cm).
- A large dot plot line on the board or on paper, marked in centimetres from 0 to 30, and sticky dots or a marker.
- The Brook Farm bean table (below), in case the class plants have not grown yet.
- The frog and chicken stage cards from lesson 3 (for the opening).
- The watering chart.
- For blind or low-vision children: tactile rabbit cards (fur texture for colour: smooth fabric for white, rough fabric for brown; ears made of card that stand up or hang down; a raised dot for the nose spot); a ruler with raised marks or a talking tape measure; a dot plot made with pins or stickers on a corkboard so it can be felt.

The Brook Farm rabbit table (made up for this unit):

Rabbit	Fur colour	Ears	White spot on nose	Tail
Hazel (parent)	brown	stand up	yes	white
Pip (parent)	white	floppy	no	white
Bramble (young)	brown	floppy	no	white
Clover (young)	white	stand up	yes	white
Fern (young)	brown	stand up	no	white
Moss (young)	white	floppy	yes	white

The Brook Farm bean table (made up; ten bean plants from one packet, all given plenty of water, measured after three weeks):

Plant	1	2	3	4	5	6	7	8	9	10
Height (cm)	9	12	10	14	11	12	13	10	12	11

Steps

✎ Opening (5 min)

1. Hold up the frog cards. "Does a baby frog look like its parents?" (Not at first; a tadpole looks very different. An adult frog looks like its parents.) "Does a chick look like its parents?" (Quite a lot.)
2. Explain: "Something we can observe about a living thing, like its colour, its shape or how tall it grows, is called a **trait**. Today we look at which traits young animals and plants share with their parents."

✎ Main activity (25 min)

1. **The rabbit family (10 min).** Put up the rabbit cards and the table. Read the table together: Hazel and Pip are the parents, and Bramble, Clover, Fern and Moss are their young. Pairs answer, using their copy of the table:
    - "Which young rabbits have brown fur like Hazel?" (Bramble and Fern.)
    - "Which young rabbits have floppy ears like Pip?" (Bramble and Moss.)
    - "Which young rabbits have a white spot on the nose like Hazel?" (Clover and Moss.)
    - "Which trait do all six rabbits share?" (A white tail.)
    - "Is any young rabbit exactly the same as Hazel? As Pip? As each other?" (No. Each young rabbit has some traits like Hazel and some like Pip, and no two are the same.)
2. **Measuring the bean plants (10 min).** Bring out the six P cups. Show how to measure: stand the ruler on the compost next to the stem, with 0 at the compost, and read the number at the top of the highest leaf or the tip of the shoot, to the nearest centimetre. If two seeds grew in a cup, measure the taller one. Two pairs measure each cup, one after the other, and compare: "Did you get the same number? If not, measure again together." Write each height in the class height table. (Measure only the P cups today; the L cups wait until lesson 5.)
3. **A dot plot (5 min).** Each pair puts a dot above their plant's height on the dot plot line. If two plants have the same height, the second dot goes above the first. If the class plants have not grown yet, use the Brook Farm bean table instead.

✓ Discussion questions (5 min)

- "All these bean plants came from one packet and had the same water, light and compost. Are they all the same height?" (No. Usually they are different.)
- With the Brook Farm table: "What is the tallest? The shortest? Which height is most common?" (14 cm; 9 cm; 12 cm, three plants.)

- "Why might plants from one packet be different?" (Each seed is a little different, just as the young rabbits are; and small things in each cup can be different too, such as how deep the seed was planted. Scientists call differences in a group of the same kind **variation**.)
- "Are the young rabbits different from each other for the same reason?" (Partly: each one got a different mix of traits from its parents.)

✓ Closing check (5 min)

Ask each question; children answer on fingers, by pointing to the table, or in their own way.

1. "How many young rabbits have stand-up ears?" (2: Clover and Fern.)
2. "Is Moss exactly like Pip?" (No. Moss has white fur and floppy ears like Pip, but a white nose spot like Hazel.)
3. "Look at the Brook Farm bean table. How many centimetres taller is the tallest plant than the shortest?" (5 cm: 14 - 9 = 5.)
4. "What is a trait?" (Something we can observe about a living thing, such as its colour, shape or height.)

Vocabulary

trait, parent, young, similar, variation, centimetre, dot plot

Differentiation

- **Support:** use only two traits from the rabbit table (fur colour and ears). Hold the ruler steady for the child and let them read the number.
- **Stretch:** "Hazel and Pip have more young next year. Could one have brown fur and floppy ears? Could one have spotted fur?" (Brown fur and floppy ears is a mix we have already seen in Bramble. Spotted fur is not in the table, so we cannot tell from this table. This table is made up and too small to predict from.)
- **Tactile:** use the tactile rabbit cards: feel the fur texture, the ears and the nose dot. A blind child measures with a talking tape measure or a raised-mark ruler, with a partner checking the reading.

⚠ Safety

- Handle the plants gently: hold the ruler next to the stem, not against it.
- Wash hands after touching compost.
- Use only the made-up rabbit family and the plants. Never ask children which traits they got from which family member, and never compare children's own looks or heights. Some children are adopted, fostered or live with other family, and this is a private matter.

Teacher notes and misconceptions

- **"The young are always a half-and-half mix."** Children may expect each young rabbit to be exactly between the parents (for example light brown). The table shows that traits often come in whole: brown or white, not a mixture. This is a pattern in a made-up table, not a rule; real families vary.
- **"All plants of one kind are the same."** The dot plot helps: the plants are the same kind, but not the same height.
- The standard leaves out how inheritance works and predicting traits. Keep to observing patterns. The stretch question is about why we cannot predict from a small made-up table.
- If two pairs measure the same cup differently, that is useful: talk about where to put 0 and which leaf counts as the top.

Lesson 5: Can the environment change a trait?

Unit overview - Previous: Like their parents, but not exactly

Back to the grade 3 year plan

Goal

Children measure both groups of bean plants, record the results in a table and a bar graph, and use them as evidence for a claim: the amount of water (part of the environment) changed how tall the plants grew. They sort trait cards into traits that come from the parents and traits changed by the environment.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5.

Teach this lesson in week 4 or 5, when most plants in the "Plenty of water" group are about 15-25 cm tall.

Materials

- All twelve bean cups (P1-P6 and L1-L6) in their two trays.
- For each pair: a 30 cm ruler and a pencil.
- The class results table on the board (below), and one copy for each pair.
- For each pair: a blank bar graph sheet (the twelve cups P1-P6 and L1-L6 along the bottom, height in cm up the side in twos from 0 to 30) and coloured pencils.
- The Brook Farm results table (below), in case the class plants have not grown well.
- The prediction slips from lesson 1.
- The claim frame on the board (below).
- Eight trait sort cards (below) and two heading cards: "From the parents" and "Changed by the environment". One large set for the board; one small set for each group of four.
- For the end-of-unit check: the rabbit table from lesson 4, the bean and frog cards, and the class dot plot.
- The watering chart.
- For blind or low-vision children: a ruler with raised marks or a talking tape measure; a bar graph made from stacks of interlocking cubes (one cube for every 2 cm) so that it can be felt; tactile or large-print sort cards.

The class results table:

Cup	P1	P2	P3	P4	P5	P6	L1	L2	L3	L4	L5	L6
Height (cm)												

The Brook Farm results table (made up; six plants with plenty of water and six with a little water, from one packet, measured after four weeks):

Cup	P1	P2	P3	P4	P5	P6	L1	L2	L3	L4	L5	L6
Height (cm)	18	21	19	22	20	20	8	10	7	9	11	9

The claim frame: "The plants with _____ water grew taller. Our evidence: _____. The only thing that was different was _____."

The eight trait sort cards (made up for this unit; the answer is in brackets and is not on the card):

1. Clover the rabbit has white fur, like Pip. (From the parents.)
2. Tibbs the Brook Farm kitten has stripes, like its mother. (From the parents.)
3. A Brook Farm lamb has a black face, like its mother. (From the parents.)
4. A sunflower grown from a seed of a yellow sunflower has yellow petals. (From the parents.)
5. A bean plant that got only a little water stayed small. (Changed by the environment.)
6. A bean plant kept in a dark shed grew pale and thin. (Changed by the environment.)
7. A bean plant on a windowsill leaned towards the window. (Changed by the environment.)
8. The Brook Farm sheepdog learned to come when the farmer whistles. (Changed by the environment: it learned it.)

Steps

✎ Opening (5 min)

1. Bring out both trays and stand them side by side. Ask: "What do you notice?" Let children talk to a partner. (Usually the P plants look taller and greener; some L plants may be small, droopy or dead.)
2. Read out two or three prediction slips from lesson 1. "Today we find out if our predictions were right, using measurements."

✎ Main activity (25 min)

1. **Measuring (8 min).** Measure every cup the same way as in lesson 4: ruler on the compost next to the stem, 0 at the compost, the top of the highest leaf or shoot, to the nearest centimetre; the taller plant if two grew. Each pair measures one cup (with fewer than 12 pairs, some measure two). If a plant has died or never came up, write 0 and a note: "did not grow". Write every height in the class results table.
2. **Bar graph (9 min).** Pairs copy the results into their own table and draw a bar for each cup on the bar graph sheet. They colour the P bars in one colour and the L bars in another, and write P or L under each bar so that colour is not the only clue. If the class plants have not grown well, use the Brook Farm results table instead, and say so.
3. **A claim with evidence (3 min).** Pairs complete the claim frame together, by writing, drawing or telling an adult. (Example with the Brook Farm table: "The plants with plenty of water grew taller. Our evidence: the shortest P plant was 18 cm and the tallest L plant was only 11 cm. The only thing that was different was the water.")
4. **Sorting traits (5 min).** Read each sort card aloud. Groups of four put each card under one of the two headings. Go through the answers together.

✓ Discussion questions (5 min)

- "Were our predictions right?" (Compare with the slips. Either answer is fine; scientists change their ideas when the evidence says so.)
- "All twelve seeds came from one packet. So why were the L plants shorter?" (Because they got less water. The water is part of their environment. The environment changed a trait: how tall they grew.)
- "Were all the P plants exactly the same height?" (Usually not. That is the variation we saw in lesson 4. But the P plants were taller as a group.)
- "Can a trait come from the parents AND be changed by the environment?" (Yes. A bean plant gets its kind of leaves and flowers from its parents, but how tall it grows also depends on its water and light.)

✓ Closing check (5 min)

Ask each question; children answer by pointing to a heading card, on fingers, or in their own way.

1. "A puppy has long ears like its father. From the parents, or changed by the environment?" (From the parents.)
2. "A plant in a dry pot grew only a few small leaves. Which?" (Changed by the environment.)
3. "In the Brook Farm table, how many centimetres taller is P4 than L4?" (13 cm: 22 - 9 = 13.)
4. "Why was our test fair?" (Only the water was different; the seeds, compost, cups, light and room were the same.)

Then see children one at a time for the end-of-unit check (see Assessment in the unit overview), during this lesson's follow-up time or the next week.

Vocabulary

environment, trait, evidence, claim, results, bar graph, inherited (stretch)

Differentiation

- **Support:** give the bar graph sheet with the P1 bar already drawn as an example. Give the claim frame with the answers as picture choices to circle (a full jug or a jug with a drop; a tall plant or a short plant).
- **Stretch:** "Some traits are **inherited**: they come from the parents. Write one more card of your own for each heading." Or: "What could we test next, keeping everything else the same?" (For example light: one tray at the window and one further away.)
- **Tactile:** use the cube bar graph: one stack of cubes for each cup, one cube for every 2 cm (rounding to the nearest cube). A blind child compares the stacks by touch.

⚠ Safety

- Handle the plants gently. Wash hands after touching compost.

- If some L plants wilted or died, say so plainly and calmly: that is a result of the test. It is fine to water all the plants well after the lesson and see whether the small ones recover.
- Use only plant and animal examples. Never compare children's own traits, bodies or heights.
- At the end of the unit, plants can be planted outside by an adult, given to the school garden, or composted.

Teacher notes and misconceptions

- **"The L plants were just bad seeds."** Ask: "Did the P seeds and the L seeds come from the same packet?" (Yes.) "Then what was different?" (The water.) This is why the fair test matters.
- **"Environment means nature or forests."** Here, a living thing's environment means everything around it and everything it gets: water, light, food, warmth, and even what it learns.
- **Results that do not match.** Sometimes one L plant grows taller than a P plant. That is real data. Look at the whole group, not one plant, and talk about why one plant might be different (a seed planted shallower, or a cup nearer the window).
- **Card 8** shows that learning counts too: the sheepdog was not born knowing the whistle. The standard's core idea says characteristics can come from the environment, "which can range from diet to learning".
- Card 6 builds on grade 1, where children saw that a plant needs light to grow green, and card 7 on the plant bending towards a window.

Maps, routes, and places

Subject: History, geography and society Grade: 3 Lessons: 5 Time per lesson: about 50–55 minutes

Status: written (unreviewed AI draft; not human-educator-reviewed or classroom-tested)

Author: GPT-5.6 Sol

Big idea

A map is a purpose-built model of a place. Symbols, a legend, direction, a grid and scale help people communicate about that place, but every map leaves details out and a suitable route depends on a traveller's needs.

What students should be able to do

- Explain how a map differs from the place it represents and how purpose affects what a map includes.
- Interpret and create point, line and area symbols with a clear legend that does not depend on colour alone.
- Use a north arrow, cardinal directions and letter-first alphanumeric grid references.
- Find whole-number route lengths on a square grid when one edge represents 100 metres.
- Compare routes using distance and stated constraints rather than calling one route best for everyone.
- Create, test and revise a map for a stated fictional audience.

What students should already know

Students should be able to count by 100 to at least 1,000, follow a short sequence of instructions, and distinguish a real object from a drawing of it. The lessons teach rather than assume map vocabulary.

Use this oral diagnostic without treating it as an entry test:

1. If a tree is not drawn on a park map, must the park have no trees?
2. What could a key or legend tell a map reader?
3. If a path is 4 equal map edges long and each edge represents 100 m, how long is it?

Diagnostic guide: (1) No; the map may omit it. (2) What symbols mean. (3) 400 m. Revisit any uncertain answer during the unit.

Lesson list

1. A map is a model: compare two maps of the same fictional park and connect selection to purpose.
2. Symbols and legends: read, classify and repair point, line and area symbols.
3. Direction and grid references: use a north arrow, cardinal directions and letter-first grid cells.

4. Scale and choosing a route: count route segments and compare distance with stated access needs.
5. Make, test, revise: design a fictional map, test it with a reader, revise it and complete an eight-task assessment.

Materials (whole unit)

Printed or digital lesson maps and cards, paper, pencils, counters or sticky notes, ruler or straight edge, and optional string or craft sticks for tracing routes. All maps have plain-text descriptions. Provide large print, raised/tactile lines, pre-cut symbol cards or oral directions where helpful. No live internet, account, purchase, personal location, image file or field trip is required.

Assessment

Lesson 5 contains an original fictional map packet with exactly eight numbered tasks and a full worked guide. Students may answer orally, with movable symbols, by typing or by drawing. Assess the geographical ideas rather than handwriting, drawing precision, speed, accent or colour vision. There is no validated pass threshold, and the task does not measure every map skill.

Sources

Consulted November 4, 2026:

- USGS Topographic Map Symbols informed the general treatment of conventional symbols and legends.
- USGS Map Scales informed the explanation that scale relates distance on a map to distance on the ground.

These are background influences, not claims of official alignment or endorsement. All fictional maps, place names, questions and explanations in this unit are original CC0 material. Linked sources remain under their own terms.

Known gaps and cautions

Pacing, reading load, accessibility and cultural context are untested. A qualified local educator should review the unit before classroom use. A north-at-page-top layout is a convention used only when the north arrow says so; it is not a natural rule.

The simplified square-grid scale does not teach curved-route measurement, contour lines, map projections, latitude and longitude, GIS or contested boundaries. Maps reflect choices, can become outdated and can contain mistakes. Teachers should not replace fictional activities with children's home addresses, personal travel patterns or unsupervised outdoor route tasks.

Lesson 1: A map is a model

Time: about 52 minutes (untested estimate)

Status: unreviewed AI draft; not classroom-tested. Author: GPT-5.6 Sol.

Goal

Explain that a map represents selected features of a place for a purpose and that an omitted feature is not necessarily absent.

Materials

Willow Park cards below, paper, two highlighters or two tactile markers, and optional blocks or classroom objects to view from above.

Steps

✎ 1. Opening — 6 minutes

Place three objects on a desk. Ask students to sketch what they see from the side and then from directly above. Discuss why an overhead view can make positions easier to compare while hiding other details.

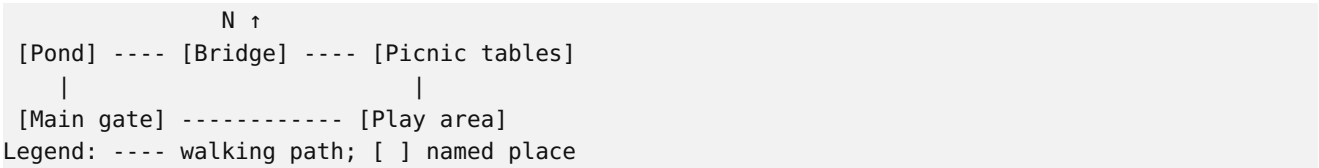
2. Place and model — 8 minutes

Define a **place** as a location with features and a **map** as a purpose-built model of all or part of a place. A model is not a tiny copy: it selects, simplifies and labels. Ask what a classroom fire-exit map needs and what a classroom furniture-moving plan needs. **Example response:** Both need doors and walls; the moving plan also needs furniture sizes, while the exit map needs a clear safe route.

3. Compare two Willow Park maps — 15 minutes

Both cards describe the same fictional park.

Map A: visitor map



Text equivalent: The pond is north of the main gate. A path runs east from the pond across a bridge to picnic tables. Another path runs east from the main gate to the play area. A north-south path connects the pond and gate; another connects the picnic tables and play area.

Map B: grounds-work map

```
               N ↑
 (Tap) ===== (Drain) ===== (Tool shed)
    |                          |
 (Gate) ================== (Sand bin)
Legend: ===== service pipe; ( ) work location
```

Text equivalent: A tap is north of the gate; a drain is east of the tap; the tool shed is east of the drain; and the sand bin is south of the tool shed. Service pipes connect the shown work locations.

Students list two facts each map supports and two questions it cannot answer. Explain that the aligned layouts indicate the same general place, but the cards select different features for visitors and grounds workers.

4. Purpose cards — 12 minutes

For each fictional audience, students choose useful features and justify one omission:

- a visitor finding a picnic table;
- a worker checking a water pipe;
- a performer moving equipment to the play area.

Example: The performer needs wide paths, gates and the play area. Pond depth is probably not needed for that purpose. Not drawing the depth does not claim the pond has no depth.

5. Evidence or inference — 6 minutes

Ask:

1. Does Map A support “A walking path connects the gate and play area”? **Yes.**
2. Does Map A prove “The park has no tool shed”? **No; it may be omitted.**
3. Does Map B prove visitors may walk along the service pipe? **No; a pipe symbol is not a walking-path symbol.**

✓ 6. Closing check — 5 minutes

1. Complete: “A map is not the place; it is ___.” **Answer:** a model or representation of selected features.
2. Why might two accurate maps of one place look different? **Answer:** They may serve different purposes or audiences and select different details.

Vocabulary

- **Place:** a location with features.
- **Map:** a purpose-built model of all or part of a place.
- **Feature:** something at a place that can be represented.
- **Omit:** leave out.
- **Purpose:** what something is intended to help a person do.

Differentiation

- **Extra support:** let students match physical objects to overhead symbol cards; read cards aloud and use tactile lines.

- **Extra challenge:** name one feature that could mislead a reader if omitted from an emergency map and explain why.

⚠ Safety

Use only the fictional park. Do not ask students to map home addresses, habitual routes or private locations.

Teacher notes

Avoid saying a map is simply “a picture from above.” Some maps show networks, underground systems or data that no eye sees directly. Accuracy is connected to purpose, date and scale; a truthful map can still be unsuitable for a different task.

Unit overview · Next lesson

Lesson 2: Symbols and legends

Time: about 54 minutes (untested estimate)

Status: unreviewed AI draft; not classroom-tested. Author: GPT-5.6 Sol.

Goal

Interpret and create point, line and area symbols, using a legend that works without colour.

Materials

Symbol cards below, paper, string, counters, optional pre-cut shapes and tactile materials.

Steps

✎ 1. Opening — 6 minutes

Show a dot, a line and a shaded rectangle. Ask what each could mean. Accept several answers, then ask what information is missing. **Example:** A legend is missing, so the same dot might mean a tree, tap or bus stop.

2. Three useful symbol types — 10 minutes

- A **point symbol** represents a location, such as a fountain.
- A **line symbol** represents a path, stream or boundary.
- An **area symbol** represents a region, such as a field.

The category describes how the feature is represented at this map's scale. A large real pond can be an area, while a pond on a very small map might be a point.

3. Decode Juniper Square — 16 minutes



Text equivalent: The meadow occupies the northwest area. A tree is north of a fountain. A path runs from the fountain northeast to a junction, then east to a gate and south. The pond occupies the southwest area. The library garden occupies the southeast area.

Students answer:

1. Which symbols are points? **F, T and G.**

2. Which feature is crossed by the diagonal path? **The open space between the fountain and junction; the diagram does not show it crossing the pond.**
3. Is the tree inside the meadow? **No; it is drawn east of the meadow.**
4. Can we infer that every tree is shown? **No.**

4. Repair a broken legend — 12 minutes

Broken map notes say: "○ = fountain; ○ = gate; green = safe route." Students identify two problems and repair them.

Example repair: Use `F` inside a circle for fountain and `G` inside a square for gate. Use a solid line for the ordinary route and a double line for the step-free route, with labels. The original reused one symbol for two meanings and depended on colour vision.

5. Design for a purpose — 5 minutes

Students create one point, one line and one area symbol for a fictional animal-care park. Partners decode them using only the legend. Drawing beauty is irrelevant; distinctness and explanation matter.

✓ 6. Closing check — 5 minutes

1. A border around a playground is what symbol type? **Line.**
2. Why should a map not rely only on red and green? **Some readers cannot distinguish them, and grayscale copies remove the difference. Use shape, pattern or labels too.**

Vocabulary

- **Symbol:** a mark that represents something.
- **Legend/key:** an explanation of map symbols.
- **Point:** a symbol locating a feature.
- **Line:** a symbol representing a route, flow or boundary.
- **Area:** a symbol representing a region.

Differentiation

- **Extra support:** provide pre-cut points, string lines and textured area cards; allow spoken classification.
- **Extra challenge:** explain how the same real feature could be a point on one map and an area on another.

⚠ Safety

Do not use student addresses or private places as symbol examples. Scissors or raised-line tools, if used, require ordinary classroom supervision.

Teacher notes

A point symbol locates rather than reproduces a feature's exact shape. A line may have width on the page without claiming a path has that exact ground width. A boundary symbol may describe an administrative choice rather than a visible wall.

Previous lesson · Unit overview · Next lesson

Lesson 3: Direction and grid references

Time: about 54 minutes (untested estimate)

Status: unreviewed AI draft; not classroom-tested. Author: GPT-5.6 Sol.

Goal

Use a north arrow and cardinal directions, then locate cells with letter-first alphanumeric grid references.

Materials

Harbour Garden grid below, counters, paper, optional raised grid and movable labels.

Steps

✎ 1. Opening — 6 minutes

Rotate a sheet with an arrow on it. Ask whether the top of the page must always be north. **Answer:** No. Page-top means north only when the map's north arrow or convention says so.

2. Cardinal directions — 9 minutes

On today's map, north points to page-top, east right, south bottom and west left. Contrast:

- **movement:** “Move east one cell”;
- **relative position:** “The pond is east of the gate.”

A north arrow controls how page directions are interpreted; it does not move when a reader turns their body.

3. Read the grid — 15 minutes

Rows use letters A–D from north to south. Columns use numbers 1–4 from west to east. Give the **letter first**, so `B3` means row B, column 3. A reference identifies a whole cell, not an exact point inside it.

```
            N ↑
          1   2   3   4
      A | T | . | P | . |
      B | . | G | . | F |
      C | R | . | H | . |
      D | . | S | . | L |
Legend: T tree; P pond; G gate; F fountain;
        R rock garden; H shelter; S stage; L library kiosk; . empty shown cell
```

Text equivalent: A1 tree, A3 pond, B2 gate, B4 fountain, C1 rock garden, C3 shelter, D2 stage and D4 library kiosk. Other cells are shown empty.

Ask:

1. What is at C3? **Shelter.**
2. Where is the fountain? **B4.**
3. Which feature is east of the gate in the same row? **Fountain.**
4. Is the stage directly south of the gate? **Yes, at D2, with C2 between them.**
5. Does B2 tell the gate's exact location within that cell? **No.**

4. Follow and write directions — 13 minutes

Starting at the gate B2, make only north/east/south/west moves between adjacent cells; no diagonals.

- Move north one, east one. **End: A3, pond.**
- Move south two. **End: D2, stage.**
- Write a route from rock garden C1 to shelter C3. **Example:** east two cells. Other routes may work if stated.

Students swap one two- or three-move instruction and test it with a counter.

5. Find the error — 6 minutes

A guide says: “The fountain is at 4B, west of the gate.” Students repair both errors. **Answer:** The agreed convention is letter first, so B4; the fountain is east of the gate.

✓ 6. Closing check — 5 minutes

1. What tells a reader which page direction is north? **The north arrow.**
2. What does D4 identify? **The whole cell containing the library kiosk, not an exact point.**

Vocabulary

- **Cardinal directions:** north, east, south and west.
- **North arrow:** a symbol showing north on that map.
- **Grid:** crossing rows and columns used to organize locations.
- **Grid reference:** a label naming a grid cell.
- **Adjacent:** sharing an edge here, not only a corner.

Differentiation

- **Extra support:** use a raised 4×4 grid and counters; chant “letter row, number column”; allow oral moves.
- **Extra challenge:** rotate a copy so east is at page-top, draw the new north arrow and restate one relative-position fact without changing the place.

⚠ Safety

Keep all locations fictional. Do not ask students to identify their home cell on a real map.

Teacher notes

Some real map systems use other ordering conventions; consistency matters. This unit deliberately uses letter first. “Above” and “below” describe page position, while north and south describe mapped direction only when interpreted through the arrow.

Previous lesson · Unit overview · Next lesson

Lesson 4: Scale and choosing a route

Time: about 55 minutes (untested estimate)

Status: unreviewed AI draft; not classroom-tested. Author: GPT-5.6 Sol.

Goal

Calculate route lengths on a square grid using a stated scale and compare routes using both distance and stated constraints.

Materials

Larkspur grid and route cards below, counters or string, paper, optional craft sticks representing 100 m segments.

Steps

✎ 1. Opening — 6 minutes

Draw two equal map segments. State that on one map a segment means 10 m and on another it means 100 m. Ask whether equal marks must mean equal ground distance. **No; read each map's scale.**

2. Scale and segments — 10 minutes

For this lesson, movement follows grid edges. One edge between adjacent intersections represents **100 m**. Count route segments, then multiply by 100 m. Four segments represent 400 m. Do not count visited points; four segments connect five points.

3. Larkspur route map — 14 minutes



Text equivalent: Top row A-B-C-D; middle E-F-G-H; bottom I-J-K-L. Vertical edges connect A-E-I, B-F-J, and D-H-L. Horizontal edges connect E-F-G-H and I-J-K-L. C-G is closed. F-G is open but has steps. Each drawn edge is 100 m.

Three route cards from Clinic A to Library D:

- **Route 1:** A–B–C–D.

- **Route 2:** A–E–F–G–H–D; F–G has steps.
- **Route 3:** A–E–I–J–K–L–H–D; described by the fictional town as quieter.

Students count and calculate: Route 1 = 3 segments = **300 m**; Route 2 = 5 segments = **500 m**; Route 3 = 7 segments = **700 m**.

4. Suitable for whom? — 13 minutes

Use fictional needs, not personal disclosures:

1. A courier needs the shortest open route. **Route 1, 300 m.**
2. A traveller needs a route with no steps. **Routes 1 or 3; Route 1 is shorter.**
3. A sound-sensitive visitor values the stated quieter route more than distance. **Route 3 may be suitable despite being longer.**
4. A guide proposes A–B–C–G–H–D. Is it usable? **No; C–G is closed.**

Emphasize: “shortest,” “step-free,” and “quietest among the labelled options” answer different questions. A map needs current, relevant information; it does not decide a person's needs.

5. Create and check a route — 7 minutes

Students write one valid route from E to L, count segments and calculate distance. **Example:** E–I–J–K–L = 4 segments = 400 m. Partners verify every edge is drawn and open.

✓ 6. Closing check — 5 minutes

1. A valid route has 8 edges. How far is it? **800 m.**
2. Why might a longer route be chosen? **It may avoid steps or a closure, be quieter, or meet another stated need.**

Vocabulary

- **Scale:** a relationship between map distance and ground distance.
- **Segment/edge:** one part of a route between adjacent points.
- **Route:** a connected path from a start to a destination.
- **Constraint:** a condition a route must meet.
- **Step-free:** not requiring use of stairs or steps.

Differentiation

- **Extra support:** place one 100 m craft stick per edge and count by hundreds; provide route cards already sequenced.
- **Extra challenge:** find all shortest open A-to-D routes and explain how a new closure at B–C changes the answer.

⚠ Safety

All routes and needs are fictional. Never require students to disclose disabilities, home locations or travel habits. Do not treat this paper exercise as safe real-world navigation advice.

Teacher notes

Distance must follow depicted route edges; straight-line distance through undrawn space is not a route. The scale uses edge length, not square area. Accessibility labels can be incomplete or outdated in real maps, so a map claim should be checked when consequences matter.

Previous lesson · Unit overview · Next lesson

Lesson 5: Make, test, revise

Time: about 55 minutes (untested estimate)

Status: unreviewed AI draft; not classroom-tested. Author: GPT-5.6 Sol.

Goal

Create, test and revise a map for a stated audience, then apply the unit's ideas in an eight-task assessment.

Materials

Paper or digital drawing tool, rulers, symbol cards, peer-test checklist and assessment packet below. Offer raised-line paper, movable pieces, typing or oral description.

Steps

✎ 1. Opening — 5 minutes

Display: “A clear map is one its intended reader can use.” Ask why “looks beautiful” is not enough. **Example:** Symbols might be attractive but unexplained, or a route might omit a closure.

2. Design brief — 12 minutes

Students choose one fictional brief:

- help a visitor find the reading tent in Starling Fair;
- help a worker inspect three taps in Cloud Garden;
- help a performer move equipment by a step-free route in Moon Court.

Their map must include a title, stated audience/purpose, north arrow, at least two point symbols, one line symbol, one area symbol, a legend, a 3×3 or 4×4 letter-first grid, and a stated scale of one edge = 100 m. It must not depend on colour alone.

3. Reader test — 8 minutes

A partner answers without coaching:

1. What is this map for?
2. What do three symbols mean?
3. Give one feature's grid cell.
4. Follow one route and count its length.
5. Name one detail that remains unknown.

The author records where the reader hesitated. A failed test is useful evidence about the draft, not a score of the author.

4. Revise and explain — 7 minutes

Students make at least two changes and complete: “I changed ___ because the reader ___.” **Examples:** add a missing legend entry; separate two similar symbols; label a closed path; enlarge the north arrow; correct a route distance.

5. Assessment packet — 18 minutes

Use this fictional map:

```
                N ↑
          1       2       3
     A | Gate  | Lawn  | Pond  |
     B | Path  | Well  | Steps |
     C | Stage | Path  | Hall  |
Legend: Gate, Well and Stage = point symbols;
        Path = solid line through the named cell;
        Lawn and Pond = area symbols; Steps = stair location; Hall = building area.
Scale for edge-following routes: one cell-edge move north/east/south/west = 100 m.
```

Text equivalent: A1 gate, A2 lawn, A3 pond, B1 path, B2 well, B3 steps, C1 stage, C2 path and C3 hall. Rows A–C run north to south; columns 1–3 west to east. Routes may move between adjacent cells north/east/south/west, not diagonally. For Task 6 only, the stated route is A1–B1–C1–C2–C3. For Task 7, the direct B2–B3–C3 option includes steps, while B2–C2–C3 is step-free.

Complete exactly these eight tasks:

1. Explain one way this map differs from the place it represents.
2. Classify Gate, the route through Path cells, and Pond as point, line or area symbols.
3. State the grid reference of the Well using the unit's convention.
4. Name the cardinal direction from the Gate A1 to the Lawn A2.
5. Does the absence of a tree symbol prove that the place has no trees? Explain.
6. Calculate the length of A1–B1–C1–C2–C3.
7. Choose a stated route from Well B2 to Hall C3 for a traveller avoiding steps, and justify it.
8. Name one revision that would make this map clearer or more useful, and connect it to a reader or purpose.

6. Closing reflection — 5 minutes

Students finish: “One map choice I can now explain is ___; one thing I would still check is ___.” Accept oral, typed, drawn or arranged responses.

Answer guide

1. A map is a selected, simplified model; it does not reproduce every object, exact shape, height, sound or current condition. Accept one clear example.
2. Gate = point; route/path = line; Pond = area.
3. B2: letter row first, number column second. It locates the cell, not an exact point inside it.
4. East, because the north arrow makes page-right east.
5. No. A map can omit features because of purpose, scale, date or error.
6. A1–B1, B1–C1, C1–C2 and C2–C3 are 4 edges; 4 × 100 m = **400 m**.
7. B2–C2–C3 is 2 edges = 200 m and is stated step-free. B2–B3–C3 also has 2 edges but includes the Steps cell, so it does not meet the stated constraint.

8. Answers vary. Examples: distinguish point and area symbols more clearly; draw the actual line route; add a closure/date label; explain whether the Hall entrance is in C3; add a step-free symbol. The response must name how the change helps a reader or purpose.

Do not turn the guide into a validated pass mark. Look for patterns: a student who counts points rather than edges needs a different follow-up from one who ignores the legend.

Vocabulary

- **Audience:** the intended reader or user.
- **Draft:** a version made for testing and improvement.
- **Usability test:** observing whether a reader can use something for its purpose.
- **Revision:** a purposeful change after checking a draft.
- **Constraint:** a condition that a choice must meet.

Differentiation

- **Extra support:** provide a map frame, pre-cut symbols and sentence starters; let the student dictate labels or demonstrate routes with counters.
- **Extra challenge:** create two maps of the same fictional place for different audiences and justify three changed inclusions or omissions.

⚠ Safety

Use only invented places and routes. Do not collect home addresses, personal mobility information or identifiable daily journeys. No public posting or unsupervised fieldwork is part of the lesson.

Teacher notes

Praise useful revision rather than artistic polish. A reader's difficulty may reveal a legend or layout problem, but one reader does not represent everyone. Tactile and verbal maps are maps too; visual drawing is not the learning goal by itself.

Previous lesson · Unit overview

Grade 3 History, Geography and Society: Then and Now from Sources (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every activity against your school's rules.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on grade 1 society: Then and now: timelines and old and new objects, grade 2 society: How letters changed: sources, the first stamps and the people who changed them, grade 3 society term 1: Maps, routes, and places, and the society progression

Big idea

We find out about the past from sources: things people made or wrote at the time, and memories told later. Putting events on a timeline shows what came first and what was happening at the same time. Two sources about the same day can agree on some things and differ on others, because different people made them for different reasons. Good history questions use more than one source.

This is the second society unit of grade 3 (term 2). Grade 1 put objects and pictures into "long ago, when grown-ups were small, now" and listened to a made-up memory (Mrs Okafor's). Grade 2 used sources about one real change, the first postage stamps. Grade 3 adds a timeline with real years and a scale, two things happening at the same time in different places, comparing daily life in one past year with life now, sorting kinds of sources, and a closer comparison of two sources about the same event (what both say, what only one says, and why they differ).

The town is the made-up Little Hill, used in earlier grades. Its past in this unit is made up too, but it follows a real pattern from the sources: in the 1920s many towns had electricity while many farms did not, and farms were connected years later. The past year studied is 1926, exactly 100 years before this unit was written. See Known gaps.

Outcomes

By the end of the unit most children can:

1. Put dated events on a timeline with a scale, and say what happened in town and on the farms at the same time (1926).
2. Work out how many years apart two events were, using the timeline or subtraction (for example 1948 - 1926 = 22 years).
3. Compare daily life for a made-up child in 1926 with a made-up child now, naming at least one thing that changed and one that stayed the same.
4. Name the kind of a source (picture, writing, object, map or memory) and say one thing it can tell us and one thing it cannot.

5. Say one thing two sources about the same day both tell us, and one thing only one of them tells us.
6. Give a reason why two sources differ (who made it, what they wanted, who it was for), and ask a question about the past that a source could answer.

Prior knowledge

- Grade 1 society term 2: long ago and now; old and new objects; a person remembering is a source; Mrs Okafor's memory of Little Hill School.
- Grade 2 society term 2: a source can be a picture, an object, a letter or an account; dated events in order (1835-1841).
- Grade 3 society term 1: maps with a key, direction and a grid. Lesson 3 uses a simple map of Little Hill in 1926.
- Grade 3 mathematics term 1: adding and taking away within 1000 and counting in tens. Lesson 1 uses differences between years.
- An adult reads every source aloud. Children may follow the printed copy but do not need to read it alone.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week.

1. Putting Little Hill's past in order: a floor timeline from 1880 to 2030 (10 cm for every 10 years); nine event cards; what happened at the same time in 1926; how many years between events.
2. A day in 1926 and a day now: Iris (a made-up girl on a farm near Little Hill in 1926) and Leo (a made-up boy in Little Hill now); six pairs of daily-life cards; changed or stayed the same.
3. What kind of source is it?: six made-up sources about Little Hill in 1926 (a photograph, a diary page, a newspaper report, an object, a map and a memory told later); what each can and cannot tell us; who each was made for.
4. Two sources, one day: the evening the electric lamps were first lit on Main Street, 6 November 1926, told by the newspaper and by Iris's diary; sorting statements into "both say", "only the newspaper" and "only the diary"; why they differ.
5. Questions from many sources: pairs ask questions about the sources and the people in them; "our sources answer it" or "we need another source"; a new source from 1948; a class "Little Hill then and now" display.

Materials (whole class unless noted)

- A floor or wall timeline strip at least 160 cm long, marked from 1880 to 2030 with a mark every 10 cm for every 10 years, drawn by the teacher from the description in lesson 1 (all lessons).
- Nine event cards, from the list in lesson 1, one large set for the class timeline and one small set per pair (lessons 1, 5).
- A metre stick or a 30 cm ruler (lesson 1).
- Blu-tack or masking tape (lessons 1, 2, 3, 5).
- Twelve daily-life picture cards (six pairs, Iris and Leo), from the list in lesson 2, one set per pair, and a large "Changed / Stayed the same" chart (lesson 2).
- Two large name cards: "Iris, 1926" and "Leo, now", each with a simple face drawing (lessons 2-5).

- Six source cards, from the texts in lesson 3: a photograph drawing, Iris's diary page, the Little Hill News report, an oil lamp picture card, a map of Little Hill in 1926 and Iris's memory told in 1990; one large set for the class and one small set per group of four (lessons 3, 5), plus one extra small diary card and newspaper card per pair (lesson 4).
- Five kind-of-source labels: picture, writing, object, map, memory, and a three-column "Can tell us / Can't tell us / Made for" sheet per group (lesson 3).
- Eight statement strips, from the list in lesson 4, one set per pair, and a three-column sorting mat per pair ("Both say", "Only the newspaper", "Only the diary"), and a large copy of the mat for the class (lesson 4).
- A seventh source card, the 1948 Little Hill News notice, from the text in lesson 5 (lesson 5).
- A large sheet titled "Our questions", split into "Our sources answer it" and "We need another source", and five question starter cards (Who, Why, When, How, What happened to) (lesson 5).
- Paper strips or sticky notes, pencils and crayons (lessons 1, 2, 3, 4, 5).
- A large sheet for the class display "Little Hill then and now" (lesson 5).
- For blind or low-vision children: a raised-line timeline (a string or puffy-paint line with a raised dot every 10 cm and large-print or braille years every 50 years), large-print or braille copies of the event cards, source texts and statement strips, a piece of corrugated card to feel the ridges of a washboard (lesson 2), a raised-line version of the 1926 map and of the oil lamp outline (lesson 3), and a sorting mat with raised lines between the columns (lessons 3, 4) (all lessons unless noted).

⚠ Safety and access

- **Privacy.** Never ask what children's own homes have (lights, a fridge, a washing machine, a phone), how their families travel, or what their relatives did in the past. Every home and family in this unit belongs to a made-up character. Children may share family stories only if they choose to; do not write them down or display them.
- **"Now" is not the same for everyone.** Leo's home in Little Hill has electricity, a fridge and a washing machine. Say "in Leo's home" rather than "in homes now": some families today do not have these things, and in many places in the world farms still have no electricity.
- **No real lamps or flames.** The oil lamp is a picture card only. Do not bring in a lamp with fuel, and never light one in class.
- **Moving on the timeline.** Placing cards on a floor timeline can be done from a chair with a pointer, or by telling a partner where to put the card. Leave a clear path round the strip for wheelchairs, or put the strip on a wall at seated height.
- **Feelings about the past.** In lesson 4 the lamplighter, Mr Gale, loses his job of lighting the gas lamps. Keep it gentle: say he found other work (Iris's memory in lesson 3 says he became the school caretaker), and let any child step out of the discussion.
- Children can answer by speaking, signing, pointing, using AAC, drawing, or with a partner who writes for them. Their own way counts.
- Deaf children: show each source while it is read, and face the class when reading aloud; give printed copies. Blind and low-vision children: use the raised-line timeline and the large-print or braille copies listed in Materials; describe each picture card in words. Colour is never the only clue (the two strands on the timeline are above and below the line, not only in two colours).

Assessment

Watch and listen during lessons, and use the closing checks. During lesson 5 or the following week, see each child for about 4 minutes with the timeline, the cards and the source cards (answers in brackets):

1. Give four event cards (bridge 1895, station 1910, Main Street lamps 1926, farms get electricity 1948): "Put these on the timeline." "In 1926, what was different in town and on the farms?" (In order 1895, 1910, 1926, 1948. The town had electric street lamps; the farms still had no electricity, only oil lamps and candles.) (Outcome 1.)
2. "How many years after the Main Street lamps did the farms get electricity?" (22 years: 1948 - 1926, or counting on 4 to 1930, then 10 to 1940, then 8 to 1948.) (Outcome 2.)
3. Show the "light" pair and the "washing clothes" pair of Iris and Leo cards: "What changed? Tell me one thing that stayed the same for Iris and Leo." (Changed: oil lamp to electric light; washboard and wringer to washing machine. Same: for example both go to Little Hill School, both play hopscotch, both help at home.) (Outcome 3.)
4. Show the photograph, the oil lamp card and Iris's memory: "What kind of source is each one? Tell me one thing one of them can tell us, and one thing it can't." (Picture, object, memory. For example the photograph shows what Main Street looked like but not what people said or felt; the memory tells feelings but was told 64 years later, so some details may be forgotten.) (Outcome 4.)
5. Read the two short sources from lesson 4 again: "Tell me one thing both say, and one thing only Iris's diary says." (Both: the lamps came on at six o'clock on Main Street, many people came. Only the diary: it rained; the lamps were not as bright as Iris expected; the farm would not get electricity; Mr Gale looked sad.) (Outcome 5.)
6. "Why do you think they tell the day differently?" (The newspaper was written for the whole town to read and wanted to tell good news; Iris wrote for herself and wrote what she saw and felt; she lived on a farm. Any reason about who made it, why, or for whom counts.) "Ask me one question about Little Hill in 1926." "Which source could help answer it?" (Any sensible question and source.) (Outcome 6.)

Record "yes", "with help" or "not yet" for each outcome. A child who can do it in their own way (pointing, signing, AAC) gets "yes".

Sources

The C3 framework was read in the archived PDF (pages with the grades 3-5 history indicators): https://web.archive.org/web/20220403055307/https://www.socialstudies.org/sites/default/files/2017/Jun/c3-framework-for-social-studies-rev0617.pdf

The indicators used, quoted from the framework (the unit is not a full alignment):

- D2.His.1.3-5: "Create and use a chronological sequence of related events to compare developments that happened at the same time." (Lesson 1.)
- D2.His.2.3-5: "Compare life in specific historical time periods to life today." (Lesson 2.)
- D2.His.3.3-5: "Generate questions about individuals and groups who have shaped significant historical changes and continuities." (Lesson 5.)
- D2.His.6.3-5: "Describe how people's perspectives shaped the historical sources they created." (Lesson 4.)
- D2.His.9.3-5: "Summarize how different kinds of historical sources are used to explain events in the past." (Lesson 3.)

- D2.His.10.3-5: "Compare information provided by different historical sources about the past." (Lesson 4.)
- D2.His.11.3-5: "Infer the intended audience and purpose of a historical source from information within the source itself." (Lessons 3, 4.)
- D2.His.12.3-5: "Generate questions about multiple historical sources and their relationships to particular historical events and developments." (Lesson 5.)

Real facts behind the made-up Little Hill story come from Wikipedia articles, read on 12 November 2026:

- "Rural electrification": https://en.wikipedia.org/wiki/Rural_electrification ("Despite widespread electricity in cities, by the 1920s electricity was not delivered by power companies to rural areas because of the general belief that the infrastructure costs would not be recouped." and "Of the 6.3 million farms in the United States in January 1925, only 205,000 were receiving centralized electric services." The same article says that in Ireland most towns were connected in the 1930s and the countryside from the early 1950s, and that from 1935 a United States government agency made "long-term, self-liquidating loans to state and local governments, to farmers' cooperatives, and to nonprofit organizations".) Used for the town having electric lamps in 1926 while the farms waited until 1948, and for the farmers' group in lesson 5.
- "Kerosene lamp": https://en.wikipedia.org/wiki/Kerosene_lamp (such lamps are "useful for lighting without electricity"). Used for Iris's oil lamp.
- "Icebox": https://en.wikipedia.org/wiki/Icebox ("a common early-twentieth-century kitchen appliance before the development of safely powered refrigeration devices", with "large chunks of ice" added "every several days"). Used for Iris's icebox and the ice cart.
- "Washboard (laundry)": https://en.wikipedia.org/wiki/Washboard_(laundry) ("a tool designed for hand-washing clothing") and "Mangle (machine)": https://en.wikipedia.org/wiki/Mangle_(machine) (a wringer "was used to squeeze the water out of wet washing"). Used for washing day in 1926.
- "Primary source": https://en.wikipedia.org/wiki/Primary_source (a source "created at the time under study"; "accounts written after the fact with the benefit of hindsight are secondary"). Used for the teacher note on Iris's memory told in 1990.
- "Timeline": https://en.wikipedia.org/wiki/Timeline ("a list of events displayed in chronological order"; many use "a linear scale, in which a unit of distance is equal to a set amount of time"). Used for the 10 cm scale.

Known gaps and cautions

- Three other agents text-checked this unit on 2026-11-12: Gemini 3.8 Flash (at c0a59de) and Gemini 4 Argon (re-checked at f9d319a) reported no errors; Gemini 4 Carbon (at bbbdbc6) reported three small errors (lesson 4 copy counts and materials, a progression wording, and which C3 history indicators are grades 3-5), all fixed in 9ea2f9c and diff re-checked by Gemini 4 Carbon (and, as reported, Gemini 4 Argon). Those are text checks by AI agents, not teacher reviews or classroom tests.
- Little Hill, its people (Iris, Leo, Mr Gale, the mayor Mrs Hart) and all its sources are made up by the author. The sources are written to look like real ones, but they are **not** real 1926 sources; tell the children so. The general pattern (towns before farms, oil lamps, iceboxes, washboards) comes from the Wikipedia articles above, which describe the United States and Ireland; when farms got electricity was different in different countries and is still not finished everywhere.

- The years of Little Hill's events (1890 school, 1895 bridge, 1910 station, 1926 lamps and second classroom, 1948 farms, 1956 Mrs Okafor starts school, 1975 library, 2005 computers) are made up. Mrs Okafor and the gas lamps match the grade 1 unit, where she started school "about 70 years ago".
- Iris's memory is told in 1990, 64 years after 1926. The unit calls it "a memory told later" and does not teach the words "primary" and "secondary"; that is left for later grades in the society progression.
- The comparison in lesson 2 is between one made-up child then and one made-up child now. It is not a fair picture of every child in 1926 or now.
- The grades 3-5 indicators C3 D2.His.4, D2.His.5, D2.His.13, D2.His.14, D2.His.16 and D2.His.17 (perspectives across a period, using sources as evidence for claims, causes and effects) are not covered; the year plan puts a longer "then and now" project in term 3.
- The sources are read aloud. The unit does not use the grade 3 literacy letter sequence, because adults read the texts; it does not teach reading.
- The lesson order, the made-up story, the card wording and the timings are the author's choices, not taken from a source.

Lesson 1: Putting Little Hill's past in order

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children put dated events from the made-up town of Little Hill on a timeline with a scale, find two things that happened at the same time, and work out how many years apart two events were.

Materials

- The timeline strip: paper at least 160 cm long, taped to the floor or a wall at seated height. Draw a line along it. Starting 5 cm from the left end, mark 1880, then a mark every 10 cm for every 10 years (1890, 1900 ...) up to 2030, 150 cm from 1880. Write the year under every mark. Write "School" above the line at the left end and "Town and farms" below it.
- Nine large event cards (below) for the class timeline, and one small set per pair.
- A metre stick or a 30 cm ruler.
- Blu-tack or masking tape, and a sticky note for "Now".
- Paper strips and pencils for the closing check.
- For blind or low-vision children: the raised-line timeline (a raised dot every 10 cm and large-print or braille years every 50 years) and large-print or braille event cards.

The nine event cards (made up)

Each card has the year in large numbers, one sentence and a simple drawing. The letter in brackets is for the teacher. "Above" means the School strand; "below" means the Town and farms strand.

- (A) **1890:** Little Hill School opens with one classroom. (Above.) Drawing: a small school with one door.
- (B) **1895:** The stone bridge over the river is built. (Below.) Drawing: a stone bridge.
- (C) **1910:** The railway station opens. (Below.) Drawing: a station with a steam train.
- (D) **1926:** Electric lamps take the place of the gas lamps on Main Street. (Below.) Drawing: a street lamp with a wire.
- (E) **1926:** Little Hill School gets a second classroom. (Above.) Drawing: the school with two doors.
- (F) **1948:** The farms around Little Hill get electricity. (Below.) Drawing: wires on poles going to a farmhouse.
- (G) **1956:** Mrs Okafor starts at Little Hill School. (Above.) Drawing: a girl with a school bag and a hand bell.
- (H) **1975:** Little Hill library opens. (Below.) Drawing: a building with books in the window.
- (I) **2005:** Little Hill School gets its first computers. (Above.) Drawing: a computer on a desk.

Where each card goes, measured from 1880: A 10 cm, B 15 cm, C 30 cm, D and E 46 cm, F 68 cm, G 76 cm, H 95 cm, I 125 cm. Now (2026) is at 146 cm.

Steps

✎ Opening (5 min)

Show the strip. Say: "This is a **timeline**. Every 10 centimetres stands for 10 years. That is its **scale**." Put a finger on 1880 and walk it along, counting in tens: "1890, 1900, 1910 ..." to 2030. Ask: "Where is now, 2026?" (Between 2020 and 2030, a little past the middle; 146 cm from 1880.) Stick a "Now" note there.

Say: "Remember Little Hill, and Mrs Okafor who went to school there? This week we find out about Little Hill long ago. The town and its story are made up, but the way things changed is like what happened in many real places."

✎ Main activity (25 min)

1. **Place the cards (12 min).** Give each pair one or two large cards. Read each card aloud. The pair finds its year on the strip (counting in tens, then on in ones; for 1926, find 1920, then count 6 more centimetres) and sticks the card at its place: above the line for School cards, below for Town and farms cards. Check with the metre stick. Everyone checks with a thumbs up or asks "Why there?"
2. **Same time, different places (6 min).** Ask: "Find two things that happened in the same year." (D and E, in 1926.) "In 1926, the town had new electric lamps. Did the farms have electricity in 1926?" (No; card F says the farms got it in 1948.) "So for some years, the town had electric light and the farms did not. From which year to which year?" (From 1926 to 1948.) Run a finger along the strip between D and F.
3. **How many years apart? (7 min).** Pairs use their small sets and the class strip to answer, by counting on in tens and ones or by taking away:
    - "How many years between the bridge and the station?" (1910 - 1895 = 15.)
    - "How many years did the farms wait after the town got electric lamps?" (1948 - 1926 = 22.)
    - "How long after the school opened did Mrs Okafor start there?" (1956 - 1890 = 66.)
    - "How many years ago was 1926?" (2026 - 1926 = 100: one hundred years ago.)

    Pairs who finish make up one question for another pair.

✓ Discussion questions (5 min, with answers)

1. "Which came first, the station or the electric lamps on Main Street? How does the timeline show it?" (The station, 1910; it is further to the left, nearer 1880.)
2. "Why might the farms have got electricity later than the town?" (Accept ideas. The farms are far apart, so the wires and poles cost more for each house; in many real countries, towns got electricity before farms.)
3. "What does the space between two cards tell us?" (How long it was between them: more space means more years.)

✓ Closing check (5 min, with answers)

Each child gets a paper strip and answers two questions in their own way (writing, drawing or telling an adult):

1. "Which two things happened in 1926?" (The electric lamps on Main Street and the second school classroom.)
2. "Which happened first, the library or the farms getting electricity?" (The farms, in 1948; the library opened in 1975.)

Collect the strips to see who needs help with the scale.

Vocabulary

timeline, scale, year, before, after, at the same time, how many years, electricity, gas lamp, farm

Differentiation

- **Support:** place cards with an adult, using only the hundreds and tens first ("1926 is after 1920"); use only the cards A, D, F and I; count the years between events by stepping along the 10 cm marks.
- **Stretch:** "How many years from the school opening to the first computers?" (2005 - 1890 = 115.) Add a card for a made-up event in 2030, then explain where it goes.
- **Tactile:** blind and low-vision children use the raised-line timeline, feel the raised dots to count in tens, and place large-print or braille cards with a partner.

⚠ Safety

- Keep the floor strip taped flat so nobody trips; children kneel or reach from chairs and do not walk on it. Leave a clear path for wheelchairs.

Teacher notes and misconceptions

- Some children think a bigger year is "longer ago". Point out that the years get bigger as we walk towards now.
- 1926 sits 46 cm from 1880, not 26 cm: the count starts at 1880, not 1900. Count the tens together before measuring.
- Two events in the same year go at the same place, one above and one below the line. This is the point of the two strands: to compare what happened in different places at the same time.
- Tell the children clearly that Little Hill and its events are made up. The idea that towns often got electricity before farms is real (see Sources in the unit overview).

Lesson 2: A day in 1926 and a day now

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 40 minutes.

Goal

Children compare daily life for Iris, a made-up girl on a farm near Little Hill in 1926, with daily life for Leo, a made-up boy in Little Hill now, and sort what changed and what stayed the same.

Materials

- The timeline from lesson 1, with its "Now" note.
- Two large name cards: "Iris, 1926" (a girl aged 9, on a farm near Little Hill) and "Leo, now" (a boy aged 9, in Little Hill), each with a simple face drawing.
- Twelve daily-life picture cards (six pairs, below), one set per pair. Each card has a drawing and one sentence for the adult to read.
- A large "Changed / Stayed the same" chart with a column for each, and a space between them for "Some of both".
- Sticky notes, pencils and crayons.
- Blu-tack, to put the name cards on the timeline.
- A piece of corrugated card (to feel the ridges of a washboard).
- For blind or low-vision children: large-print or braille copies of the card sentences.

The six pairs of cards (made up)

1. **Light.** Iris: "When it gets dark, my mum lights the oil lamp. I am not allowed to touch it." Leo: "When it gets dark, I press the switch and the light comes on."
2. **Keeping food cold.** Iris: "We keep milk and butter in the icebox. The ice cart brings a big block of ice from town every few days." Leo: "We keep milk and butter in the fridge. It is plugged in to the electricity."
3. **Washing clothes.** Iris: "Monday is washing day. We scrub the clothes on a washboard, then turn the handle of the wringer to squeeze the water out." Leo: "In my home, the washing machine washes the clothes and spins the water out."
4. **Going to school.** Iris: "I walk 3 kilometres down the farm lane to Little Hill School. This year it has a new second classroom." Leo: "I walk for 10 minutes to Little Hill School. It has computers."
5. **Sending a message.** Iris: "To tell my aunt in Big Harbour our news, I write a letter and we post it in town." Leo: "To tell my aunt in Big Harbour our news, we send a message on a phone."
6. **Playing.** Iris: "At break we play hopscotch in the school yard." Leo: "At break we play hopscotch in the school yard."

Steps

✎ Opening (5 min)

Show the two name cards. Put "Iris, 1926" on the timeline at 1926 and "Leo, now" at the Now note. Ask: "How many years apart are Iris and Leo?" (100.) Say: "In 1926, did Iris's farm have electricity?" (No; the farms got it in 1948.) "Today we compare one day for Iris and one day for Leo. They are both made up, but Iris's things are like real things from 100 years ago."

✎ Main activity (25 min)

1. **Read the pairs (8 min).** Read each pair aloud and show the drawings. Pass round the corrugated card: "A washboard had ridges like this. You rubbed the wet clothes up and down on it." For the icebox, explain: "It was a cupboard with thick walls. The block of ice inside kept it cold until it melted."
2. **Sort (10 min).** Pairs lay out the twelve cards in pairs, Iris on the left and Leo on the right, and decide for each pair: did it **change**, did it **stay the same**, or is it **some of both**? They put a sticky note on the class chart with the pair's name (for example "Light") in the column they choose, and say why.
3. **Same need, new way (7 min).** Ask: "Iris and Leo both keep food cold. What changed?" (The way: an icebox with ice, or a fridge with electricity.) Do the same for light, washing and messages. Write on the chart: "The **need** stayed the same. The **way** changed." Ask: "Which changes need electricity?" (The light, the fridge, the washing machine and the phone.) Link back to lesson 1: Iris's farm had no electricity in 1926.

✓ Discussion questions (5 min, with answers)

1. "What stayed the same?" (Both play hopscotch, both go to Little Hill School, both keep food cold, both send news to an aunt; accept others with a reason.)
2. "What changed the most, do you think? Why?" (Any choice with a reason; for example washing, because it took Iris a whole day.)
3. "Iris lived on a farm. Would a child in the town of Little Hill in 1926 have the same light as Iris?" (Maybe not: Main Street had electric lamps from 1926, so some town homes might have had electric light. Our cards don't tell us; that is a question for another source.)

✓ Closing check (5 min, with answers)

Each child draws or writes, or tells an adult:

1. One thing that changed between Iris and Leo. (For example "Iris had an oil lamp; Leo has an electric light.")
2. One thing that stayed the same. (For example "They both play hopscotch.")

Vocabulary

changed, stayed the same, then, now, icebox, washboard, wringer, oil lamp, electricity, need, way

Differentiation

- **Support:** sort only three pairs (light, washing, playing) with an adult; use the sentence frame "In 1926 Iris ... Now Leo ...".
- **Stretch:** add a seventh pair of their own (for example cooking or keeping warm) and say whether Iris's way needed electricity. Write a short diary sentence as Iris.
- **Tactile:** blind and low-vision children feel the corrugated card and use large-print or braille copies of the card sentences.

⚠ Safety

- The oil lamp is talked about and drawn, never brought in or lit.
- Never ask what children's own homes have. Talk only about Iris's and Leo's homes. If a child says their home has no washing machine or fridge, accept it calmly: "Homes are different now too."

Teacher notes and misconceptions

- Children may think everyone in 1926 lived without electricity. In Little Hill the town had electric street lamps from 1926; Iris's farm did not. Real sources say many towns had electricity in the 1920s while many farms did not (see Sources in the unit overview).
- Children may say "people were poor" or "people were not clever then". Say: "They did clever things with what they had. The icebox was a clever way to keep food cold without electricity."
- Leo is one made-up child. Say "in Leo's home", not "in all homes now".

Lesson 3: What kind of source is it?

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 40 minutes.

Goal

Children meet six made-up sources about Little Hill in 1926, sort them into kinds (picture, writing, object, map, memory), and say what each can tell us, what it cannot, and who it was made for.

Materials

- The timeline from lesson 1, with the Iris and Leo name cards from lesson 2.
- Six source cards (texts and descriptions below): one large set for the class and one small set per group of four. Also print one extra small diary card and newspaper card per pair for lesson 4. Each card says at the top: "Made up for this lesson".
- Five kind-of-source labels: picture, writing, object, map, memory.
- A "Can tell us / Can't tell us / Made for" sheet per group (three columns), and pencils.
- Paper strips for the closing check.
- Blu-tack, to put the memory card on the timeline.
- For blind or low-vision children: large-print or braille copies of the source texts, a raised-line version of the map (string for the river, puffy-paint dots for the lamps) and of the lamp outline, and a sorting mat with raised lines between the columns.

The six source cards (made up)

1. **Photograph (a drawing that looks like an old photo).** Main Street in November 1926: a new electric street lamp on a pole with a wire, a horse and cart, one motor car, a baker's shop, and people in coats and hats. Written on the back: "Main Street, the week the new lamps came. Taken for the Little Hill News."
2. **Iris's diary page.** Read aloud:

   Saturday 6 November 1926. Today we went into town on the cart to see the new lamps. It rained all the way. There were lots of people on Main Street. At six o'clock Mrs Hart the mayor pulled a lever and the lamps came on. Everyone cheered. I thought they would be bright like the sun, but they were only a bit brighter than the gas lamps. Dad says the wires will not come to our farm for years and years. Mr Gale the lamplighter stood at the back. He looked sad. We got home wet.

1. **Newspaper report.** Read aloud:

   LITTLE HILL NEWS, Monday 8 November 1926. LIGHT AT LAST ON MAIN STREET! On Saturday evening a great crowd filled Main Street to see the new electric lamps. At six o'clock exactly, the mayor, Mrs Hart, pulled the lever and twelve lamps shone out. "Little Hill is a modern town now," she said. The lamps will shine every night, and

nobody will need to light them by hand. Shops on Main Street will stay open later in winter. Buy your electric lights at Penn's Hardware, Main Street!

1. **Object: an oil lamp (picture card).** A drawing of an oil lamp: a metal base to hold the oil, a wick, and a tall glass chimney. Label: "Oil lamp from Brook Farm, near Little Hill. Used every evening until 1948. Now in the Little Hill museum."
2. **Map: Little Hill in 1926.** Drawn by the teacher: the river across the middle, the stone bridge, the railway and the station, Main Street with twelve small lamp symbols, the school, and a lane going out of town to Brook Farm. Key: lamp, school, station, bridge, farm. Title: "Little Hill: where the new lamps will go. For the town council, 1926."
3. **A memory told later.** Read aloud:

   Iris Brook, aged 73, told this to a pupil at Little Hill School in 1990: "I was nine when the lamps came on in Little Hill. It was a lovely dry evening and the whole town was there. The lamps were so bright! Mr Gale, the lamplighter, didn't light lamps any more after that; he became the caretaker at the school. We waited a long time for electricity on our farm. When it came, in 1948, the first thing my mother bought was an electric iron."

Steps

✎ Opening (5 min)

Say: "A **source** is something that tells us about the past. In grade 2 we used pictures, objects and accounts. Today we have six sources about Little Hill in 1926. They are made up for these lessons, but they are like real sources." Ask: "Who remembers a source we used before?" (For example Mrs Okafor's memory, the old objects, the first stamp.)

✎ Main activity (25 min)

1. **Meet the sources (10 min).** Show each large card and read it aloud, or describe the picture. After each one, ask: "When was it made? Who made it?" (Photograph: 1926, for the newspaper. Diary: 6 November 1926, Iris. Newspaper: 8 November 1926, the Little Hill News. Lamp: used until 1948, label written later by the museum. Map: 1926, for the town council. Memory: told in 1990 by Iris, aged 73.) Put the 1990 memory on the timeline: "This was told 64 years after 1926."
2. **Sort by kind (5 min).** Groups lay out their small set under the five labels. (Photograph: picture. Diary and newspaper: writing. Oil lamp: object. Map: map. Iris's memory: memory.) Two cards go under "writing".
3. **Can tell, can't tell, made for (10 min).** Each group takes one source (give the six out across the groups; repeat if there are more than six groups) and fills the three columns. Example answers:
   - Photograph: can tell what Main Street looked like, a horse and cart and a car together; can't tell what people said, felt, or heard; made for the newspaper's readers.
   - Diary: can tell what Iris saw and felt, the rain; can't tell what everyone else thought; made for Iris herself.

- Newspaper: can tell the time, how many lamps, what the mayor said; can't tell how a farm family felt; made for the people of the town who bought the paper (and it sells lights for a shop).
- Oil lamp: can tell how a farm lit its rooms; can't tell who used it or what they thought; made to light a room (the label was made for museum visitors).
- Map: can tell where the lamps, the school and the farm were; can't tell what it was like to be there; made for the town council.
- Memory: can tell feelings and what happened later (Mr Gale, the iron); can't be sure every detail is right, because it was told long after; told to a pupil for a school project.

Each group reads its row to the class.

✓ Discussion questions (5 min, with answers)

1. "Which sources were made in 1926, at the time?" (The photograph, the diary, the newspaper and the map. The lamp was made and used then, but its label was written later.)
2. "Iris's memory was told 64 years later. Is anything in it hard to be sure about?" (Small details, like the weather or how bright the lamps were, might be remembered differently after a long time. We can check them with other sources; lesson 4 will.)
3. "Why do we need more than one source?" (Each source tells only part of the story; together they tell more.)

✓ Closing check (5 min, with answers)

Hold up three cards one at a time: the oil lamp, the newspaper, the map. Each child writes or shows on a strip, or tells an adult, the kind of each (object, writing, map). Then: "Tell me one thing the map can't tell us." (For example what people felt, what the weather was, what anyone said.)

Vocabulary

source, picture, writing, object, map, memory, diary, newspaper, made for, at the time, told later

Differentiation

- **Support:** sort only four cards (photograph, diary, oil lamp, map); use the frame "This is a … It tells us …".
- **Stretch:** "Which source would you trust most about the weather that evening? Why?" (The diary, written that same day, says it rained; the memory says dry, but was told 64 years later.)
- **Tactile:** blind and low-vision children use the raised-line map and lamp outline, large-print or braille texts, and the raised-line sorting mat.

⚠ Safety

- The oil lamp is a picture card only. Do not bring in a real lamp.

Teacher notes and misconceptions

- Tell the children the sources are made up for these lessons, so they do not think Little Hill is real.
- Historians often call sources made at the time "primary" and accounts made later "secondary" (see "Primary source" in the unit overview's Sources). The unit says "made at the time" and "told later" instead; the words can come later.
- A source made later is not useless: Iris's memory is the only source here that tells what happened to Mr Gale and when the farm got electricity.
- The newspaper ends with an advert. Children may notice that the newspaper wanted people to like the new lamps; this leads into lesson 4.

Lesson 4: Two sources, one day

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 40 minutes.

Goal

Children compare what two sources tell about the same evening (the electric lamps first lit on Main Street on Saturday 6 November 1926), sort what both say and what only one says, and give reasons why the sources differ.

Materials

- The large diary card and newspaper card from lesson 3 (texts in lesson 3).
- One small diary card and newspaper card per pair (the extra pair copies printed with the lesson 3 sets).
- Eight statement strips (below), one set per pair.
- A three-column sorting mat per pair: "Both say", "Only the newspaper", "Only the diary".
- A large copy of the same mat for the class.
- The Iris name card from lesson 2.
- A board or chart paper for the two-column "Newspaper" / "Diary" answers.
- Paper and pencils for the closing check and the stretch writing.
- For blind or low-vision children: large-print or braille copies of the two sources and the strips, and a sorting mat with raised lines between the columns.

The eight statement strips

1. The lamps came on at six o'clock.
2. The lamps were on Main Street.
3. The mayor, Mrs Hart, pulled a lever.
4. There were twelve lamps.
5. Shops on Main Street will stay open later in winter.
6. The mayor said, "Little Hill is a modern town now."
7. It rained.
8. The lamps were only a bit brighter than the gas lamps.

Answer key: Both say: 1, 2, 3. Only the newspaper: 4, 5, 6. Only the diary: 7, 8.

Steps

✎ Opening (5 min)

Hold up the diary and the newspaper. Ask: "What day are both of these about?" (Saturday 6 November 1926, the evening the electric lamps were first lit.) "Who made each one?" (Iris, aged 9, from a farm; the Little Hill News.) Say: "Today we are detectives. Do they tell the same story?"

✎ Main activity (25 min)

1. **Read both again (6 min).** Read the newspaper aloud, then the diary. Pairs follow on their small cards. After each, ask one child to retell it in one sentence.
2. **Sort the strips (9 min).** Read each strip aloud. Pairs find it in one or both sources and put it in a column of their mat. Then go through the class mat together and check with the answer key. Ask pairs to point to the words in the source that prove each one.
3. **Why are they different? (10 min).** Ask these detective questions and write the answers in two columns, "Newspaper" and "Diary":
   - "Who made it?" (A newspaper writer in town; Iris, a girl from a farm.)
   - "Who was it made for?" (People in the town who read the newspaper; Iris herself.) "What clue in the newspaper tells you?" (It talks to the reader: "Buy your electric lights at Penn's Hardware".)
   - "What did they want to say?" (The newspaper: good news, "Light at last", the town is modern. Iris: what she saw and felt, the rain, being a bit disappointed.)
   - "What did Iris notice that the newspaper did not?" (The farm would not get the wires; Mr Gale looked sad.) "Why might Iris notice that?" (She lives on a farm with no electricity; she saw Mr Gale at the back.)

   Say: "The two sources were made by different people for different reasons, so they tell the same evening in different ways. Both can be useful."

✓ Discussion questions (5 min, with answers)

1. "The newspaper doesn't say it rained. Does that mean it didn't rain?" (No. It just doesn't say. A source can leave things out.)
2. "Which source tells us more about how a farm family felt? Why?" (The diary, because Iris's family lived on a farm and she wrote down her feelings.)
3. "In lesson 3, Iris's memory from 1990 said it was a dry evening. Her diary from that day says it rained. Which would you believe about the weather, and why?" (Most children choose the diary, written the same day; the memory was told 64 years later, and small details can be forgotten. Accept any choice with a reason.)

✓ Closing check (5 min, with answers)

Each child says, signs, writes or points to answer:

1. "Tell me one thing both sources say." (The lamps came on at six; on Main Street; the mayor pulled a lever.)
2. "Tell me one thing only the diary says." (It rained; the lamps were only a bit brighter; the farm would not get wires; Mr Gale looked sad.)

Vocabulary

compare, both, only, same, different, newspaper, diary, made for, reason, leave out, believe

Differentiation

- **Support:** sort four strips only (1, 4, 7 and 3) with an adult; use the frame "Both say ..." and "Only the diary says ...".
- **Stretch:** write two sentences as a newspaper writer who lived on a farm. How would the report change? Or write one strip of their own for a partner to sort.
- **Tactile:** blind and low-vision children use large-print or braille copies and the raised-line sorting mat.

⚠ Safety

- Mr Gale loses his lamplighting job when the gas lamps go. Keep it gentle: if children worry, read the line from Iris's memory (lesson 3) that he became the school caretaker. Any child may step out of the discussion.

Teacher notes and misconceptions

- Children may think one source is "right" and the other "wrong". Most of the differences here are not mistakes: each source chose different things to tell. Only the weather is a real disagreement, and that is between the diary and the memory, not the newspaper.
- "Twelve lamps" is only in the newspaper, but the lesson 3 map also shows twelve lamp symbols. That is a third source agreeing; mention it if a child notices.
- The advert is a clue to the newspaper's audience and purpose (C3 D2.His.11). Keep it light: newspapers often carried adverts.

Lesson 5: Questions from many sources

Unit overview - Previous: Lesson 4

About 40 minutes, plus about 4 minutes per child for the one-to-one check during the week.

Goal

Children ask questions about the Little Hill sources and the people in them, decide which questions the sources can answer, use a new source from 1948, and make a class "Little Hill then and now" display.

Materials

- The timeline from lesson 1 with its nine event cards and the Iris and Leo name cards.
- One small set of the six source cards from lesson 3 per group of four, and the large set.
- The 1948 Little Hill News notice (text below), one large copy and one small copy per group.
- A large sheet titled "Our questions", split into "Our sources answer it" and "We need another source".
- Five question starter cards: Who, Why, When, How, What happened to.
- Blu-tack or masking tape, to add the 1948 notice to the timeline.
- Sticky notes or paper strips, pencils and crayons.
- A large sheet titled "Little Hill then and now" for the display.
- The small event card sets from lesson 1, for the support group.
- The cards needed for the one-to-one check (see Assessment in the unit overview).
- For blind or low-vision children: large-print or braille copies of all the sources, the raised-line timeline, and a partner or adult to write their questions down.

The 1948 notice (made up)

Read aloud:

> LITTLE HILL NEWS, Monday 3 May 1948. WIRES REACH THE FARMS Electricity came to eleven farms near Little Hill last week, Brook Farm among them. In 1946 the farmers formed the Little Hill Farmers' Group and borrowed money together to pay for the poles and wires. Workers from Big Harbour put up 200 poles along the farm lanes. "We waited a long time," said Mr Brook of Brook Farm, "but tonight we have light at the touch of a switch."

Steps

✎ Opening (5 min)

Point to the 1926 cards and the 1948 card on the timeline. Say: "Historians ask questions and then look for sources that answer them. Today you are the historians." Show the question starter cards: **Who ...? Why ...? When ...? How ...? What happened to ...?**

✎ Main activity (25 min)

1. **Ask questions (8 min).** Groups look at all six sources and the timeline and write or say questions, one per sticky note (an adult scribes where needed). Ask for at least one question about a **person or group** (Mrs Hart, Mr Gale, Iris's family, the farmers).

2. **Sort and answer (10 min).** Read the 1948 notice aloud, stick the large copy on the timeline next to the 1948 card, and add the small copies to the groups' sources. Groups read their questions out; the class decides together where each goes on "Our questions". If the sources answer it, a child points to the source and says the answer. Likely questions and answers:

    - "What happened to Mr Gale?" (Answered: he became the school caretaker; Iris's memory.)
    - "When did Brook Farm get electricity?" (Answered: 1948; the notice and Iris's memory agree.)
    - "Who brought electricity to the farms?" (Answered: the Little Hill Farmers' Group, who borrowed money together, and the workers from Big Harbour who put up the poles; the notice.)
    - "Why did the farms wait so long?" (Partly answered: the poles and wires cost a lot, and the farmers had to borrow the money; the notice. Other reasons need another source.)
    - "How many lamps were on Main Street?" (Answered: twelve; the newspaper and the map.)
    - "Did houses in town have electric light in 1926?" (Need another source; none of ours says.)
    - "How did Mr Gale feel about his new job?" (Need another source.)

    For each "need another source" question, ask: "What kind of source might help?" (For example a photograph of a town house, a letter from Mr Gale, a memory from someone in town.) 3. **Then and now display (7 min).** Each child adds two things to the display, in their own way: one sentence or drawing comparing Iris and Leo ("In 1926 Iris ... Now Leo ..."), and one question about Little Hill's past with the kind of source that could answer it.

✓ Discussion questions (5 min, with answers)

1. "Who helped change things in Little Hill?" (Mrs Hart the mayor, the people who put in the lamps, the Farmers' Group, the workers from Big Harbour.) "What stayed the same?" (The school, the bridge, children playing hopscotch, Mr Gale working in Little Hill.)
2. "The 1948 notice and Iris's memory both say 1948. Does that make us more sure?" (Yes: two different sources agree.)
3. "Which question are you still wondering about?" (Any; there is no single answer.)

✓ Closing check (5 min, with answers)

Ask individual children: "Tell me one question about Little Hill in 1926. Which source could help answer it?" (Any sensible question and source.) Note answers; the full one-to-one check (see Assessment in the unit overview) is done during the week.

Vocabulary

question, historian, answer, source, group, change, stayed the same, agree, another source

Differentiation

- **Support:** ask one question using a starter card with an adult; place one event card from the small set on the timeline to show when it happened.
- **Stretch:** write a short memory as Mr Gale in 1948, then say what kind of source it is and when it was made. Or write a question that needs two sources to answer.
- **Tactile:** blind and low-vision children use the large-print or braille sources and the raised-line timeline; a partner writes their questions.

⚠ Safety

- Display only children's questions and comparisons about Iris and Leo, not family stories. If a child shares a family memory, thank them and do not write it down.

Teacher notes and misconceptions

- Some questions have no answer in any of our sources. That is normal in history; the honest answer is "our sources don't tell us".
- The Farmers' Group is like the real farmers' groups (co-operatives) that borrowed money to bring electricity to farms (see "Rural electrification" in the unit overview's Sources). The Little Hill group itself is made up.
- Keep the display up for term 3, when the year plan has a longer project comparing life then and now.

Grade 3 History, Geography and Society: Rules, Laws and Who Makes Them (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every activity against your school's rules.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 4 Argon, Gemini 3.8 Flash and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on grade 1 society: Rules, fairness and community jobs, grade 2 society: People, jobs and choices, grade 3 society term 2: Then and now from sources, and the society progression

Big idea

Rules are made by people, for reasons: to keep people safe, to be fair, to look after places and things, and to help people get along. A law is a rule made by a government that everyone in a place has to follow. Different groups decide different things: a class, a school, a town council and a country's lawmakers. When a rule is not working, people can notice the problem, find out more, tell the people who decide, listen to everyone and change the rule, then check whether the change worked. Every choice has benefits (what you get) and costs (what you give up), and people who see a question differently often care about different things.

This is the third society unit of grade 3 (term 3). Grade 1 made and changed a rule for a class game and looked at rules in different places. Grade 2 met choosing when there is not enough, with a benefit and a cost. Grade 3 adds the difference between a rule and a law, four levels of decision-making (class, school, town, country), the steps a town uses to change a rule, weighing the benefits and costs of a choice, and a class meeting where children speak for made-up characters who see one question in different ways.

The town is the made-up Little Hill, used in earlier grades. Its mayor is Mayor Hen (the grade 3 literacy unit has children write letters to her). In 1926, in the term 2 society unit, the mayor was Mrs Hart: mayors change over time. The council, its meetings, the Pond Lane problem and the vote in this unit are made up. See Known gaps.

Outcomes

By the end of the unit most children can:

1. Say what a rule is for (safe, fair, looking after, getting along) and who made it (our class, our school, the town council or the country's lawmakers), and say that a law is a rule made by a government for everyone in a place.
2. Match a decision to the group that makes it (class, school, town, country), and name one job of Little Hill's town council and one job of a country's lawmakers.
3. Put the steps of changing a rule in order, using the Pond Lane story, and say what changed afterwards.

4. Name one benefit and one cost (what you give up) of a choice, and say which option they would choose and why.
5. Say why two made-up characters see the same question differently (what each one cares about).
6. Take part in a class meeting by listening, taking turns and giving a reason.

Prior knowledge

- Grade 1 society term 1: rules in different places with a "so that..." reason; three kinds of fair; changing a rule in a game that was not working.
- Grade 2 society term 1: there is not enough of everything, so people choose; a choice has a benefit and a cost.
- Grade 3 society term 2: Little Hill's past, including Mrs Hart, the mayor in 1926.
- Grade 3 literacy term 3: an opinion with reasons and "because"; letters to Mayor Hen. Lesson 5 uses this, but children can also give advice by speaking.
- An adult reads every card aloud. Children may follow the printed copy but do not need to read it alone.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week.

1. What rules are for and who made them: ten made-up rule cards from a class, a school, Little Hill and a country; sorting by what each rule is for and by who made it; a rule and a law; why the "dogs on leads by the pond" rule was made.
2. Who decides? Class, school, town and country: four circles one inside the other (class, school, town, country); eight decision cards; Little Hill's town council (Mayor Hen and five councillors); a country's lawmakers, and the three jobs of making laws, carrying them out and judging when people disagree about them; four ways of deciding (one person decides, a vote, taking turns, a meeting then a vote).
3. A problem on Pond Lane: how a rule changes: five story cards about cars going too fast past the park and the school; six step cards from "notice a problem" to "check it worked"; what changed for the town.
4. Benefits and costs: what do you give up?: three made-up choice cards (Mouse's Saturday, Goat's 10 Little Hill coins, Kit's Tuesday club); a benefits and costs chart; the town council's choice of one thing to pay for.
5. A class meeting about the park path: Mayor Hen asks the class for advice about bikes and scooters on the new park path; six role cards with different points of view; meeting rules; options, benefits and costs; a class letter of advice to Mayor Hen.

Materials (whole class unless noted)

- Ten rule cards, from the list in lesson 1, one large set for the class and one small set per pair (lessons 1, 2).
- Four "what it is for" cards (Keeps us safe, Is fair, Looks after places and things, Helps us get along and learn) and four "who made it" cards (Our class, Our school, Little Hill town council, The country's lawmakers), one large set and one small set per pair (lessons 1, 2).
- A large sheet with four circles one inside the other, labelled from the inside: Class, School, Town (Little Hill), Country, drawn by the teacher (lessons 2, 3, 5).

- Eight decision cards, from the list in lesson 2, one large set and one small set per pair (lesson 2).
- A Little Hill town council picture card (Mayor Hen and the five councillors, from the description in lesson 2) (lessons 2, 3, 4, 5).
- A small picture card of Mrs Hart, the mayor in 1926, from the term 2 society unit or drawn by the teacher (lesson 2).
- Five Pond Lane story cards, from the texts in lesson 3, one large set and one small set per pair (lesson 3).
- Six step cards, from the list in lesson 3, one large set and one small set per pair, and one long arrow drawn on a strip of paper for the board plus one arrow strip per pair (lesson 3).
- A large tally chart "Cars on Pond Lane in 10 minutes: before / after" (lesson 3).
- Three choice cards, from the texts in lesson 4, one set per pair, and a two-column "Benefits (what you get) / Costs (what you give up)" chart per pair, plus a large copy for the class (lessons 4, 5), and ten counters per pair needing support, standing for Goat's coins (lesson 4).
- A town choice card and three option cards (a new crossing, new library books, new park benches), from lesson 4 (lesson 4).
- Mayor Hen's letter to the class, from the text in lesson 5, and six role cards (Mouse, Goat, Duck, Ana, Sana and Remy), one large set and one small set per group of six, plus a role name badge for each child, drawn by the teacher or a child (lesson 5).
- A "Meeting rules" poster, made with the class in lesson 5, four option cards (A to D) for the park path, a talking object (for example a soft toy or a beanbag), and small blank voting cards (one per child) with a box, in case the class votes (lesson 5).
- A class post box (a shoebox with a slot) labelled "To Mayor Hen" (lesson 5).
- Blu-tack or masking tape (all lessons).
- Paper, sticky notes, pencils and crayons (all lessons).
- For blind or low-vision children: large-print or braille copies of every card and letter, a sorting mat with raised lines between the columns (lesson 1), a raised-line version of the four circles (string or puffy-paint rings) (lessons 2, 3, 5), a raised arrow and raised tally marks (lesson 3), a benefits and costs chart with a raised line between the columns (lessons 4, 5), and four voting cards marked A, B, C and D in raised or braille letters (lesson 5) (all lessons unless noted).

⚠ Safety and access

- **Keep it about Little Hill.** Never ask children what their families think about laws, the police, leaders, elections or political parties, who their family voted for, or whether anyone they know has been in trouble with the law. Every opinion in this unit belongs to a made-up character.
- **Stay neutral about real politics.** Do not name or discuss real political parties or current leaders, and keep your own views private. If a child raises a real news story, say "That's a real question people disagree about; in this unit we're practising on Little Hill," and move on gently.
- **Worries about the law.** Some children may have worries about the police, courts or rules at home. Keep the "judging" job in lesson 2 short and general, and let any child step out of a discussion.
- **The Pond Lane story is gentle on purpose.** Nobody is hurt; people find it hard and slow to cross. Do not add stories of accidents.
- **Speaking for a role.** In lesson 5 children speak for a made-up character, not for themselves. Make clear that a child playing Mouse does not have to agree with Mouse.

Ana uses a wheelchair; the child playing Ana does not act out using a wheelchair, and Ana's card is about what she wants from the path, like every other card.

- **Money is made up.** Goat's coins in lesson 4 are made-up Little Hill coins. Never ask about children's own pocket money or what their families can buy.
- **Votes are about Little Hill only.** If the class votes in lesson 5, it is advice about a made-up town's path. Never hold a class vote about a child's own life or views.
- Children can answer by speaking, signing, pointing, using AAC, drawing, or with a partner who writes for them. Their own way counts.
- Deaf children: show each card while it is read, face the class when reading aloud, and in the meeting make sure only one person speaks at a time (the talking object helps). Blind and low-vision children: use the raised-line circles and the large-print or braille copies listed in Materials; describe each picture card in words. Colour is never the only clue: the circles are labelled, and cards are sorted by place on the mat, not by colour.

Assessment

Watch and listen during lessons, and use the closing checks. During lesson 5 or the following week, see each child for about 4 minutes with the rule cards, the decision cards, the four circles, the step cards and one choice card (answers in brackets):

1. Show rule cards 1 ("Walk, don't run, in the corridor") and 6 ("Everyone in the country stops at a red traffic light"): "What is each rule for? Who made it? Which one is a law?" (1: keeps us safe, made by our school. 6: keeps us safe, made by the country's lawmakers; 6 is a law, because a government made it for everyone in the country.) (Outcome 1.)
2. Show decision cards 3 ("Where the new bench goes in Little Hill park") and 7 ("The rules for driving on every road in the country"): "Put each one in the right circle." "Tell me one job of the town council, and one job of the country's lawmakers." (3: town; 7: country. Council, for example: decides things for the town such as benches, crossings and fixing roads; holds meetings where people can speak. Lawmakers: make laws for the whole country, for example by talking about them and voting.) (Outcome 2.)
3. Give the six step cards, mixed up: "Put the steps in order. What changed on Pond Lane afterwards?" (Notice a problem; find out more; tell the people who decide; listen to everyone; decide; check it worked. A change, for example: there is a crossing; cars go slower at school times; fewer cars went fast in the second count.) (Outcome 3.)
4. Read choice card 2 (Goat's 10 coins): "Tell me one benefit and one cost of buying the kite. Which would you choose, and why?" (Benefit: Goat gets the kite to fly. Cost: Goat gives up the book and the ball, because the kite uses all 10 coins. Any choice with a reason counts.) (Outcome 4.)
5. Show the Mouse and Goat role cards from lesson 5: "Why do Mouse and Goat want different things for the path?" (Mouse cares about getting to school quickly by bike; Goat cares about walking safely without being bumped. Any answer about what each one cares about counts.) (Outcome 5.)
6. From watching lesson 5: did the child listen while others spoke, wait for a turn (or the talking object), and give at least one reason? (Outcome 6; a child who gives a reason by pointing, signing, AAC or through a partner gets "yes".)

Record "yes", "with help" or "not yet" for each outcome. A child who can do it in their own way (pointing, signing, AAC) gets "yes".

Sources

The C3 framework was read in the archived PDF (pages with the grades 3-5 civics and economics indicators): https://web.archive.org/web/20220403055307/https://www.socialstudies.org/sites/default/files/2017/Jun/c3-framework-for-social-studies-rev0617.pdf

The indicators used, quoted from the framework (the unit is not a full alignment):

- D2.Civ.1.3-5: "Distinguish the responsibilities and powers of government officials at various levels and branches of government and in different times and places." (Lesson 2.)
- D2.Civ.3.3-5: "Examine the origins and purposes of rules, laws, and key U.S. constitutional provisions." (Lesson 1; see Known gaps for the constitutional part.)
- D2.Civ.7.3-5: "Apply civic virtues and democratic principles in school settings." (Lesson 5, the class meeting.)
- D2.Civ.8.3-5: "Identify core civic virtues and democratic principles that guide government, society, and communities." (Lesson 5.)
- D2.Civ.9.3-5: "Use deliberative processes when making decisions or reaching judgments as a group." (Lesson 5.)
- D2.Civ.10.3-5: "Identify the beliefs, experiences, perspectives, and values that underlie their own and others' points of view about civic issues." (Lesson 5, using made-up characters' points of view.)
- D2.Civ.11.3-5: "Compare procedures for making decisions in a variety of settings, including classroom, school, government, and/or society." (Lessons 2, 3 and 5: the class meeting, the teacher deciding, the council's vote.)
- D2.Civ.12.3-5: "Explain how rules and laws change society and how people change rules and laws." (Lesson 3.)
- D2.Civ.13.3-5: "Explain how policies are developed to address public problems." (Lesson 3.)
- D2.Eco.1.3-5: "Compare the benefits and costs of individual choices." (Lesson 4.)

Background for the teacher, from Wikipedia articles read on 12 November 2026:

- "Law": https://en.wikipedia.org/wiki/Law ("a set of rules that are created and enforced by governmental or societal institutions to regulate behavior"; laws "can be made by a legislature", "by the executive" or "by judges' decisions"). Used for "a law is a rule made by a government" and the three jobs in lesson 2.
- "Legislature": https://en.wikipedia.org/wiki/Legislature ("a deliberative assembly that holds the legal authority to make law"; legislatures "may exist at different levels of governance"). Used for "the country's lawmakers" and for the town council as a smaller group that decides.
- "Mayor": https://en.wikipedia.org/wiki/Mayor ("Worldwide, there is a wide variance in local laws and customs regarding the powers and responsibilities of a mayor"; a mayor "may simply chair a multi-member governing body"). Used for Mayor Hen chairing the council.
- "Bill (law)": https://en.wikipedia.org/wiki/Bill_(law) ("a proposal for a new law, or a proposal to substantially alter an existing law"). Used for the teacher note on proposals in lesson 3; the word "bill" is not taught.
- "Opportunity cost": https://en.wikipedia.org/wiki/Opportunity_cost (the dictionary definition quoted there: "the loss of potential gain from other alternatives when one alternative is chosen"). Used for "a cost is what you give up" in lesson 4; the term "opportunity cost" is not taught.
- "Deliberation": https://en.wikipedia.org/wiki/Deliberation ("a process of thoughtfully exchanging and weighing options, for example prior to voting"; "Group decisions are

generally made after deliberation through a vote or consensus of those involved"). Used for the class meeting in lesson 5.

Known gaps and cautions

- Four other agents text-checked this unit on 2026-11-12: Gemini 3.5 Flash (at cc8185e) reported no errors; Gemini 4 Argon (at cc8185e and 6d872b2) reported one pronoun slip (Goat in lesson 4) and one materials note (an arrow strip for each pair in lesson 3), both fixed in 3edb47a and re-checked by Argon; Gemini 3.8 Flash (at 3edb47a) reported no errors; Gemini 4 Carbon (at 33e03b7) reported a yes/no voting card for a four-option vote (lesson 5) and pairs placing cards without their own circles sheet (lesson 2), both fixed in a5d4dd5 (with a leftover sentence tidied in 7c5f26f). Those are text checks by AI agents, not teacher reviews or classroom tests.
- Some Little Hill characters have different roles from the grade 2 unit People, jobs and choices (for example Remy runs the café here, and Duck is a mother duck). Tell the children the stories are separate.
- Little Hill, Mayor Hen, the council and its members, the Pond Lane problem, the car counts, the council vote and every character's point of view are made up by the author. Tell the children so.
- How towns and countries make decisions is different in different countries. In Little Hill the people choose five councillors in an election and the mayor chairs the meetings; real towns may have more or fewer councillors, and mayors may be chosen in other ways or have different powers (see the Wikipedia "Mayor" article). Tell the class what their own town and country call their decision-makers if your school wants to; the unit does not name any real government.
- D2.Civ.3.3-5 includes "key U.S. constitutional provisions". This unit does not teach any constitution. A teacher in the United States who needs that part should add it; teachers elsewhere may add their own country's founding rules, or leave it for later grades.
- D2.Civ.1.3-5 includes "branches of government". Lesson 2 only names three jobs (making laws, carrying them out, judging when people disagree about them) and does not name branches or institutions.
- D2.Eco.1.3-5 is about individual choices. Lesson 4 uses three made-up individual choices, then adds a town choice; the town choice is the author's extension, not part of that indicator.
- D2.Civ.8.3-5 names "civic virtues and democratic principles". The unit names only a few, in plain words (listening, taking turns, respect, fairness, everyone having a say); the list is the author's choice, not taken from the framework.
- The other grades 3-5 civics indicators (D2.Civ.2, D2.Civ.4, D2.Civ.5, D2.Civ.6 and D2.Civ.14) are not covered.
- The texts are read aloud. The unit does not use the grade 3 literacy letter sequence, because adults read the cards; it does not teach reading.
- The lesson order, the made-up stories, the card wording and the timings are the author's choices, not taken from a source.

Lesson 1: What rules are for and who made them

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children sort ten made-up rules by what each rule is for and by who made it, learn that a law is a rule made by a government for everyone in a place, and work out why one Little Hill rule was first made.

Materials

- Ten rule cards (below), one large set for the class and one small set per pair.
- Four "what it is for" cards: Keeps us safe; Is fair; Looks after places and things; Helps us get along and learn. One large set and one small set per pair.
- Four "who made it" cards: Our class; Our school; Little Hill town council; The country's lawmakers. One large set and one small set per pair.
- Blu-tack or masking tape, and a board or wall space for two sorting rows.
- Paper and pencils for the closing check.
- For blind or low-vision children: large-print or braille copies of all the cards, and a sorting mat with raised lines between the columns.

The ten rule cards

Each card has a simple picture and the words, read aloud by an adult.

1. Walk, don't run, in the corridor. (Our school.)
2. Show the talking object before you speak in our class meeting. (Our class.)
3. Take turns on the playground swings: count to 50, then swap. (Our class.)
4. Wash your hands before lunch. (Our school.)
5. Dogs on leads by the Little Hill pond. (Little Hill town council.)
6. Everyone in the country stops at a red traffic light. (The country's lawmakers.)
7. Put litter in the bins in Little Hill park. (Little Hill town council.)
8. Market stalls in Little Hill square are packed away by six o'clock, so the street can be swept. (Little Hill town council.)
9. Children go to school. (The country's lawmakers; this is a law in many countries.)
10. Tidy the reading corner before home time. (Our class.)

Answer key, what each rule is mainly for: Keeps us safe: 1, 4, 5, 6 (card 4 keeps us healthy, which is a kind of safe). Is fair: 2, 3 (everyone gets a turn to speak or to swing). Looks after places and things: 7, 8, 10. Helps us get along and learn: 9. Many rules do more than one job: accept any answer with a sensible reason (for example 2 also helps us get along, and 5 also looks after the ducks).

Answer key, who made it: the brackets after each card. Laws: 6 and 9 (made by the country's lawmakers), and 5, 7 and 8 (made by the town council, which is also a kind of government). Rules 1, 2, 3, 4 and 10 are rules but not laws.

Steps

✎ Opening (5 min)

Ask: "What is a rule?" Take a few ideas. Say: "A rule tells people what to do or what not to do. Someone made every rule, for a reason. Today we are rule detectives: what is each rule for, and who made it?" Read rule card 1 aloud and ask: "Why do you think someone made this rule?" (So that nobody bumps into anyone or falls over.)

✎ Main activity (25 min)

1. **What is it for? (9 min).** Put the four "what it is for" cards in a row on the board. Read each rule card aloud and show the picture. Pairs put their small card under the purpose they think fits, then hold up their choice. Put the large card on the board, and ask a pair to give their "so that..." reason. If pairs disagree, say: "Many rules do more than one job. Which job is the biggest one?" Check with the answer key.
2. **Who made it? (8 min).** Put the four "who made it" cards in a second row. Ask: "Who do you think made this rule?" Pairs move their cards into the new row. Talk through clues: "Who could make a rule for every road in the country? Could our class make that rule?" (No: our class can only make rules for our class.)
3. **Rules and laws (3 min).** Point to the town council and country lawmakers cards. Say: "These groups are part of a government: they make decisions for everyone in a town or a whole country. A rule made by a government is called a law. Everyone in that place has to follow it, not only the people in one class or school." Ask: "Which of our cards are laws?" (5, 6, 7, 8, 9.) "Which are rules but not laws?" (1, 2, 3, 4, 10.)

4. **Where did this rule come from? (5 min).** Read this short story aloud:

   > Long ago there was no rule about dogs by the Little Hill pond. Every spring, Duck's ducklings hatched by the water. One spring, some dogs ran off their leads and chased the ducklings into the reeds. The ducklings were scared, and Duck was upset. People wrote to the town council. The council talked about it and made a new rule: "Dogs on leads by the pond." A sign went up by the water.

   Ask: "What problem came first?" (Dogs chased the ducklings.) "Who made the rule?" (The town council.) "What is it for?" (Keeping the ducklings safe; looking after the pond.) Say: "Most rules start with a problem that someone noticed."

✓ Discussion questions (5 min, with answers)

1. "Could our class make a rule that everyone in Little Hill must wear a hat?" (No: a class can only make rules for the class; a rule for the whole town would be made by the town council.)

2. "Why do you think the market has to be packed away by six o'clock?" (So that the street can be swept and cars and people can use it again; it looks after the town.)
3. "What might happen if there was no rule about red traffic lights?" (Cars might crash into each other or into people crossing; it would not be safe.)

✓ Closing check (5 min, with answers)

Read rule card 7 ("Put litter in the bins in Little Hill park"). Each child draws or writes two things on their paper: what it is for, and who made it. (Looks after places and things; Little Hill town council.) Then ask: "Is it a law?" Children show thumbs up for yes, thumbs down for no. (Yes: a government, the town council, made it for everyone in the park.)

Vocabulary

rule, law, government, town council, lawmakers, purpose ("what it is for")

Differentiation

- **Support:** give a pair only four rule cards (1, 3, 5, 6) and only the "what it is for" row. Say the "so that..." sentence starter for them to finish.
- **Stretch:** ask children to make up one new rule for the reading corner, say what it is for, and say who could make it (our class).
- **Tactile and non-speaking:** children place large or braille cards on a mat with raised lines between the columns, or point to the purpose card while a partner moves the rule card.

⚠ Safety

- Every rule is about the class, the school or made-up Little Hill. Do not ask what rules children have at home.
- The duckling story is gentle: the ducklings were scared but safe.

Teacher notes and misconceptions

- Children often think a law is "a big rule" or "a rule the police check". The unit's simple meaning is "a rule made by a government for everyone in a place". In this unit the town council counts as a government (a local government); that matches the Wikipedia "Legislature" article, which says law-making groups "may exist at different levels of governance".
- Some children think every rule was always there. The duckling story shows that a rule starts with a problem; lesson 3 shows a rule being changed.
- Whether the country or the town makes a rule (for example speed limits or school rules) differs between countries. The answer key follows the made-up Little Hill, not any real country.

Lesson 2: Who decides? Class, school, town and country

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 40 minutes.

Goal

Children match decisions to the group that makes them (class, school, town, country), learn who is on Little Hill's town council and what it does, hear the three jobs of a country's government, and compare different ways of deciding.

Materials

- The large sheet with four circles one inside the other, labelled from the inside: Class, School, Town (Little Hill), Country.
- Eight decision cards (below), one large set for the class and one small set per pair.
- The Little Hill town council picture card (described below).
- The ten rule cards and four "who made it" cards from lesson 1 (large set), for the opening.
- A small picture card of Mrs Hart, the mayor in 1926, from the term 2 society unit (or a drawing of a woman in 1920s clothes with the words "Mrs Hart, mayor in 1926").
- Blu-tack or masking tape.
- Paper and pencils for the closing check.
- For blind or low-vision children: a raised-line version of the four circles (string or puffy-paint rings) and large-print or braille decision cards.

The eight decision cards

1. Which game we play at class choosing time on Friday. (Class.)
2. What time school starts in the morning. (School.)
3. Where the new bench goes in Little Hill park. (Town.)
4. Which day the bins are emptied on Pond Lane. (Town.)
5. Which story is read at story time today. (Class.)
6. Which days each class uses the school hall. (School.)
7. The rules for driving on every road in the country. (Country.)
8. What the country's coins and notes look like. (Country.)

The Little Hill town council picture card

A drawing of a long table in the Little Hill town hall. Mayor Hen sits in the middle with a small bell for starting the meeting. Around the table sit the five councillors: Bear (who drives the Little Hill bus), Crab (who runs the hardware shop), Mrs Okafor (a retired teacher), Ted and Meg. A few chairs at the side say "Anyone may come and listen".

What the class is told (all made up for Little Hill): every four years the grown-ups of Little Hill choose the five councillors in an election. The council chooses Mayor Hen to lead its meetings. The council meets once a month; anyone may come, and at the start anyone may ask to speak. The council decides things for the whole town, such as parks, benches, crossings, bins, the library

and fixing roads, and it decides how to spend the town's money. When it cannot agree, the councillors vote, and the idea with the most votes wins.

Steps

✎ Opening (5 min)

Hold up the lesson 1 "who made it" cards. Ask: "Which group made the rule about dogs by the pond?" (The town council.) "Which group made the rule about red traffic lights?" (The country's lawmakers.) Say: "Today: who decides what? And how do they decide?" Show the four circles and ask: "Why is the class circle inside the school circle?" (Our class is part of the school; the school is part of the town; the town is part of the country.)

✎ Main activity (25 min)

1. **Which circle? (8 min).** Read each decision card aloud. Pairs agree which circle it belongs in and hold up their small card, pointing to that circle on the large sheet. Ask one pair for a reason, then have one child stick the large card in that circle. Check with the brackets above. Point out: "The bigger the circle, the more people the decision is for."

2. **Little Hill's town council (7 min).** Show the council picture card and read the description. Ask:

    - "Who chose the councillors?" (The grown-ups of Little Hill, in an election.)
    - "What does Mayor Hen do at the meeting?" (She leads it: she starts it, makes sure people take turns and keeps it moving.)
    - "Name one thing the council decides." (For example the bench, the bins, crossings, the library, mending roads, spending the town's money.)

    Show the Mrs Hart card. Say: "In 1926, in our then-and-now unit, the mayor of Little Hill was Mrs Hart. Now it is Mayor Hen. Mayors and councillors change over time, because new people are chosen." 3. **The country's three jobs (5 min).** Say: "A country has a much bigger government. It has three big jobs." Hold up three fingers, one at a time: - "**Making laws.** A big group of lawmakers, chosen by the grown-ups of the whole country in many countries, talks about new laws and votes on them." (Many countries call this group a parliament or a congress; tell the class what yours is called if your school wants to.) - "**Carrying out the laws.** A leader and their team make the laws happen, for example by building roads or running services." - "**Judging.** When people disagree about what a law means, or whether someone followed it, judges listen to both sides and decide."

    Ask: "Which job does the town council do when it makes the dog rule?" (Making a law, for the town.) 4. **How do they decide? (5 min).** Say: "Groups decide in different ways." Read these four ways and ask for each: "Is it quick? Does everyone get a say?" - The teacher decides alone which story to read (quick; the children do not get a say this time). - The class votes on Friday's game: hands up for each choice, and the one with the most hands wins (quite quick; everyone gets one vote, but some people may not get their choice). - The class takes turns: a different child chooses the game each Friday

(quick each time; fair over many weeks). - The town council listens to people at its meeting, talks, then votes (slow; many people get a say).

Say: "No way is best for every decision. Quick ways are good for small things; slower ways that listen to many people are used for bigger things that affect lots of people."

✓ Discussion questions (5 min, with answers)

1. "Could the town council decide what our class plays on Friday?" (No: that is a class decision. The council decides things for the whole town.)
2. "Why does the council let anyone come and speak at the start?" (So the people of the town can tell the council about problems and ideas before it decides; the decisions are for everyone in the town.)
3. "Why do you think the grown-ups of Little Hill choose new councillors every four years?" (So that if they want different people or different ideas, they can choose again; nobody stays in charge for ever without being chosen.)

✓ Closing check (5 min, with answers)

Read decision cards 4 and 8. Each child writes or draws the circle for each (4: town; 8: country) and one thing the town council decides (for example benches, bins, crossings). Children who are not writing point to the circles on the sheet and tell an adult.

Vocabulary

decide, decision, town council, councillor, mayor, election, vote, lawmakers, judge

Differentiation

- **Support:** use only the class, town and country circles and four cards (1, 3, 7, 8). Ask "Is it for our class, our town or our whole country?"
- **Stretch:** ask children to make up a ninth decision card and say which circle it belongs in and why.
- **Tactile and non-speaking:** children place braille or large cards inside the raised rings, or point to a ring while a partner places the card.

⚠ Safety

- Do not name or discuss real political parties, current leaders or real elections, and do not ask who children's families voted for.
- Keep the judging job short and general. If a child mentions someone they know and the police or a court, thank them kindly and move on; follow your school's guidance if you are worried.

Teacher notes and misconceptions

- Children often think the mayor, or a single leader, decides everything. In Little Hill Mayor Hen leads the meetings, but the council decides together. Real mayors differ a great deal: the Wikipedia "Mayor" article says a mayor "may simply chair a multi-member governing body" in some places and leads the town's government in others.
- Who decides school start times, bin days or driving rules differs between countries and places. The answers follow made-up Little Hill and are a simple model, not a description of any real country.
- The circles are a simplification: many countries also have regions, states or provinces between the town and the country. Mention this if children know about it; the unit does not teach it.
- The three jobs are given in plain words. The unit does not name the branches of government; see Known gaps in the unit overview.

Lesson 3: A problem on Pond Lane: how a rule changes

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 40 minutes.

Goal

Children follow a made-up story of a town problem, put the six steps of changing a rule in order, and say what changed for the people of Little Hill afterwards, including who gained and who gave something up.

Materials

- Five Pond Lane story cards (below), one large set for the class and one small set per pair.
- Six step cards (below), one large set and one small set per pair.
- One long arrow drawn on a strip of paper for the board, and one arrow strip per pair, for laying the step cards along.
- A large tally chart: "Cars on Pond Lane in 10 minutes", with two rows, "Before" and "After", and two columns, "All cars" and "Going too fast".
- The Little Hill town council picture card and the four circles sheet from lesson 2.
- Blu-tack or masking tape.
- Paper and pencils for the closing check.
- For blind or low-vision children: large-print or braille story and step cards, a raised arrow (a ridge of tape or string) to lay the step cards along, and a tally chart with raised tally marks (pipe-cleaner or puffy paint).

The five Pond Lane story cards

Read each card aloud. Each has a simple picture.

1. **The problem.** Pond Lane runs between Little Hill park and Little Hill School. Cars and vans often drive fast along it. In the morning, children walking to school and people going to the park have to wait a long time to cross, and Duck has to hurry her ducklings across to the pond. Nobody has been hurt, but many people feel worried.
2. **Finding out more.** Goat and Mouse want to know if the problem is real. With their teacher, they stand behind the park fence on a school morning for 10 minutes. They count 23 cars. The town's speed sign, which flashes when a car is too fast, flashes for 15 of them.
3. **Telling the people who decide.** Goat and Mouse write a letter to Mayor Hen with their tally chart. At the next town council meeting, Mouse asks to speak at the start. She shows the chart and says, "Please can Pond Lane be safer to cross?"
4. **Listening to everyone.** Mayor Hen asks other people to speak. Duck says, "I want a safe place for my ducklings to cross." Bear, a councillor who drives the bus, says, "If cars must go slower all day, my bus will be late." Crab, who runs the hardware shop, says, "Vans must still be able to bring things to my shop." Mrs Okafor says, "Children and older people should be able to cross without hurrying." The council lists four ideas: A, a crossing with stripes and a crossing helper at school times; B, a slow speed on Pond Lane at school times only; C, close Pond Lane to cars; D, change nothing.

5. **Deciding and checking.** The council talks about every idea. Closing the lane (C) would stop the bus and the vans, and changing nothing (D) would not help. The five councillors vote on A and B together. Four vote yes and Bear votes no, because he still worries about the bus. The new rule is: "A crossing with a helper, and slow speed on Pond Lane at school times." A month later Goat and Mouse count again: 22 cars, and the sign flashes for 3 of them. The bus is a little slower at school times. The council says it will look at the rule again next year.

The six step cards

Notice a problem. Find out more. Tell the people who decide. Listen to everyone. Decide. Check it worked.

Answer key: the order is as listed. Story card 1 is "Notice a problem", 2 "Find out more", 3 "Tell the people who decide", 4 "Listen to everyone", and 5 shows both "Decide" and "Check it worked".

Steps

✎ Opening (5 min)

Show the four circles. Ask: "Who would decide about a busy road in Little Hill: the class, the school, the town or the country?" (The town council.) Say: "Today we find out how the people of Little Hill changed a rule about a road. Listen for what happens first, next and last."

✎ Main activity (25 min)

1. **Hear the story (7 min).** Read the five story cards aloud, showing each picture. Fill in the "Before" row of the tally chart together after card 2 (23 cars, 15 too fast), and the "After" row after card 5 (22 cars, 3 too fast). Ask after card 4: "Why do Bear and Duck want different things?" (Bear cares about the bus being on time; Duck cares about her ducklings crossing safely.)
2. **Put the story in order (5 min).** Pairs mix up their small story cards, then put them back in order without looking at the numbers (cover the numbers with tape or cut them off before the lesson).
3. **The six steps (8 min).** Put the long arrow on the board and give each pair an arrow strip. Read the six step cards. Pairs lay their step cards along their arrow in order, then put each story card under the step it shows. Check with the answer key and build the large version on the board.
4. **What changed? (5 min).** Ask:
    - "What changed on Pond Lane?" (There is a crossing with a helper; cars go slower at school times; far fewer cars went too fast: 3 instead of 15.)
    - "Who is better off?" (Children, older people, Duck and her ducklings, people going to the park.)
    - "Who gave something up?" (The bus is a little slower at school times; drivers must slow down.)

Say: "When a rule changes, life in the town changes too. Usually some people gain more than others, so the council listened to everyone and will check again next year."

✓ Discussion questions (5 min, with answers)

1. "Why did Goat and Mouse count the cars before writing to Mayor Hen?" (To find out if the problem was real, and to show the council facts, not only a feeling.)
2. "Bear voted no. Does he have to follow the new rule?" (Yes: the council decided by voting, and the new rule is for everyone, even people who voted no. Bear can ask the council to look again next year.)
3. "Why didn't the council close Pond Lane?" (It would stop the bus and the vans: the cost was too big for some people.)

✓ Closing check (5 min, with answers)

Say: "Our class has a problem: the reading corner is messy every afternoon, even though we have a rule to tidy it." Each child draws or writes the first two steps the class could take, using the step cards on the board. (Notice a problem: the corner is messy. Find out more: for example look at the corner each afternoon for a week, or ask who uses it and when.) Children who are not writing point to the two step cards and tell an adult their idea.

Vocabulary

problem, change, council meeting, vote, new rule, check

Differentiation

- **Support:** use only four step cards (Notice a problem, Tell the people who decide, Decide, Check it worked) and story cards 1, 3 and 5.
- **Stretch:** ask children which other idea (A, B, C or D) they would have chosen as a councillor, and one cost of that idea. Say it is a made-up town: any reasoned answer is fine.
- **Tactile and non-speaking:** children lay braille or large step cards along a raised arrow (a ridge of tape or string), and point to the tally marks to compare before and after.

⚠ Safety

- The story is gentle on purpose: nobody is hurt. Do not add stories of real road accidents.
- Goat and Mouse count cars with their teacher, behind a fence. If the class wants to do a real traffic count, follow your school's rules for trips; children never stand at the roadside. The unit does not need a real count.

Teacher notes and misconceptions

- Children often think rules are made once and never change. The story shows a rule being proposed, discussed, voted on, tried and planned for review. A proposal for a new

or changed law is called a bill in many places (the Wikipedia "Bill (law)" article: "a proposal for a new law, or a proposal to substantially alter an existing law"); the unit does not teach that word.
- Some children think the side that loses a vote does not have to follow the rule. Discussion question 2 addresses this.
- The numbers, the flashing sign, the vote and the new rule are made up. Real towns use many ways to make roads safer, and what a town council is allowed to decide about roads differs between countries.

Lesson 4: Benefits and costs: what do you give up?

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 40 minutes.

Goal

Children list the benefits (what you get) and costs (what you give up) of each option in three made-up choices, say which option they would choose and why, and then weigh a choice the town council has to make.

Materials

- Three choice cards (below), one set per pair.
- A two-column chart per pair: "Benefits (what you get)" and "Costs (what you give up)", with a line across the middle so each option has its own half.
- A large copy of the same chart for the class.
- The town choice card and its three option cards (below), large, for the class.
- The Little Hill town council picture card from lesson 2.
- Blu-tack or masking tape.
- Paper, sticky notes and pencils.
- Ten counters per pair needing support, standing for Goat's coins.
- For blind or low-vision children: large-print or braille choice cards and a chart with a raised line between the columns and across the middle.

The three choice cards

1. **Mouse's Saturday morning.** The Pond Lane fair is on Saturday morning, with games and a toy duck race on the pond. It only happens once a year. Mouse also planned to finish her model boat with Goat that morning, so they can sail it on Sunday. She cannot do both.
2. **Goat's 10 coins.** Goat has 10 Little Hill coins (made-up money). A kite costs 10 coins. A book costs 6 coins and a ball costs 4 coins. Goat can buy the kite, or the book and the ball.
3. **Kit's Tuesday club.** Football club and choir both meet on Tuesday after school. Kit can only go to one. The choir is singing in a concert at the end of term.

Answer key (examples; accept any sensible answer):

- Mouse, fair: benefit, games and the duck race with friends, and it only happens once a year; cost, the boat is not finished, so no sailing on Sunday, and Goat finishes it alone or waits. Mouse, boat: benefit, the boat is finished and they can sail it on Sunday; cost, she misses the fair until next year.
- Goat, kite: benefit, a kite to fly; cost, no book and no ball (all 10 coins are used). Goat, book and ball: benefit, two things, a story to read and a ball to play with; cost, no kite. (6 + 4 = 10, so both use all the coins.)
- Kit, football: benefit, playing a game and running about with the team; cost, no choir and no singing in the concert. Kit, choir: benefit, singing and being in the concert; cost, missing football on Tuesdays.

The town choice card and options

Read aloud: "Little Hill town council has enough money for **one** new thing this year. The councillors must choose."

- **Option 1:** a second crossing, on Station Road.
- **Option 2:** new books for the Little Hill library.
- **Option 3:** new benches in Little Hill park.

Steps

✎ Opening (5 min)

Remind the class of lesson 3: "When the council made the Pond Lane crossing, who gained, and who gave something up?" (Children, older people and Duck gained; the bus is a little slower.) Say: "Every choice is like that. A **benefit** is what you get. A **cost** is what you give up. Sometimes a cost is money, and sometimes it is time, or another thing you could have had."

✎ Main activity (25 min)

1. **One together (4 min).** Read choice card 1 (Mouse). Fill in the class chart together: the fair in the top half, the boat in the bottom half, benefits on the left, costs on the right. Point out: "The cost of going to the fair is the boat; the cost of the boat is the fair. You give up the one you don't choose."
2. **Pairs (12 min).** Pairs take choice cards 2 and 3 and fill in their own chart for each, drawing or writing on sticky notes. Go round and ask: "What does Goat give up if he buys the kite?" (The book and the ball.) Children who finish early add one more benefit or cost to Mouse's card.
3. **What would you choose? (4 min).** Each child picks one card and tells their partner, using this sentence: "I would choose ___ because ___, even though I give up ___." Ask three children to share. Say: "Different people can make different choices, because they care about different things. Both can be good choices."
4. **The town's choice (5 min).** Read the town choice card and the three options. For each, ask: "Who would this help?" and "If the council chooses this, what does the town give up?" (Crossing: helps people crossing near the station; gives up the books and benches this year. Books: helps readers and the school; gives up the crossing and benches. Benches: helps people who need to rest in the park, for example older people; gives up the crossing and the books.) Pairs agree which they would choose and give one reason. Do not count a class vote: there is no right answer.

✓ Discussion questions (5 min, with answers)

1. "Goat buys the kite. Did it cost him anything apart from the coins?" (Yes: it cost him the book and the ball he could have bought instead.)
2. "Why might two children make different choices on Kit's card?" (They care about different things: one may love football, another may love singing.)

3. "Why can't the council buy all three things?" (There is only enough money for one; there is never enough of everything, so people have to choose.)

✓ Closing check (5 min, with answers)

Read: "Remy has one ticket at the Pond Lane fair. Remy can ride the little train or have a go at the hook-a-duck game." Each child draws or writes one benefit and one cost of riding the train. (Benefit, for example: a ride round the park. Cost: no go at the hook-a-duck game.) Children who are not writing tell an adult or point to pictures.

Vocabulary

choice, option, benefit, cost, give up

Differentiation

- **Support:** use only choice card 2 with real counters standing for the coins (10 counters; the kite takes all 10; the book takes 6 and the ball 4). Ask: "What is left after the kite?" (Nothing.)
- **Stretch:** ask children to add a fourth town option and say who it would help and what the town would give up.
- **Tactile and non-speaking:** counters for the coins; children place braille or picture cards in the raised chart, or point to "benefit" or "cost" while a partner places the card.

⚠ Safety

- The coins are made-up Little Hill coins. Never ask about children's own money, pocket money or what their families buy.
- The clubs and the fair belong to made-up characters. Do not ask which clubs children go to or what their families do at weekends.

Teacher notes and misconceptions

- Many children think a cost is only money. The unit's meaning, "what you give up", follows the idea of opportunity cost (the Wikipedia "Opportunity cost" article quotes "the loss of potential gain from other alternatives when one alternative is chosen"); the term itself is not taught.
- The town choice goes beyond the C3 indicator used here, which is about individual choices; see Known gaps in the unit overview.
- Some children decide a choice is "wrong" because it has a cost. Stress that every option has costs; a good choice is one where you have thought about them.

Lesson 5: A class meeting about the park path

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

Children hold a class meeting about a made-up Little Hill question, speaking for characters who see it differently, follow meeting rules they agree together, weigh the options, and send advice with reasons to Mayor Hen.

Materials

- Mayor Hen's letter (below), large.
- Six role cards (below), one large set for the class and one small set per group of six.
- A role name badge for each child (a sticky note with the character's name and picture, drawn by the teacher or a child).
- A large sheet for the "Meeting rules" poster, made with the class.
- A talking object (for example a soft toy or a beanbag) for the meeting.
- Four option cards, A to D (below), large.
- The two-column benefits and costs chart from lesson 4 (large copy, wiped or a new sheet).
- Small blank voting cards (one per child) and a box, in case the class votes.
- The class post box labelled "To Mayor Hen".
- Paper and pencils.
- The four circles sheet and the council picture card from lesson 2.
- For blind or low-vision children: large-print or braille copies of the letter, the role cards and the option cards, and a raised-line chart; four voting cards marked A, B, C and D in raised or braille letters, so the child can choose one by touch and put it in the box.

Mayor Hen's letter

> Dear class,
>
> Little Hill park has a new smooth path round the pond. Some people want bikes and scooters to be allowed on it. Some people do not. The town council will decide at next month's meeting. Please hold a class meeting, listen to everyone, and send us your advice, with your reasons.
>
> From Mayor Hen

The six role cards

1. **Mouse** rides her bike to school through the park. On the path she is away from cars and gets to school quickly. She cares about getting there quickly and safely.
2. **Goat** walks slowly with a walking stick. He worries that bikes will come up fast behind him and bump him. He cares about walking safely.

3. **Duck** takes her ducklings across the path to the pond every morning. She worries about fast wheels. She cares about the ducklings being safe.
4. **Ana** uses a wheelchair. She likes the smooth path, because the grass is bumpy. She does not mind bikes if they go slowly, but she needs room to get past. She cares about having space on a smooth path.
5. **Sana** scoots to the park to meet friends. There is nowhere else smooth to scoot. She cares about having somewhere to play.
6. **Remy** runs the café beside the path, with tables near the edge. Remy wants the path calm for people at the tables, but also likes more visitors coming by. Remy cares about the café being safe and busy.

The four option cards

- **A:** Bikes and scooters can go anywhere on the path, at any speed.
- **B:** No bikes or scooters on the path.
- **C:** Bikes and scooters are allowed, but they go slowly, ring a bell, and let walkers go first.
- **D:** A painted line down the middle: bikes and scooters on one side, walkers and wheelchairs on the other.

Steps

✎ Opening (5 min)

Read Mayor Hen's letter aloud. Ask: "Who decides about the park path?" (The town council.) "What is the council asking us to do?" (Hold a meeting, listen to everyone and send advice with reasons.) Say: "Today we are going to speak for six people of Little Hill. You do not have to agree with your character: you are helping them be heard."

✎ Main activity (25 min)

1. **Meeting rules (4 min).** Ask: "What makes a good meeting, where everyone is heard?" Write the class's ideas on the poster. Make sure it includes: only the person with the talking object speaks; listen while others speak; give a reason; disagree with the idea, not the person; everyone gets a say. Say: "These are the same ideas grown-up meetings and governments try to follow: fairness, respect, and everyone having a say."
2. **Get to know your character (6 min).** Put children in groups of six and give each child a role and a badge. An adult reads each role card aloud to the group. Each child practises one sentence with the group: "I am ___. I care about ___, so I think ___."
3. **The meeting (6 min).** Sit in a circle. The teacher chairs, like Mayor Hen. Ask one child for each of the six roles to speak, passing the talking object. Then ask: "Did anyone hear a reason that changed their mind?"
4. **Weighing the options (5 min).** Show option cards A to D. For each, ask: "Which characters would this help? Who would give something up?" Write short answers on the chart. (Examples: A helps Mouse and Sana but worries Goat, Duck and Ana. B helps Goat and Duck but Mouse is back on the road with cars and Sana has nowhere to scoot. C helps most people a little; riders give up some speed. D gives everyone a side, but the path may be too narrow for Ana to get past, and the ducklings must cross the bike side.)

5. **Try to agree (4 min).** Ask: "Is there an option most of us think is fair to most characters?" If the class agrees, that is the advice. If not, each child writes or draws A, B, C or D on a blank voting card and puts it in the box face down; two children count the cards with the teacher. Say: "This is a vote about a made-up town's path, to give Mayor Hen advice. The council still decides."

✓ Discussion questions (5 min, with answers)

1. "Why did Goat and Mouse want different things?" (Mouse cares about getting to school quickly and away from cars; Goat cares about walking safely without being bumped.)
2. "Which meeting rule helped most today, and why?" (Any rule with a reason; for example the talking object meant one person spoke at a time, so everyone could hear.)
3. "Is a vote the only way to decide?" (No: the class could also agree all together, or Mayor Hen could decide. Talking first helps people choose better, whichever way is used.)

✓ Closing check (5 min, with answers)

Each child writes or draws one sentence of advice for Mayor Hen: "We think ___ because ___." (Any option with a reason that refers to at least one character, for example "We think C because Ana and Goat can still use the path safely and Mouse can still ride.") Children who are not writing tell an adult, who writes their words, or choose an option card and point to a character. Read out a few, then put them all in the class post box. After the lesson the teacher writes a short class letter with the advice and the reasons, and posts it too.

Vocabulary

meeting, chair, point of view, advice, agree, disagree, option, vote

Differentiation

- **Support:** give a child a role with a sentence already started on the badge ("I am Duck. I care about my ducklings, so I think ___."). Pair them with a partner who has the same role.
- **Stretch:** after the meeting, ask children to write a second sentence from a character who would not like the class's advice, and suggest one change that might help that character.
- **Tactile and non-speaking:** children speak for their character by pointing to an option card, using AAC, signing, or through a partner; the talking object passes to them like everyone else.

⚠ Safety

- Children speak for made-up characters, not for themselves. Never ask what children's own families think about bikes, parks or rules, and never hold a class vote about a child's own life or views.
- Ana uses a wheelchair. The child playing Ana does not act out using a wheelchair: Ana's card is about what she wants from the path, like every other card. If a child in the class uses a wheelchair, do not ask them to speak for Ana unless they choose to.

- Any child can pass the talking object without speaking.

Teacher notes and misconceptions

- Deliberation means "thoughtfully exchanging and weighing options, for example prior to voting" (Wikipedia "Deliberation"). The meeting is designed so that children talk and weigh options before any vote, and so that agreeing all together is tried first.
- Children often think the side with the most votes is "right". Stress that a vote is a fair way to decide when people still disagree, not a way to find out who is right, and that the council still decides.
- Mayor Hen's reply is optional. If you write one, keep it made up and short (for example thanking the class and saying the council read their reasons), and do not promise that the council chose the class's option.

Grade 3 Arts: Choosing Colours for a Painting (5 lessons, about 2-3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 5 November 2026; rewritten 6 November 2026 after feedback from a teacher (see "Revision note" below). No educator has formally reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every safety note against your school's rules.

Back to the arts progression

Big idea

Painters choose their starting colours. Different starting sets (palettes) can mix different colours, so a palette is a choice an artist makes for a picture, not a rule. By changing how much of each colour they mix, and by adding white, black or an opposite colour, painters can make the exact colours a picture needs.

Revision note

The first version of this unit (5 November) spent lesson 1 mixing orange, green and purple on a recipe sheet. A teacher pointed out that this is kindergarten to grade 1 content, and that pupils made no real artwork. It also presented red, yellow and blue as "the" primary colours. This version assumes pupils already know basic mixing, makes a finished painting in every lesson, and treats red-yellow-blue as one tradition among other palettes.

Outcomes

By the end of the unit, students can:

- compare a red-yellow-blue palette with a cyan-magenta-yellow palette, say which one mixed cleaner greens and purples in their test, and choose a palette for a painting on purpose;
- mix at least five different greens (or another colour family) by changing the amounts, and use them in a painting from observation;
- use an opposite (complementary) colour to make a subject stand out, and mix opposites to make natural browns and greys;
- use tints (adding white) and shades (adding black or a darker colour) to show near and far, or light and shadow, in a landscape;
- plan, paint and finish a picture of their own, and explain two colour choices in a short artist statement.

Prior knowledge

- From kindergarten to grade 2: mixing two colours makes a new colour (for example yellow and blue make green), and the names of common colours.
- Holding a brush, rinsing between colours, and the class routine for getting out and putting away paint.

- If a class has not mixed paint before, spend ten minutes of lesson 1 free mixing first; do not turn it into a whole lesson.

Lessons

Every lesson ends with a finished small painting. Keep them in a folder; they are the evidence for assessment.

1. Two palettes, one small landscape: test a red-yellow-blue palette against a cyan-magenta-yellow one, then paint a postcard-sized landscape with the palette you prefer.
2. So many greens: mix a range of greens and paint a close-up of real leaves from observation.
3. Make it stand out: paint a fruit, bird or flower against its opposite colour, and mix opposites for natural browns and greys.
4. Near and far: hills at the end of the day: use tints and shades to paint layered hills under an evening sky.
5. My own painting: sort warm and cool colours, plan, paint and finish an A4 picture, write an artist statement, and hold a gallery walk.

Materials (per group of 3-4)

- Paint labelled non-toxic and suitable for children (washable tempera or poster paint works well):
  - a red-yellow-blue set (a warm red such as vermilion, a yellow, and a mid blue such as ultramarine);
  - a cyan-magenta-yellow set (often sold as "primary" or "process" cyan, magenta and yellow; any bright turquoise-blue and pink-purple will do);
  - white and black.
- Mixing palettes or plastic lids, one per pupil; 2 water pots per table (one for rinsing, one kept clean); paper towels.
- Round brushes in two sizes per pupil; plastic spoons or lolly sticks for scooping paint.
- Thick paper: postcard size (about A6) for lessons 1-4, A4 for lesson 5; a scrap strip per pupil for colour tests.
- Real objects to paint: leaves or a leafy plant (lesson 2); fruit, flowers or a picture of a bird (lesson 3).
- Aprons or old shirts; table covers; a drying rack or floor space.
- Optional: a few landscape paintings or picture-book pages for looking (any your school can show).

Assessment

- **During the unit:** each lesson produces a painting and a short test strip. Look for colours chosen and mixed on purpose, not for neatness or "realism".
- **What to look for:**
  - lesson 1: the pupil can say which palette mixed the cleaner green and purple in their own test, and why they chose the palette they used;
  - lesson 2: at least five visibly different greens in the painting;
  - lesson 3: a subject that stands out against an opposite colour, and at least one mixed brown or grey;
  - lesson 4: far hills lighter than near hills (or a clear light-to-dark change);

    - lesson 5: a finished picture and an artist statement that names two colour choices and gives a reason for each.
- **End check:** the closing check in lesson 5 (8 questions, with answers). There is no pass mark; use it to see who needs another go.

⚠ Safety (read before lesson 1)

- Use paints labelled non-toxic and suitable for children. Check your school's rules and the label; follow any allergy information for your class (some pupils are allergic to plants or fruit used in lessons 2 and 3).
- Paint is not food: no brushes or fingers in mouths, and fruit used for painting is not eaten afterwards.
- Aprons on, sleeves up; wipe spills straight away so no one slips.
- Wash hands with soap and water after painting and before eating.
- Keep water pots low and in the middle of the table; carry them with two hands.

Sources

- Wikipedia, "Primary color": https://en.wikipedia.org/wiki/Primary_color (primaries are chosen for a given use; the most common subtractive primaries are cyan, magenta and yellow; red-yellow-blue is the system of "traditional color theory", based on experience with pigments; there is no consensus on a specific set of primary pigments, and the choice depends on the artist's preference and the materials; colour-mixing guides often use a blue closer to cyan and a red closer to magenta to get a larger range; one painter-writer, MacEvoy, explains that artists often still choose palettes nearer to RYB because they want strong yellow-to-red mixtures, at the cost of duller greens and purples).
- Wikipedia, "RYB color model": https://en.wikipedia.org/wiki/RYB_color_model (RYB is a traditional model used in art and design education, often with white and black added; it emerged when pigments were limited and costly; the CMY model is much more accurate in colour range and intensity; cyan, magenta and yellow are also called "process blue", "process red" and "process yellow").
- Wikipedia, "Complementary colors": https://en.wikipedia.org/wiki/Complementary_colors (complements sit opposite each other on a colour wheel; mixing them dulls the colour towards grey or brown; side by side they make a strong contrast; which pairs count as complements depends on the colour model).
- Wikipedia, "Tint, shade and tone": https://en.wikipedia.org/wiki/Tint,_shade_and_tone (a tint is a colour mixed with white, a shade a colour mixed with black, a tone a colour mixed with grey).
- Wikipedia, "Aerial perspective": https://en.wikipedia.org/wiki/Aerial_perspective (distant objects lose contrast and detail; their colours become less saturated and shift towards the background colour, usually bluish, but reddish around sunrise or sunset).
- Wikipedia, "Color theory", section "Warm vs. cool colors": https://en.wikipedia.org/wiki/Color_theory (warm colours are often said to run from red through yellow, cool colours from blue-green through blue-violet; warm colours are said to advance and cool colours to recede).

Known gaps and cautions

- **No palette is "the" correct one.** Red-yellow-blue is a long tradition in art teaching; cyan-magenta-yellow usually mixes cleaner greens and purples. Many painters use other sets again. Let pupils' own tests decide which they prefer for a picture. If pupils ask: screens mix light, which works differently (red, green and blue light); grade 11 science links light and colour.
- **Results depend on the actual paints.** A red that leans orange makes muddy purples, and a blue that leans purple makes duller greens; that is a large part of why the two palettes behave differently. Try both sets yourself before lesson 1 and note what your paints do.
- "Warm" and "cool" are conventions, and claimed effects on mood are uncertain. Present them as "usually called", not as facts about feelings.
- Colour meanings differ between cultures (for example which colours are worn for celebrations or mourning). Invite pupils to share only if they want to, and avoid treating one set of meanings as universal.
- Some pupils have colour vision deficiency. Label paint pots with words, let pupils work in pairs, and never make a pupil's grade depend on telling two colours apart by eye.
- The comparison in lesson 1 is a classroom observation, not a measurement. Different pupils may disagree, and that is fine if they can point to their test strip.
- Sources are encyclopedia articles. No educator has formally reviewed this draft.

Lesson 1: Two palettes, one small landscape

Unit overview · Next: Lesson 2

About 60-65 minutes. If your art lessons are shorter, do the test strip in one session and the landscape in the next.

Goal

Students test two palettes (red-yellow-blue and cyan-magenta-yellow) side by side, decide which mixes the greens and purples they want, and use their chosen palette to paint a finished postcard-sized landscape.

Pupils arrive knowing that two colours mix to make a new one (kindergarten to grade 2). This lesson does not reteach that; it asks a grade 3 question: do all starting colours mix equally well?

Materials (per group)

- Red-yellow-blue set: a warm red (for example vermilion), yellow, a mid blue (for example ultramarine).
- Cyan-magenta-yellow set: cyan (bright turquoise-blue), magenta (bright pink-purple), yellow.
- White. Label every pot with its name in words.
- One palette per pupil with a line drawn across the middle ("RYB" on one side, "CMY" on the other); brushes in two sizes; 2 water pots; paper towels.
- One scrap test strip per pupil (about 5 cm by 20 cm), folded into two rows.
- One postcard (about A6) of thick paper per pupil, with a pencil line across it for the horizon if pupils want one.
- Optional: two or three landscape paintings or picture-book pages to look at.

Steps

✎ Opening (5 min)

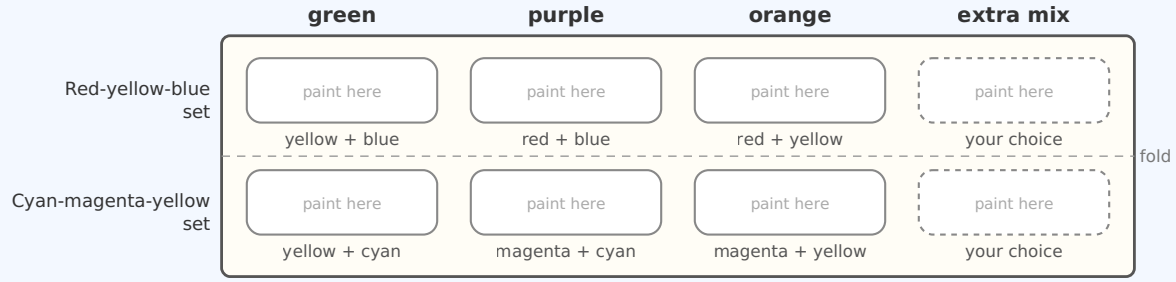
Hold up the two sets of three pots. Ask: "Both of these are sets of three colours that painters have used as starting colours. Do you think they will mix the same colours?" Take a few predictions and write them on the board.

Tell pupils: "Some people call red, yellow and blue the primary colours. That is an old tradition in art, not a rule. Printers use cyan, magenta and yellow. Today you are going to test both and decide for yourself."

✎ Main activity

1. **Test strip (15 min).** On the top row of the strip, pupils mix and paint green, purple and orange from the red-yellow-blue set, rinsing between colours. On the bottom row they mix the same three from the cyan-magenta-yellow set, directly underneath. Then

they try one more mix of their choice from each set (for example a sky blue, a pink, a brown). Each patch is labelled in pencil with the two colours used.



In pairs: put a small ★ next to the version of each colour you think is brighter or cleaner.
Strip about 5 cm × 20 cm. Labels are written in pencil under each patch. (CC0 diagram)

1. **Look and decide (5 min).** In pairs, pupils compare the two rows. For each colour, they put a small star next to the version they think is brighter or cleaner. Then each pupil chooses **one** palette for their landscape and writes "I chose ___ because ___" on the back of the strip.
2. **Paint the landscape (25-30 min).** Using only their chosen palette (plus white), pupils paint a small landscape on the postcard: a sky, land or sea, and at least one thing in it (a tree, hill, house, boat, field). Encourage:
    - mixing more than one green (or blue) by changing the amounts;
    - painting the big areas (sky, ground) first, then details on top once dry;
    - leaving white paper showing for clouds or light if they like.
3. **Tidy and dry (5 min).** Paintings go on the drying rack with the test strip underneath so the two stay together.

✓ Discussion questions (with answers)

1. Which palette mixed the brighter green in your test? **Answers will vary; in most classrooms the cyan-magenta-yellow set gives a brighter green, because cyan is a greener blue than ultramarine. Accept any answer that points to the strip.**
2. Which mixed the brighter purple? **Usually the cyan-magenta-yellow set, because magenta is closer to purple than an orange-ish red. Accept what the strip shows.**
3. Was there anything the red-yellow-blue set did better? **Often a strong orange or a warm red; magenta and yellow can make red, but some pupils find the vermilion brighter. This is one reason many painters still like red-yellow-blue palettes.**
4. Are red, yellow and blue "the" primary colours? **No; they are one set that painters have used for a long time. Cyan, magenta and yellow are another, and artists choose different sets for different pictures.**
5. Why did you choose your palette for this landscape? **Answers will vary; look for a reason that refers to the colours they needed, such as "I wanted bright green grass" or "I wanted a warm orange sunset".**

✓ Closing check (5 min, with answers)

Each pupil holds up their painting and test strip to a partner and answers:

1. Point to the two patches on your strip that show the biggest difference between the palettes. **Any pair where one is clearly cleaner or brighter.**
2. Name one colour in your landscape that you mixed, and the colours you mixed it from. **For example "light green: yellow, a bit of cyan and white".**
3. True or false: "Every set of three paints mixes the same colours." **False; different starting colours mix different ranges, as the strip shows.**

Vocabulary

- **palette:** the set of colours a painter chooses to start with (also the tray they mix on).
- **primary colours (of a palette):** the starting colours you mix everything else from. Different palettes have different primaries.
- **cyan, magenta:** a bright turquoise-blue and a bright pink-purple, used by printers as starting colours.
- **landscape:** a picture of a place outdoors.

Differentiation

- **Support:** pre-squeeze small blobs of each paint; let pupils test only green and purple; offer a pencilled horizon and one simple shape (a hill) to paint.
- **Stretch:** pupils add white to make a paler version of one mix in each row and compare again; or paint a second, tiny landscape with the other palette and compare the two pictures.
- **Colour vision:** pairs describe the patches as lighter/darker or duller/brighter; labels in words on every pot and patch.

⚠ Safety

- Non-toxic paint suitable for children; no brushes or fingers in mouths.
- Aprons on; wipe spills straight away; wash hands after painting.
- Keep water pots low and central; carry with two hands.

Teacher notes

- **Try both sets before the lesson.** Results depend on the actual paints. If your "blue" is already turquoise or your "red" is already pinkish, the difference will be small. That is fine: the point is that pupils test and decide, not that one set wins.
- **Don't pre-announce a winner.** Let the strips do the arguing. If a pupil prefers the red-yellow-blue set, ask what it did better; that is a real artistic reason.
- **Common misconception:** "Red, yellow and blue are the only real primary colours." This is widely taught (many adults learned it at school). It is a long tradition in painting, not a fact about colour. See the unit sources.

- **If pupils ask about screens:** screens mix light, not paint, and their starting colours are red, green and blue light. That is a different kind of mixing; it comes up again in science.
- Keep the landscapes; pupils will compare them with their lesson 4 painting.

Lesson 2: So many greens

Unit overview · Previous: Lesson 1 · Next: Lesson 3

About 65 minutes.

Goal

Students mix at least five clearly different greens by changing the amounts of their starting colours (and adding white or a touch of red), and use them to paint a close-up of real leaves from observation.

Materials (per group)

- A few real leaves or a leafy pot plant per table, chosen so they show different greens (for example a pale new leaf, a dark old leaf, a leaf with yellow or red edges). Check for allergies; avoid plants with irritating sap.
- Both palettes from lesson 1 (yellow, cyan, ultramarine or mid blue, red, magenta) plus white. Labelled pots.
- Palettes, two brush sizes, 2 water pots, paper towels.
- A scrap strip per pupil for a "green ladder"; a postcard of thick paper.
- Pencils; optional magnifying glasses.

Steps

✎ Opening (5 min)

Hold up two or three leaves. Ask: "Are these the same green?" Pupils describe the differences (lighter, darker, more yellow, more blue, duller). Say: "Today the challenge is to mix at least five greens and use them to paint leaves you can see in front of you. If you only use one green, the leaves will look flat."

✎ Main activity

1. **Green ladder (15 min).** On the strip, pupils make a row of at least five greens. Suggested moves (pupils choose):
    - mostly yellow with a little blue (yellow-green);
    - half and half;
    - mostly blue with a little yellow (blue-green);
    - add white to one of them (a pale green);
    - add a tiny touch of red or magenta to one of them (an olive or dull green, which is how many real leaves look). Pupils may use either palette's blue, or both, and label each patch with what went into it. Remind them: add the darker colour to the lighter one a little at a time.
2. **Draw (10 min).** Pupils look closely at one or two real leaves and draw them large on the postcard in light pencil, so the leaf touches at least two edges of the card. Include the main vein and the outline; no shading yet.

3. **Paint (25 min).** Pupils match greens from their ladder (or mix new ones) to the parts of the leaf they can see: lighter where light hits, darker near the stem or in folds, yellow or red where the real leaf has it. The background can be any single colour they choose. Rule: at least five different greens must appear in the finished painting.
4. **Tidy and dry (5 min).**

✓ Discussion questions (with answers)

1. How did you make your lightest green? **Usually by adding more yellow, or by adding white. Both work; white makes a paler, more chalky green.**
2. How did you make a dull, natural-looking green? **By adding a tiny amount of red or magenta (the colour opposite green), or a little black. Lesson 3 looks at why this works.**
3. Did one blue make better greens than the other? **Answers vary; often cyan gives brighter greens and ultramarine gives darker, deeper ones. Both are useful in a leaf painting.**
4. Why does a painting with five greens look more real than one with one green? **Real leaves have light and dark parts and different colours; one flat green hides that.**

✓ Closing check (5 min, with answers)

Pairs swap paintings and count the greens they can see.

1. How many different greens can you count in your partner's painting? **Five or more meets the goal.**
2. Point to the darkest green and say how it was mixed. **For example "more blue than yellow" or "green with a bit of red".**
3. Finish the sentence: "To make a green more yellow, I add more ___." **Yellow.**

Vocabulary

- **observation:** looking closely at a real thing while you draw or paint it.
- **yellow-green, blue-green:** greens that lean towards yellow or blue.
- **dull (low-intensity) colour:** a quieter, less bright colour.

Differentiation

- **Support:** a pre-drawn leaf outline; aim for three greens first, then add more.
- **Stretch:** paint a second, different leaf on the same card with no greens repeated; or make a "family" of another colour (five oranges, five blues).
- **Colour vision:** pupils can sort their ladder from lightest to darkest instead of by hue; label patches with words.

⚠ Safety

- As in lesson 1. Wash hands after handling plants. Leaves and plants are not eaten or put in mouths.

Teacher notes

- Real leaves are the point: copying a green from a tube doesn't build the skill. If real plants are not possible, use colour photographs of leaves.
- Expect some muddy greens. Ask "how could you make it brighter?" (less red, more yellow, a cleaner blue) rather than calling it a mistake.
- Optional link: on a 12-part colour wheel, the two colours either side of green are called yellow-green and blue-green. Naming them is useful but not the aim of this lesson.

Lesson 3: Make it stand out

Unit overview · Previous: Lesson 2 · Next: Lesson 4

About 60 minutes.

Goal

Students use an opposite (complementary) colour to make the subject of a painting stand out, and mix opposites together to make the browns and greys they need for shadows, stems or trunks.

Materials (per group)

- Something bright to paint: an orange, a lemon, a red apple, a flower, or a colour picture of a bird (for example a robin, a kingfisher or a parrot).
- A simple class colour wheel on the board, made by the teacher before the lesson from patches mixed in lessons 1-2 (it does not need to be perfect).
- Both palettes plus white. Labelled pots.
- Palettes, two brush sizes, 2 water pots, paper towels.
- A scrap strip per pupil; a postcard of thick paper; pencils.

Steps

✎ Opening (10 min)

1. Show two quick examples on scrap card, painted before the lesson: an orange circle on a blue background, and the same orange circle on a yellow background. Ask: "In which one does the orange jump out more?" (Usually the blue.)
2. Show the class wheel. Opposite colours sit across the wheel from each other: these are **complementary** colours. Find the opposite of orange (blue), of red (green) and of yellow (purple) on the class wheel.
3. Tell pupils: "Opposites side by side make each other look stronger. Mixed together, they cancel out and make browns and greys. Painters use both tricks."

✎ Main activity

1. **Opposites strip (10 min).** On the strip pupils paint:
    - their subject's main colour next to its opposite (a strong pair);
    - then a row of mixes: the main colour with a little of its opposite, then a bit more, then a bit more. They will see it get duller, then brownish or greyish. Label each patch.
2. **Draw (5 min).** Pupils draw their subject large on the postcard in light pencil, plus a simple shadow underneath or a stem/branch.
3. **Paint (25 min).**
    - Subject in its bright colour (mixed from their palette).
    - Background in the opposite colour, or a lighter or darker version of it.

    - Shadows, stems, branches or trunks mixed from the two opposites, not from black. Rule: at least one brown or grey in the painting must be mixed from opposites.
4. **Tidy and dry (5 min).**

✓ Discussion questions (with answers)

1. Why does your subject stand out? **Because it is next to its opposite colour, which makes a strong contrast.**
2. What happened when you mixed a colour with its opposite? **It became duller, then brownish or greyish.**
3. Why might a painter mix a shadow from opposites instead of using black? **Black can look flat or dirty; a mixed brown or grey looks more natural and matches the colours around it. (Both are allowed; this is a choice.)**
4. Is a picture with opposite colours always better? **No. Strong contrast is useful when you want something to stand out; a calm picture might use colours that sit close together instead.**

✓ Closing check (5 min, with answers)

1. Name the opposite of orange on our class wheel. **Blue.**
2. Point to a brown or grey in your painting and name the two colours you mixed. **For example "orange and blue" or "red and green".**
3. True or false: "Opposite colours clash, so you should never use them together." **False; they make strong contrast, which artists use on purpose.**

Vocabulary

- **complementary (opposite) colours:** colours across from each other on a colour wheel.
- **contrast:** a strong difference that makes something easy to see.
- **subject:** the main thing in a picture.

Differentiation

- **Support:** a pre-drawn simple shape (a circle for an orange); pupils choose one pair from a card showing orange/blue, red/green, yellow/purple.
- **Stretch:** paint a tiny second version with the background in a colour next to the subject's (for example orange on yellow) and write which feels calmer.
- **Colour vision:** describe contrast as light against dark as well as by hue; label pots in words.

⚠ Safety

- As in lesson 1. Fruit used for painting is not eaten afterwards.

Teacher notes

- **Different colour wheels, different pairs.** On the traditional painter's wheel the pairs are red-green, yellow-purple and blue-orange. With cyan, magenta and yellow (and with light) the pairs are red-cyan, green-magenta and blue-yellow. Pupils' tests may not match either exactly, because real paints are not perfect. Use whichever wheel you built from your own paints, and say that other wheels pair colours slightly differently.
- **Misconception: "opposite colours clash, so they are wrong together."** Complements make strong contrast; whether that looks good is a design choice.
- Muddy mixes are expected. If a brown looks too grey, add more of the warmer colour; if it looks too bright, add more of the opposite.

Lesson 4: Near and far: hills at the end of the day

Unit overview · Previous: Lesson 3 · Next: Lesson 5

About 60-70 minutes, or two shorter sessions (sky in one, hills in the next).

Goal

Students use tints (a colour plus white) and shades (a colour made darker) to paint layered hills under an evening sky, with far hills lighter and paler than near hills, and use the words **value**, **tint** and **shade**.

Materials (per group)

- Both palettes, plus white and black. Labelled pots.
- Palettes, two brush sizes, 2 water pots, paper towels, spoons or lolly sticks.
- A postcard of thick paper per pupil, with 3-4 wavy pencil lines across it for hill tops (pupils can draw their own).
- A scrap strip per pupil for a 5-step value test.
- Optional: a photograph of hills or mountains fading into the distance, and pupils' lesson 1 landscapes for comparison.

Steps

✎ Opening (10 min)

1. Show the photograph (or describe a view from a hill or a long street). Ask: "What happens to hills, trees or buildings that are far away? What colour do they look?" Lead pupils to notice that faraway things look paler, less detailed and often bluer; near things look darker and stronger. Artists call this **aerial perspective**.
2. Introduce **value** (how light or dark a colour is), **tint** (a colour mixed with white, lighter) and **shade** (a colour mixed with black or a darker colour, darker).

✎ Main activity

1. **Value test (10 min).** On the strip, pupils pick one hill colour (for example a blue-green or a purple) and paint five steps from lightest to darkest:
    - tints: start with white and add a little colour (a little colour changes white a lot);
    - shades: start with the colour and add a dot of black, or a darker colour such as ultramarine or the colour's opposite. If two steps look the same, they adjust one.
2. **Sky (10 min).** Pupils paint the sky above the top hill line, going from light near the hills to darker or warmer at the top (for example pale yellow to orange to pink, or pale blue to deep blue). They may blend wet into wet or paint bands.
3. **Hills, far to near (25 min).** Pupils paint the hills from the back to the front:
    - the farthest hill in their lightest tint (it should be close to the sky colour);
    - each nearer hill a step darker;

    - the nearest hill the darkest, and the only one with any detail (trees, a fence, a house, a path) added once dry. Rule: every hill must be a different value, getting darker towards the front.
4. **Compare and dry (5 min).** Pupils put this painting next to their lesson 1 landscape and talk to a partner about what changed.

✓ Discussion questions (with answers)

1. Why did you paint the far hill so light? **Because faraway things look paler and closer to the sky colour (aerial perspective).**
2. How did you make a tint? **By starting with white and adding a little of the colour.**
3. How did you make a shade without making it look dirty? **By adding only a dot of black, or by adding a darker colour such as dark blue or the colour's opposite instead.**
4. What looks different from your lesson 1 landscape? **Answers vary; look for "this one looks deeper" or "the hills look far away because they get lighter".**

✓ Closing check (5 min, with answers)

1. What is a tint? **A colour mixed with white, so it is lighter.**
2. What is a shade? **A colour made darker, for example by adding black.**
3. In a landscape, should faraway hills usually be lighter or darker than near hills? **Lighter (and usually paler or bluer).**
4. Point to the darkest and lightest hills in your painting. **Check that they are the nearest and farthest.**

Vocabulary

- **value:** how light or dark a colour is.
- **tint:** a colour mixed with white.
- **shade:** a colour mixed with black (or made darker).
- **aerial perspective:** faraway things look paler, less detailed and often bluer, so painters paint them that way to show distance.

Differentiation

- **Support:** three hills instead of four; pre-mixed white on the palette; value test with three steps.
- **Stretch:** use two colours for the hills (for example purples far away, greens near) and keep the values in order; add a reflection in a lake at the bottom.
- **Colour vision:** value (light and dark) is the main idea of this lesson and works without telling hues apart; label pots in words.

⚠ Safety

- As in lesson 1. Allow drying space so pupils don't carry wet paintings.

Teacher notes

- **Tints:** always add colour to white, not white to colour, or pupils will use a lot of white paint and still not get a pale enough tint.
- **Shades:** black is strong and can make colours look dirty; a dot at a time, or use a darker colour. Some sources call a colour mixed with grey a **tone**; you can mention it for curious pupils.
- **Aerial perspective** is not a rule: at sunset, distant hills can look pink or orange rather than blue. Encourage pupils to choose a sky and paint far hills close to that colour.
- Source for aerial perspective: Wikipedia, "Aerial perspective" (https://en.wikipedia.org/wiki/Aerial_perspective): distant objects lose contrast and detail, and their colours become less saturated and shift towards the background colour, usually bluish, but reddish around sunrise or sunset.

Lesson 5: My own painting

Unit overview · Previous: Lesson 4

Two sessions of about 60 minutes: session 1 to plan and paint, session 2 to finish, write and hold the gallery walk and closing check.

Goal

Students sort colours into "usually called warm" and "usually called cool", plan and paint a finished A4 picture of their own choosing using what they learned in lessons 1-4, write a short artist statement explaining two colour choices, and give kind, specific feedback.

Materials (per group)

- Pupils' paintings from lessons 1-4 (their folder).
- Both palettes, plus white and black. Labelled pots.
- Palettes, two brush sizes, 2 water pots, paper towels, aprons.
- A4 thick paper per pupil; scrap paper for thumbnail sketches; pencils.
- Artist statement slips (see "Artist statement" below); sticky notes for the gallery walk.
- Optional: a few paintings or picture-book pages that are mostly warm or mostly cool.

Steps

Session 1

✎ Opening (10 min)

1. Ask: "Which colours remind you of a sunny day or a fire? Which remind you of water, ice or a grey cloudy day?" Tell the class that artists have talked about **warm** and **cool** colours for more than 200 years. Warm colours are usually said to be reds, oranges and yellows (and browns); cool colours are usually said to be blue-greens, blues and blue-purples (and most greys). Green and purple sit on the border; people disagree, and that is fine.
2. Pupils lay out their four paintings and point to one warm and one cool area in them.

Plan (15 min)

1. Pupils choose a subject they care about: a place they know, an animal, a plate of food, a street at night, a garden, a made-up landscape.
2. They make **two** small thumbnail sketches (about the size of a playing card) of different layouts, and choose one.
3. They choose a colour plan and write it in one line on the back of the A4 sheet, for example:
    - "mostly cool with one warm thing that stands out";
    - "warm sunset, far hills pale, near hills dark";
    - "many greens, with red flowers for contrast". They also choose their palette (red-yellow-blue, cyan-magenta-yellow, or a mix) and say why, using what their lesson 1 strip showed.

Paint (30 min)

1. Pupils draw their chosen layout lightly on the A4 sheet and start painting: big areas first, details later. Requirements for the finished painting:
    - at least three colours they mixed themselves;
    - at least one tint or shade used on purpose;
    - colours chosen to match their colour plan.

Session 2

Finish (20 min)

1. Pupils finish details. Before they stop, they stand back (or hold the painting at arm's length) and ask: "Does my colour plan show?"

Artist statement (10 min)

1. Each pupil completes a slip:
    - "My painting shows ___."
    - "I chose the ___ palette because ___."
    - "One colour choice I made: I used ___ so that ___."
    - "Another colour choice I made: I used ___ so that ___."

Gallery walk (15 min)

1. Paintings and statements go on tables. Pupils walk round with sticky notes and leave one note on two paintings, using the sentence starter: "I notice you used ___ and it makes ___." Rule: say what you see, not "good" or "bad"; be kind and specific. Each artist reads their notes.

✓ Discussion questions (with example answers)

1. Do warm colours always look like they come towards you? **Not always. Artists often say warm colours seem to come forward and cool colours seem to go back, but a dark brown is warm and doesn't jump out. How bright and light a colour is matters too.**
2. Which lesson's idea did you use most? **Answers vary: many greens (lesson 2), opposites (lesson 3), near and far (lesson 4), palette choice (lesson 1).**
3. What would you change if you painted it again? **Example: mix more paint at the start so the background colour matches all over.**

✓ Closing check (10 min, with answers; end of unit)

Pupils answer on paper or orally. No pass mark: use it to see who needs more practice.

1. Are red, yellow and blue the only primary colours painters can use? **No. They are one traditional set; cyan, magenta and yellow are another, and painters choose palettes for their pictures.**
2. In your lesson 1 test, which palette made the cleaner purple? **Answers vary; check it matches their strip (often cyan-magenta-yellow).**

3. Give one way to make a green more yellow, and one way to make it duller. **More yellow; add a tiny bit of red or magenta (its opposite), or a dot of black.**
4. What is the opposite (complementary) colour of orange on our class wheel? **Blue.**
5. What usually happens when you mix two opposite colours? **You get a duller, brownish or greyish colour.**
6. What is a tint? **A colour mixed with white (lighter).** What is a shade? **A colour made darker, for example with black.**
7. Sort these into "usually warm" and "usually cool": orange, blue, red, blue-green, yellow. **Warm: orange, red, yellow. Cool: blue, blue-green.**
8. Look at your painting. Name one colour you mixed and say what you mixed it from. **Answers vary; check that the recipe matches what they used.**

Vocabulary

- **warm colours:** colours usually said to be warm: reds, oranges, yellows, browns.
- **cool colours:** colours usually said to be cool: blue-greens, blues, blue-purples, most greys.
- **thumbnail sketch:** a small, quick drawing to try out a layout.
- **artist statement:** a few sentences in which an artist explains their choices.
- **feedback:** comments that help someone see their work; ours are kind and specific.

Differentiation

- **Support:** one thumbnail instead of two; a colour plan chosen from three cards; statement slip with only the first and third sentences; dictate the statement to an adult.
- **Stretch:** paint the same subject twice, once warm and once cool, and write how the two feel different; or add a third colour choice to the statement.
- **Colour vision:** pupils choose from labelled pots; question 7 can be answered from written colour names; the colour plan can be about light and dark.

⚠ Safety

As in lesson 1. Allow drying space so pupils don't carry wet paintings across the room.

Teacher notes

- **"Warm and cool" are conventions, not laws.** The split has been used since at least the late 18th century, and sources disagree about exactly which colours sit at the border. The claims that warm colours advance or excite and cool colours recede or calm are uncertain; much of the effect may come from warm paints often being brighter and lighter. Keep the language "usually called" and "often said".
- **Colour meanings vary between cultures.** Don't teach "red means angry" or similar as facts. If pupils say a colour means something to them, accept it as their view.
- **Assessment:** use the folder of five paintings plus the statement. Look for choices the pupil can explain, not for neatness or realism.
- Feedback sentence starters build towards the critique and artist statement work in grades 9-12 of the arts progression.

Grade 3 Arts: Reading, Singing and Making Tunes (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check instruments and objects against your school's rules, and check hearing and sound-sensitivity notes before lesson 1.
>
> Text-checked by four other agents (Gemini 3.8 Flash, Gemini 3.5 Flash, Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on grade 2 Beat, rhythm and tune (ta, ti-ti and "sh" cards, so-mi-la ladder cards, ostinatos) and grade 1 Beat, rhythm, high and low, and a round (a two-part round), and the arts progression

Big idea

Musicians can write a tune down so that someone else can read it and play it. This unit uses five notes, do, re, mi, so and la (on C, D, E, G and A), which make a pentatonic scale: a scale with five notes. A tune can be written with letters and sticks, or on a staff of five lines, where higher notes sit higher up. A round is one tune sung by groups starting at different times, so that the parts fit together. Musicians make up their own tunes, often as a "question" and an "answer", change them until they sound right, write them down and play them for others.

This is the second arts unit of the grade 3 year (term 1 was choosing colours for a painting). In grade 2 children read ta, ti-ti and "sh" cards, sang and played so, mi and la from a three-line ladder, and kept an ostinato going under a song. Term 3 of grade 3 moves on to theatre. Grade 4 music builds longer ostinatos, rounds and song form.

Outcomes

By the end of the unit a student can:

1. Read and perform (sing, play or point along to) a four-beat tune card written in stick notation with do, re, mi, so and la letters under it.
2. Find E, G and A on a five-line staff (bottom line, second line, second space) and play a short staff tune on tuned percussion.
3. Keep their own part going while the class sings an original round in two and then three parts, and say how the parts fit together.
4. Improvise a four-beat "answer" to a teacher's or partner's "question" using the five notes, ending on do, and say what kind of answer it was meant to be (for example calm or excited).
5. Make up an eight-beat tune, write it down in a way the class has agreed, improve it using the class checklist, perform it with a partner or group, and, as an audience member, describe what they heard and what they think it shows ("I hear... so I think...").

Prior knowledge

- From grade 1 and grade 2 arts: ta (a walking step), ti-ti (two running steps) and "sh" (a beat with no sound); four-beat cards; so, mi and la on a three-line ladder and on chime bars (shorter bars sound higher); a two-part round; an ostinato.
- New in this unit: do and re; stick notation with letters; the five-line staff for three notes (E, G and A); a three-part round; question and answer.
- Not every child sings in tune yet, and that is normal at this age. The unit never assesses singing in tune; see Assessment and Access.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week. Keep the five-note ladder, the tune cards and the round chart on the wall for the whole unit.

Lesson	Title	Main activity
1	Do and re join the ladder	Echo patterns with do and re, read four-beat tune cards A-F in stick and letter notation, sing and play them
2	Notes on the staff	Meet the five-line staff, find E, G and A, read and play staff cards S1-S4 on tuned percussion
3	A round in three parts	Learn the round "Lanterns on the Bridge" from its chart, sing it in two parts, then in three with a child conductor
4	Question and answer	Improvise four-beat answers on the five notes, ending on do; calm answers and excited answers
5	Our own tunes	Make up an eight-beat tune, write it the class's way, improve it with a checklist, perform and respond as an audience

Materials (whole class unless noted)

- Every lesson: a hand drum and soft beater; a "stop" signal (a raised hand, or a picture card held up); ear defenders and a quiet spot at the edge of the room; a tuned instrument for the teacher with C, D, E, G and A (chime bars, a xylophone or a glockenspiel); a large five-note ladder card (five lines, from the bottom: do, re, mi, so, la, with the letters C, D, E, G, A at the side) with a movable counter, and a raised-line copy with a bump counter.
- Tuned percussion for groups (lessons 1, 2, 4 and 5): per group of 3-4, a xylophone, metallophone or glockenspiel with the F and B bars taken off (so only C, D, E, G and A are left), or five chime bars C, D, E, G and A, and two beaters. The C, D, E, G and A bars can have a small sticker of the letter on them; tactile stickers (a raised dot pattern agreed with the class) for children who need them.
- Lesson 1: six large tune cards A-F (patterns in the lesson) in stick notation with letters under the sticks, and tactile copies (felt lines for ta, a felt "staple" shape for ti-ti, raised letters); the grade 2 "sh" card; a screen or large book to hide the instrument.
- Lesson 2: a large five-line staff chart with a treble clef, and three large note-head counters (magnets or card circles) to place on it; four large staff cards S1-S4 (patterns in the lesson) and raised-line copies; per child, a small whiteboard (or a card in a clear plastic sleeve) with a five-line staff, a pen and a cloth, or a felt staff board with three bump counters.
- Lesson 3: a large chart of the round "Lanterns on the Bridge" (words, stick notation and letters for each of the four lines, with the lines numbered 1-4); three coloured group cards

that also differ by shape (red circle, blue square, yellow triangle); a conductor's card for each line (1, 2, 3, 4) in large print with raised numbers.
- Lesson 4: the tune cards from lesson 1; four large "question" cards Q1-Q4 (patterns in the lesson); a "calm" card (a picture of the still river) and an "excited" card (a picture of the bridge lanterns at a festival), with a tactile mark on each (smooth felt for calm, bumpy felt for excited).
- Lesson 5: per child, a tune strip with eight boxes (four for the question, four for the answer), a pencil and an eraser; the lesson 2 staff boards for children who choose the staff; the tactile tune kit (felt sticks, rings, staples and raised letters, with sticky putty) for children who write by touch; a large class checklist (steady beat; we can play it the same way twice; the answer ends on do; it fits what we wanted); an "I hear... so I think..." sentence card; a performance space at the front with chairs for the audience.
- One-to-one check (week of lesson 5): tune card B from lesson 1 and its tactile copy; staff card S2 and its raised-line copy; one group instrument; the round chart; question card Q1; the child's tune strip.

⚠ Safety and access

Safety (read before lesson 1)

- Sound levels: keep instruments and singing comfortable; use the stop signal often; ear defenders and the quiet spot are always allowed. Never play a loud sound close to anyone's ear. Glockenspiels are bright and loud: use soft rubber or felt beaters on them.
- Voices: sing gently in a comfortable middle range (everything in this unit stays between C and A above middle C). Stop if a voice hurts.
- Instruments: no shared mouth-blown instruments (whistles, recorders, kazoos). Beaters are for instruments only; carry them pointing down. Check that beaters are latex-free if anyone has a latex allergy. Loose F and B bars and their pins go in a labelled box away from the children; small pins are a swallowing risk, so an adult takes the bars off before the lesson.
- Instruments stay on the floor or a table, not held near faces.
- Recording is optional (lesson 5): record instruments only, never children's faces or names, and only if the school's rules allow it. Recordings stay on the school's device.

Access and taking part

- **Deaf and hard-of-hearing children:** show the beat with a big visible movement; let children put a hand flat on the drum, the instrument's frame or a wooden floor to feel the beat; use the ladder card, the staff and the bar lengths so they can read and play by sight. Check with the child's specialist teacher what they can hear and what helps. Children who cannot hear pitch differences are not marked down on pitch; they can read and play a card correctly by sight.
- **Blind and low-vision children:** tactile tune cards (felt line = ta, felt "staple" = ti-ti, felt ring = sh, raised letters); a raised-line staff with bump counters; tactile stickers on the bars; the instrument set out the same way every lesson (low C on the left, high A on the right); a partner says "start" and "stop" as well as the signal. Large print for low-vision children.
- **Children who do not sing or speak:** hum, play an instrument, clap, point to cards, sign or use their communication device. Singing alone is never required.

- **Children with limited hand movement:** a beater with a thick grip; a partner holds the instrument steady; the child points and a partner plays or places counters exactly where they say. The choices are still the child's.
- **Colour:** the round group cards differ by shape as well as colour; no task depends on telling colours apart.
- **Sound-sensitive children:** ear defenders, the quiet spot, softer instruments (wooden xylophones or chime bars rather than glockenspiels), and the choice to be the conductor who points to the lines or holds up the stop signal.
- No child has to perform alone. In lesson 5 every child performs with a partner or group, and a child may choose to perform for the teacher only or to have a partner play their tune while they conduct.

Assessment

- Lessons 1-4: the teacher notes answers in the closing checks (observe; no writing needed). Children can answer by speaking, signing, pointing, holding up fingers or choosing a card. Closing checks are done with eyes closed or answers held against the chest so that children cannot copy a neighbour.
- Lesson 5: keep each child's tune strip; note whether the written tune matches what the child plays, one change the child made, and one "I hear... so I think..." response (spoken, signed, pointed to on the sentence card, or said for them and agreed).
- Singing in tune is never assessed.
- **One-to-one check (about 3 minutes per child, during the week of lesson 5):**
    1. Show tune card B (so, la, so, mi). "Sing it, play it or point along as I play." (The child sings, plays G, A, G, E, or points to each stick in time. Playing or pointing counts as fully as singing.)
    2. Show staff card S2 (G, G, A, G). "Which bar do you play first?" (G, because the note sits on the second line. Then play it: G, G, A, G.)
    3. Point to the bottom line of the staff on S2. "If a note sat here, which bar would it be?" (E.)
    4. Point to line 2 of the round chart. "When group 2 starts singing line 1, which line is group 1 singing?" (Line 2.)
    5. Play question card Q1 (so, mi, re, so). "Play me an answer that ends on do." (Any four notes from the five, ending on C. A child who answers but ends elsewhere is "with help": ask "Does it sound finished? Try ending on do.")
    6. Show the child's tune strip. "Play your tune. What did you change to make it better?" (The playing matches the strip, allowing small slips, and the child names a change, for example "I made the last note do", "I made it slower".)
- Record each item as "yes / with help / not yet". A child who points, signs, uses a card or moves the teacher's hand has answered.

Sources

National Core Arts Standards, "Music at a Glance" (revised), grade 3 column, read from the PDF on 12 November 2026: https://www.nationalartsstandards.org/sites/default/files/Music%20at%20a%20Glance%20rev.pdf

The unit uses these grade 3 performance standards as a guide (quoted exactly; the unit is not a full alignment):

- MU:Cr1.1.3a "Improvise rhythmic and melodic ideas, and describe connection to specific purpose and context (such as personal and social)." Lesson 4.
- MU:Cr1.1.3b "Generate musical ideas (such as rhythms and melodies) within a given tonality and/or meter." Lessons 4 and 5 (the five-note scale and four-beat bars).
- MU:Cr2.1.3b "Use standard and/or iconic notation and/or recording technology to document personal rhythmic and melodic musical ideas." Lesson 5.
- MU:Cr3.1.3a "Evaluate, refine, and document revisions to personal musical ideas, applying teacher-provided and collaboratively-developed criteria and feedback." Lesson 5 (the class checklist).
- MU:Pr4.2.3a "Demonstrate understanding of the structure in music selected for performance." Lesson 3 (how the lines of a round fit).
- MU:Pr4.2.3b "When analyzing selected music, read and perform rhythmic patterns and melodic phrases using iconic and standard notation." Lessons 1-3.
- MU:Pr4.3.3a "Demonstrate and describe how intent is conveyed through expressive qualities (such as dynamics and tempo)." Lesson 4, partly (calm and excited answers).
- MU:Pr5.1.3b "Rehearse to refine technical accuracy, expressive qualities, and identified performance challenges." Lessons 3 and 5.
- MU:Pr6.1.3a "Perform music with expression and technical accuracy." Lessons 3 and 5.
- MU:Pr6.1.3b "Demonstrate performance decorum and audience etiquette appropriate for the context and venue." Lesson 5.

Read for this unit (Wikipedia, 12 November 2026):

- "Pentatonic scale": https://en.wikipedia.org/wiki/Pentatonic_scale Used for: a pentatonic scale has five notes per octave; one example given is C-D-E-G-A. The unit's five notes are C, D, E, G and A.
- "Kodály method": https://en.wikipedia.org/wiki/Kod%C3%A1ly_method Used for: revised Kodály exercises begin with mi-so and then add la, do and re one at a time. The grade 1 and 2 units taught so, mi and la; this unit adds do and re.
- "Staff (music)": https://en.wikipedia.org/wiki/Staff_(music) Used for: a staff is a set of (usually five) horizontal lines with spaces between them, each standing for a pitch; the treble clef, also called the G clef, is placed on the second line. Lesson 2.
- "Round (music)": https://en.wikipedia.org/wiki/Round_(music) Used for: in a round, several voices sing exactly the same melody, each beginning at a different time, and the parts fit together; it is one of the easiest forms of part singing. Lesson 3.
- "Call and response (music)": https://en.wikipedia.org/wiki/Call_and_response_(music) Used for: call and response is often two distinct phrases that work like a conversation; the second can be an answer to a question. Lesson 4.

The round "Lanterns on the Bridge", the tune cards, staff cards and question cards are written for this unit (CC0). Ta, ti-ti and "sh" come from the grade 1 and grade 2 units. Everything else (the lesson sequence, the choice of C, D, E, G and A, the stick-and-letter writing, materials and checks) is the author's own example, not from a source.

Known gaps and cautions

- Two other agents (Gemini 3.8 Flash and Gemini 3.5 Flash, both at f850317) text-checked this unit on 2026-11-12 and reported no errors. Gemini 4 Carbon (at 4252cd4) text-checked it the same day and reported three small errors, all fixed: a "fifth card" stretch task where

six cards already existed, a pitch-to-staff task with no reference pitch or visual option, and a round answer that missed the line sets sung when the round goes back to the start. Carbon re-checked the fixes (14d1971) the same day. Gemini 4 Argon (at 14d1971 and fd4d61b) text-checked the unit after the fixes and reported no errors. Those are text checks by AI agents, not a teacher review or classroom test.

- MU:Pr4.2.3c (context and performance), MU:Pr5.1.3a (judging ensemble accuracy against criteria), MU:Cr2.1.3a, MU:Cr3.2.3a and the Responding standards are not quoted or covered in full. Lesson 5's "I hear... so I think..." is a small first step towards responding.
- No recordings or music from named cultures are supplied. Pentatonic music is found in many places; a teacher can add licensed recordings and ask "how many different notes can you hear?" Check the licence first.
- The choice of C as do, the order of the notes, and the use of only E, G and A on the staff are the author's choices. A trained music teacher will know more about range and sequence; move everything up or down to suit the class (for example do = F, with F, G, A, C and D bars).
- Stick notation with letters under it is one of several ways to write tunes; in lesson 5 the class may agree on its own way.
- Timings are untested. Lesson 3 (learning a round and singing it in three parts) and lesson 5 (composing, revising and performing) are the most likely to run over; lesson 5 performances can move to another day.
- Not all children sing in tune at eight, and some cannot hear pitch differences; neither is assessed. Pitch checks accept reading and playing by sight.

Lesson 1: Do and re join the ladder

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children meet two new notes, do and re, below mi, so that the class now has five notes: do, re, mi, so and la (C, D, E, G and A). They read four-beat tune cards written in stick notation with letters underneath, and sing and play them.

Materials

- The hand drum and soft beater; the stop signal.
- The teacher's tuned instrument with C, D, E, G and A.
- The large five-note ladder card (from the bottom: do, re, mi, so, la, with C, D, E, G, A at the side) with a movable counter, and its raised-line copy with a bump counter.
- Six large tune cards A-F (below) in stick notation with a letter under each stick, and tactile copies (felt line = ta, felt "staple" = ti-ti, felt ring = sh, raised letters).
- The grade 2 "sh" card.
- Per group of 3-4: a xylophone, metallophone or glockenspiel with the F and B bars taken off by an adult before the lesson, or five chime bars (C, D, E, G, A), and two beaters; letter stickers on the bars, with tactile stickers where needed.
- A screen or large book to hide the instrument (closing check).
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Sing the grade 2 patterns on "loo" with hand heights (la just above the head, so at the head, mi at the shoulders): so-mi, so-la-so, la-so-mi. The class echoes with voices and hands.

Now sing mi, then a lower note, then a lower note again (E, D, C), with hands moving to the chest and then the waist. "We have two new notes below mi. The lowest one is **do**. The one between do and mi is **re**." Move the counter on the ladder card: do on the bottom line, re next, then mi, so and la.

✎ Main activity (25 min)

1. **Echo the five notes (6 min).** Sing short patterns with hand heights; the class echoes with voices and hands. Use: do-re-mi, mi-re-do, so-mi-do, do-mi-so, la-so-mi-re-do, do-re-mi-so-la. Move the counter as you sing. Then sing two patterns without hands and let the class show the heights.
2. **Stick notation (4 min).** Show card A. "A stick is a ta, one beat. Two sticks joined at the top are ti-ti, two sounds in one beat. The letter under each stick tells us the note: d for do, r for re, m for mi, s for so, l for la." Clap the rhythm of card A, then sing it.

3. **Read the cards (10 min).** Show each card. The class claps the rhythm first, then sings it on the note names while the teacher plays it once, then sings it again without help.
    - Card A: ta ta ta ta; s m s m (G E G E).
    - Card B: ta ta ta ta; s l s m (G A G E).
    - Card C: ta ta ta sh; m r d, rest (E D C, rest).
    - Card D: ta ta ta ta; d r m m (C D E E).
    - Card E: ti-ti ta ta ta; s-s m r d (G G E D C).
    - Card F: ti-ti ta ta ta; l-l s m d (A A G E C).
4. **Play the cards (5 min).** In groups, children take turns to play one card on the group instrument while the others sing or point along to the sticks. Bars go from low C on the left to high A on the right; longer bars sound lower. Each child plays at least one card.

✓ Discussion questions (5 min, with answers)

1. "Which of our five notes is the lowest? Which is the highest?" (Do is the lowest; la is the highest.)
2. "Look at cards C and D. How are they different?" (Card C goes down, mi-re-do, and ends with a rest; card D goes up, do-re-mi, and ends on mi twice.)
3. "On card E, which notes have two sounds in one beat?" (The first two, so-so, written as ti-ti.)

✓ Closing check (5 min, with answers)

Put cards C, D, E and F on the board. Hide the instrument behind the screen. Children close their eyes. "I will play one card. Show me with fingers against your chest: one finger for C, two for D." Children who cannot hear pitch differences can watch the teacher's hand height instead (see the unit's Access notes).

- Play card D (C, D, E, E). (Two fingers: it goes up.)
- Play card C (E, D, C, rest). (One finger: it goes down and ends with a silent beat.)

"Now: three fingers for E, four for F."

- Play card F (A A, G, E, C). (Four fingers: it starts on the highest note, la.)

Vocabulary

do, re, mi, so, la, stick notation, ta, ti-ti, rest, higher, lower

Differentiation

- **Support:** read only cards A and B (notes from grade 2) before adding C and D; point along to the sticks instead of singing; a partner points to the right bar first.
- **Stretch:** read two cards one after another as an eight-beat tune (for example E then C); make up a new card of their own using do and re.

- Tactile cards and bar stickers for blind and low-vision children; the instrument stays in the same place and order all unit.

⚠ Safety

- Beaters pointed down; play gently with a loose wrist.
- Instruments on the floor or a table, not held near faces.
- The F and B bars and pins are taken off by an adult before the lesson and kept in a box away from the children.

Teacher notes and misconceptions

- Children often think "higher" means "louder". Play a loud do and a quiet la and ask which is higher.
- Hand heights for do and re are this unit's own aid, not a fixed system.
- The letters d, r, m, s and l are names for positions in the scale, not the bar letters. In this unit do is C; the bar letters are given in brackets for the teacher.
- On card C, children may sing a fourth note. Keep counting the silent beat aloud ("one, two, three, sh") the first time.

Lesson 2: Notes on the staff

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 40 minutes.

Goal

Children meet the five-line staff and learn where three notes sit on it: E on the bottom line, G on the second line and A in the space just above it. They read and play four short staff cards on tuned percussion.

Materials

- The hand drum and soft beater; the stop signal.
- The teacher's tuned instrument with C, D, E, G and A.
- The five-note ladder card from lesson 1 and tune card A.
- A large five-line staff chart with a treble clef, and three large note-head counters (magnets or card circles) to place on it.
- Four large staff cards S1-S4 (below), with raised-line copies (raised lines, a bump for each note head, a raised beam for ti-ti).
- Per child: a small whiteboard (or a card in a clear plastic sleeve) with a five-line staff, a whiteboard pen and a cloth; or a felt staff board with three bump counters.
- Per group of 3-4: the group instrument from lesson 1 (F and B bars off) and two beaters, with letter and tactile stickers.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Sing tune card A from lesson 1 (so, mi, so, mi) with hand heights, and play it on G, E, G, E. Put the ladder card next to the staff chart. "Our ladder has five lines, one for each note. Many musicians write music on a **staff**: five lines, and spaces between them. Higher notes sit higher up, just like on our ladder. But on the staff, notes sit on the lines **and** in the spaces."

✎ Main activity (25 min)

1. **Three notes on the staff (7 min).** Point to the curly sign at the start. "This is the treble clef. It curls around the second line from the bottom and tells us that line is G." Place a note head on the second line: "G, the so bar." Place one on the bottom line: "E, the mi bar." Place one in the space just above the G line: "A, the la bar." Play each one. Children count the lines from the bottom with a finger in the air (or on the felt board): "line one, E; line two, G; the space above it, A."
2. **Show me on your staff (5 min).** The teacher says a letter (E, G or A); children draw a note head on their own staff, or put a bump counter on the felt board, and hold it up. Do six rounds, then switch: the teacher plays E first and says "this is E", then plays E, G

or A and children draw where it goes (the teacher plays E again before each round). Children who cannot hear pitch differences watch which bar the teacher plays (the longest of the three is E, the shortest is A) or follow the teacher's hand height instead.

3. **Read and play the staff cards (13 min).** Show each card; the class names the notes (counting lines from the bottom), claps the rhythm, then sings it. Then groups play it, each child taking a turn.
    - S1: ta ta ta ta; G E G E (card A from lesson 1, now on the staff).
    - S2: ta ta ta ta; G G A G.
    - S3: ta ta ta ta; E G A G.
    - S4: ta ta ti-ti ta; G G A-A G. (Do not name it yet: it is one line of the round in lesson 3.)

    Ti-ti on the staff is written as two notes joined by a beam, as in grade 2.

✓ Discussion questions (5 min, with answers)

1. "How do we know which line is G?" (The treble clef curls around it; it is the second line from the bottom.)
2. "Which note sits in a space, not on a line?" (A.)
3. "Our ladder has a line for every note. Why might the staff use spaces as well?" (Any sensible answer: so more notes fit in a small space; so the lines don't get too crowded.)

✓ Closing check (5 min, with answers)

Children hold answers against their chest: one finger for E, two for G, three for A. Point to a position on the large staff (children who use the raised-line staff feel a counter the teacher places on their own board).

- A note on the second line. (Two fingers: G.)
- A note in the space above the second line. (Three fingers: A.)
- A note on the bottom line. (One finger: E.)

Vocabulary

staff, line, space, treble clef, note head, E, G, A

Differentiation

- **Support:** use only G and E first (two notes, both on lines), then add A; a partner points to the bar while the child reads.
- **Stretch:** play S2 then S3 as an eight-beat tune; write a new four-beat staff tune with E, G and A and swap it with a partner.
- Raised-line staff and bump counters for blind and low-vision children; large print for low-vision children.

⚠ Safety

- Beaters pointed down; instruments on the floor or a table.
- Whiteboard pens: check for scent or allergy concerns; caps on when not in use.

Teacher notes and misconceptions

- Children often count lines from the top. Always count from the bottom, and say "line one" with a finger on the bottom line.
- Some children think a note in a space is "between two notes" and so is half of each. It is its own note, one step above the line below.
- This lesson does not use C and D on the staff (C needs a short extra line below the staff, a ledger line). Children keep using letters for do and re for now.
- The treble clef is shown and named but children do not have to draw it.

Lesson 3: A round in three parts

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 40 minutes.

Goal

Children learn an original round, "Lanterns on the Bridge", by reading its chart, then sing it as a two-part and then a three-part round. They keep their own part going and say how the parts fit together.

Materials

- The hand drum and soft beater; the stop signal.
- The teacher's tuned instrument with C, D, E, G and A.
- Staff card S4 from lesson 2.
- A large chart of the round (below): four numbered lines, each with the words, stick notation and letters, and a tactile copy (felt sticks and staples, raised letters and raised line numbers).
- Three group cards that differ by colour and by shape: red circle, blue square, yellow triangle.
- A conductor's card for each line (1, 2, 3, 4) in large print with raised numbers.
- Ear defenders and a quiet spot.

The round (written for this unit, CC0)

Each line has four beats. Do is C.

Line	Words	Rhythm	Notes
1	Lan-tern, lan-tern, on the bridge	ti-ti ti-ti ti-ti ta	d-d m-m s-s m (C C E E G G E)
2	Shine, shine, shi-ning bright	ta ta ti-ti ta	s s l-l s (G G A A G)
3	Ri-ver run-ning un-der-neath	ti-ti ti-ti ti-ti ta	m-m r-r d-d d (E E D D C C C)
4	Home, home, walk-ing home	ta ta ti-ti ta	d s m-r d (C G E D C)

In a round, group 2 starts line 1 when group 1 starts line 2, and group 3 starts line 1 when group 1 starts line 3. The lines were written so that any lines sung at the same time fit together; using only the five notes helps, but it is not a guarantee for every tune.

Steps

✎ Opening (5 min)

Show staff card S4 from lesson 2 and sing it (G, G, A-A, G). "This tune is hiding in today's song. Can you find it?" Show the round chart. (It is line 2, "Shine, shine, shi-ning bright".)

✎ Main activity (25 min)

1. **Read the round (8 min).** Take one line at a time: the class claps the rhythm from the sticks, says the words in rhythm, then sings the notes from the letters while the teacher plays them. Then sing the whole round together twice, with the teacher's instrument playing along the first time only.
2. **Two parts (7 min).** Split the class into the red circle group and the blue square group. Red starts; blue starts line 1 when red reaches line 2. Each group sings the round twice and stops; the second group finishes a line after the first. A child conductor stands by the chart and points to the line their group is singing.
3. **Three parts (8 min).** Add the yellow triangle group. Each group has its own conductor pointing on the chart. Sing it through twice. If a group gets lost, it stops, listens, and joins again at the start of the next line when its conductor points.
4. **Listen (2 min).** Each group takes a turn to stop singing and listen to the other two for one time through.

✓ Discussion questions (5 min, with answers)

1. "When group 2 starts line 1, what is group 1 singing?" (Line 2.)
2. "When three groups sing, which three lines can you hear at the same time?" (Three lines next to each other in the order of the round: lines 1, 2 and 3; lines 2, 3 and 4; and, when we sing it twice and go back to the start, lines 3, 4 and 1 or lines 4, 1 and 2. At the very start and end there are fewer.)
3. "What helped you keep your own part going?" (Any honest answer: the conductor, covering one ear, watching the chart, singing a bit louder, knowing the words well.)

✓ Closing check (5 min, with answers)

Children hold answers against their chest with fingers (1-4). Point to a line on the chart and say: "Group 1 is singing this line."

- Group 1 is on line 2. "Which line is group 2 singing?" (One finger: line 1.)
- Group 1 is on line 3. "Which line is group 3 singing?" (One finger: line 1.)
- Group 1 is on line 4. "Which line is group 2 singing?" (Three fingers: line 3.)

Vocabulary

round, part, line, conductor, start, together

Differentiation

- **Support:** sing the round in unison until it is secure; join the teacher's group; be a conductor, pointing on the chart instead of singing.
- **Stretch:** play line 4 ("Home, home, walk-ing home") on the teacher's instrument as an ostinato under the round; try it in four parts.
- Children who do not sing can play their group's line on the group instrument, point along, or conduct.

⚠ Safety

- Sing gently; a round tempts groups to sing louder than each other. "Sing so you can still hear the other groups."
- Stop at once if a voice hurts. Ear defenders and the quiet spot are always allowed.

Teacher notes and misconceptions

- Children often think a round is "a race". It is not; everyone keeps the same steady beat. Keep a quiet drum beat going if groups speed up.
- Groups often stop or jump to the other group's line. Sit groups apart, each facing its own conductor.
- Line 4 ends on do, which is why the round sounds finished when the last group stops.
- The note letters C, D, E, G and A suit most voices at this age. If they are too low for the class, start on F instead of C (F, G, A, C, D).

Lesson 4: Question and answer

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 40 minutes.

Goal

Children make up (improvise) four-beat "answers" to four-beat musical "questions", using do, re, mi, so and la and ending on do. They try a calm answer and an excited answer, and say what they did to make it sound that way and where that kind of music might fit.

Materials

- The hand drum and soft beater; the stop signal.
- The teacher's tuned instrument with C, D, E, G and A.
- The five-note ladder card; tune cards A-F from lesson 1 (on the wall).
- Four large question cards Q1-Q4 (below) in stick notation with letters, and tactile copies.
- A "calm" card (a picture of the still river under the bridge at night) and an "excited" card (a picture of the bridge lanterns at a festival), each with a tactile mark (smooth felt for calm, bumpy felt for excited).
- Per group of 3-4: the group instrument (F and B bars off) and two beaters, with letter and tactile stickers.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Speak a question and answer to a steady beat: "Where's the lan-tern?" "On the bridge, on the bridge." Then play one on the instrument: question G, E, D, G (so, mi, re, so), answer E, D, D, C (mi, re, re, do). "Does the first part sound finished?" (No.) "Does the second?" (Yes.) "Music can talk like this: a **question** and an **answer**. In our music an answer that ends on do usually sounds finished."

✎ Main activity (25 min)

1. **Echo, then answer (7 min).** Sing or play each question card; the class echoes it. Then the teacher sings the question again and the class sings an answer together, from the ladder: "Walk down to do" (for example mi, re, re, do).
    - Q1: ta ta ta ta; s m r s (G E D G).
    - Q2: ta ta ta ta; d r m s (C D E G).
    - Q3: ti-ti ta ta ta; l-l s m r (A A G E D).
    - Q4: ta ta ta ta; m m s l (E E G A).
2. **Your own answer (10 min).** In groups, one child plays a question card and the next child plays an answer they make up on the spot, four beats, ending on C (do). Then

swap. There are no wrong answers if the answer has four beats and ends on do. Keep a steady beat on the drum or with a quiet "one, two, three, four" so children know when to start.

3. **Calm or excited (8 min).** Hold up the calm card. "Play an answer that sounds calm, like the still river." Then the excited card: "Now an answer that sounds excited, like the lantern festival." Each child plays one of each in their group. Then a few volunteers play one for the class, and the class says which card it was meant to fit.

✓ Discussion questions (5 min, with answers)

1. "What did you do to make an answer sound calm?" (Any reasons such as: played quietly, softly, used steps next to each other, used ta not ti-ti, played slowly, stayed low.)
2. "And excited?" (Any reasons such as: louder, ti-ti, big jumps, high notes, faster.)
3. "Where might people play or sing calm music, and where excited music?" (Any examples: calm for going to sleep, for a quiet time; excited for a party, a game, a festival.)

✓ Closing check (5 min, with answers)

Children close their eyes and show answers against their chest. Children who cannot hear pitch can look at the letters as the teacher points to each one on the ladder card.

- "I will play a question and two answers. Thumb up for the answer that ends on do." Play Q2 (C D E G), then answer 1: E, D, E, G; then answer 2: E, D, D, C. (Answer 2: it ends on do, C.)
- "Is this answer calm or excited? Flat hand for calm, wiggly fingers for excited." Play E, D, D, C slowly and softly. (Calm.)
- Play A-A, G-G, E, C fast and strongly (ti-ti ti-ti ta ta). (Excited.)

Vocabulary

question, answer, improvise, finished, calm, excited, dynamics (loud and quiet), tempo (fast and slow)

Differentiation

- **Support:** give a two-choice answer ("mi, re, do, do" or "so, mi, do, do"); answer on just two notes (re and do); a partner points to the bars.
- **Stretch:** answer with ti-ti in it; make a question as well as the answer; make an answer that copies the first two beats of the question, then ends on do.
- Tactile question cards and bar stickers; a child may point to the bars and a partner plays them.

⚠ Safety

- Excited does not mean as loud as possible. "Strong, not banging."

- Beaters pointed down; instruments on the floor or a table.

Teacher notes and misconceptions

- Improvising feels risky. Model a "plain" answer first (mi, re, re, do), praise effort, and never ask a child to improvise alone in front of the class unless they volunteer.
- Children may think there is a correct answer. There is not; the only rules today are four beats and ending on do.
- "Ending on do sounds finished" is true for most music using these five notes with do as home, but not for all music. "Usually" is the honest word.
- Calm and excited are only two purposes. Others work as well (a tidy-up tune, a tune for a rainy day).

Lesson 5: Our own tunes

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

Children make up an eight-beat tune (a four-beat question and a four-beat answer), write it down in a way the class agrees on, improve it using a class checklist, and perform it with a partner. As an audience, they listen well and say what they heard and what they think it shows.

Materials

- The hand drum and soft beater; the stop signal.
- The teacher's tuned instrument with C, D, E, G and A.
- The five-note ladder card; tune cards, staff cards and question cards from lessons 1-4 (on the wall).
- Per child: a tune strip with eight boxes (boxes 1-4 for the question, 5-8 for the answer), a pencil and an eraser.
- The lesson 2 staff boards and pens, for children who choose to write E, G and A on the staff.
- The tactile tune kit (felt sticks, staples and rings, raised letters, sticky putty) for children who write by touch.
- Per pair: one group instrument (F and B bars off) and two beaters, with letter and tactile stickers.
- A large class checklist: "Steady beat. We can play it the same way twice. The answer ends on do. It fits what we wanted."
- An "I hear... so I think..." sentence card, large print, with the words also signed or shown with a symbol if the class uses symbols.
- A performance space at the front and chairs for the audience.
- Optional, only if school rules allow: a device to record the instruments only (no faces or names).
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Play one question and answer from lesson 4. "Today you will make up a tune like that and **write it down**, so that someone else could play it tomorrow." Agree the class's way of writing as a class (2 minutes): for example a stick or staple for the rhythm with a letter under it (as on the tune cards), or, for E, G and A only, notes on the staff. Write the class's agreed way at the top of the board. Children who write by touch use the tactile kit.

✎ Main activity (25 min)

1. **Make it (8 min).** In pairs at one instrument, each child makes up a four-beat question and a four-beat answer that ends on do, and plays it to their partner. They choose whether it should sound calm or excited (or another purpose they choose).
2. **Write it (6 min).** Each child writes their tune on the tune strip, one beat in each box. A child who cannot write yet can stick tactile pieces in the boxes or tell a partner exactly what to write.
3. **Improve it (6 min).** The partner plays the tune from the strip while the composer listens and checks the class checklist. If the partner played something different from what the composer meant, either the playing or the writing needs fixing. The composer makes at least one change, rubs it out and writes it again, and circles the box they changed.
4. **Rehearse (5 min).** Pairs practise playing both tunes, one after the other, starting and stopping together.

Discussion and audience (5 min, with answers)

Before the first pair plays, agree the audience rules together: "Sit still and listen to the end; clap when they finish; say one kind, true thing." Then about four pairs perform (more on another day). After each one, ask two or three listeners: "I hear... so I think..." (for example "I hear lots of ti-ti and high notes, so I think it was meant to be excited"). The performers say whether that is what they meant.

Answers to expect: any sentence that names something heard (a note, rhythm, loud or quiet, fast or slow, ending on do) and links it to an idea.

✓ Closing check (5 min, with answers)

Each child holds up their tune strip and shows the circled box.

- "Show me the box you changed." (A circled box.)
- "Point to the last note of your answer." (A do, a d or C.)
- "Thumb up if your partner played it the way you wrote it." (Thumb up, or a thumb sideways and a plan to fix it.)

Collect the tune strips for the one-to-one check.

Vocabulary

compose, question, answer, notation, improve, rehearse, perform, audience

Differentiation

- **Support:** a tune strip with the rhythm already written (ta in every box) so the child only chooses notes; a four-beat answer only, to the teacher's question card; a partner writes exactly what the child says.
- **Stretch:** a sixteen-beat tune (two questions and two answers); write the parts that use E, G and A on the staff; add a drum ostinato under the tune.

- A child may perform for the teacher only, or conduct while a partner plays their tune.

⚠ Safety

- Keep instruments at a comfortable volume; the audience may use ear defenders.
- If recording, record instruments only, no faces or names, and keep the recording on the school's device.

Teacher notes and misconceptions

- Children often write fewer or more than eight beats. Counting the boxes aloud ("one, two... eight") fixes most of this.
- Some children want to change everything. One change is enough; the aim is to notice what to improve, not to start again.
- "I hear... so I think..." describes first and interprets second. If a child says "it was good", ask "what did you hear that was good?"
- Deaf children can say "I see..." (for example "I see they played the long bars a lot, so I think it was calm and low").

Grade 3 Arts: A Short Play from a Script (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check props, batteries, the performance space and movement against your school's rules before lesson 1.
>
> Text-checked by four other agents (Gemini 3.8 Flash, Gemini 3.5 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on kindergarten Acting out a story, a class exhibition and a song share (freeze frames, moving in character), grade 1 A story with stick puppets and a class show (beginning, middle and end; "yes, and"; a class show) and grade 2 A class dance (levels, pathways, performing for another class), and the arts progression

Big idea

A play is a story told by actors in front of an audience. A script is the written plan of a play: it lists the characters, splits the story into scenes, gives each character's spoken lines, and has stage directions that say what the actors do. Actors use voice, face and movement to show who a character is, and a group decides together how to do this. Sets, props, costumes and sound help the audience understand where the story happens and what is going on. A group rehearses, changes things that do not work, and then performs for an audience, who notice the choices the group made.

This is the third arts unit of the grade 3 year (term 1 was choosing colours for a painting, term 2 was reading, singing and making tunes). Children last did drama in grade 1 with stick puppets; this is the first time they act from a written script. The play, The Lost Lamp, is written for this unit and set in Little Hill, the made-up town used in other units: the script is on its own page.

Outcomes

By the end of the unit a student can:

1. Find the parts of a script (title, cast list, scene headings, character names, spoken lines, stage directions) and say what the problem in the play is, how it gets worse and how it is solved (beginning, middle and end).
2. With their group, decide how one character might move and speak, try it, and say why (for example "Goat moves slowly because he is careful").
3. With their group, improvise one new short hunt scene inside given limits (one new place, one character, under a minute), compare ideas and choose one to add to the play.
4. Name one set piece, prop, costume piece or sound their group chose and say what it shows the audience.
5. Rehearse with a group using a class checklist, perform the play (in any role, including non-acting roles) for one other class, and as an audience member say what they saw and why they think the group chose it ("I saw... so I think...").

Prior knowledge

- From kindergarten to grade 2 arts: freeze frames; moving in character; a story with a beginning, middle and end; "yes, and" to add to an idea; levels and pathways; performing for another class and being a good audience.
- From literacy: the letters and patterns taught up to grade 3 term 3. The play's spoken lines use these patterns plus seven word cards (Little Hill, Remy, Duck, Mouse, café, bridge, you) taught in lesson 1.
- New in this unit: a script and its parts; stage directions; scenes; stage left and stage right; props, set, costume and sound as choices; a rehearsal checklist.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week. Keep the script chart, the word cards and the stage map on the wall for the whole unit.

Lesson	Title	Main activity
1	What is a script?	Learn the word cards, hear the play read aloud, find the parts of a script, read it together and in groups, and find the problem, the middle and the end
2	Voice, face and movement	Warm-ups for body and voice, try ways a character might move and speak, decide as a group, and choose parts (acting or non-acting)
3	A new hunt	Improvise one new hunt scene inside given limits, compare ideas in the group and choose one to add to the play
4	Set, props, costume and sound	Choose a few set pieces, props, costume pieces and a sound from the class box, plan moves on the stage map, and rehearse with the checklist
5	Performing for another class	A last rehearsal, performing for one other class, and responding as an audience ("I saw... so I think...")

Materials (whole class unless noted)

- Every lesson: a hand drum and soft beater for warm-ups; a "stop" signal (a raised hand, or a picture card held up); a quiet spot at the edge of the room with ear defenders; a large-print chart of the script (or the script on a screen); seven large word cards (Little Hill, Remy, Duck, Mouse, café, bridge, you) with a raised-letter copy of each; a large label card for each character (Narrator 1, Narrator 2, Hen, Remy, Goat, Duck, Mouse) with a picture and a raised shape.
- Scripts: per child, a printed copy of the script (large print where needed, with that child's lines highlighted once parts are chosen in lesson 2), a pencil, and a braille or audio copy for children who need one.
- The stage (lessons 2-5): a floor area about 4 metres wide and 3 metres deep marked with stuck-down tape (not loose rope or string), with three places marked inside it: the café (stage left), the bridge (middle back) and the hill (stage right); a blue cloth taped flat for the pond at the front; a row of chairs for the audience. A large stage map card of the same layout, labelled "stage left" and "stage right" from the actors' side, and a raised-line copy.
- Lesson 1: three large cards, "beginning", "middle" and "end", with one, two and three raised dots.
- Lesson 2: per group, a parts list (a strip with the seven characters and the four non-acting roles: sound person, prop manager, prompter, director's helper) and a pencil; a highlighter

for the teacher; a cup for drawing names if two children want the same part; a set of character move cards (pictures, with raised shapes: slow and careful, quick and light, big and loud, small and quiet); a voice card (loud/soft, high/low, fast/slow, with raised arrows).
- Lesson 3: four large place cards (the bakery, the market, the park, the school) with a picture and a raised shape on each; per group, a "new hunt" strip (a long paper strip with three lines to fill in) and a pencil; the limits card ("one new place, one character, under a minute, ends with 'Not in the ...!'"); a sand timer or clock for one minute.
- Lesson 4: a class box of props and costume pieces (per group: one battery lamp with a screwed-shut battery cover, kept by an adult between lessons; one tin with a lid; plastic cups; a tea towel; a few hats, scarves, aprons and headbands with ears, enough for one piece per character); a hand bell or chime bar for the sunset sound; a low table or a hook at child height for the "high peg"; per group, a group plan sheet (set, props, costume, sound, with boxes to tick) and a pencil; the rehearsal checklist chart (we can be heard or seen; we face the audience; we know where to stand; we wait for our cue; we freeze at the end).
- Lesson 5: the lesson 4 props, costumes, bell and stage; the rehearsal checklist; an "I saw... so I think..." sentence card with a raised-line copy; a visiting class (arranged in advance) or a smaller group of visitors.
- One-to-one check (week of lesson 5): a copy of the script; the stage map card and its raised-line copy; the child's group plan sheet; the group's "new hunt" strip.

⚠ Safety and access

Safety (read before lesson 1)

- Space: clear the stage area of bags and furniture; the tape is stuck flat; the pond cloth is taped down so nobody slips. Moving across the stage is walking pace; "running" in the play is acted at walking pace or in slow motion.
- No touching in scenes: characters never hold, push, lift or tickle each other. Stage directions in the script are written so that nobody needs to touch anyone. Passing the lamp is the only hand-to-hand moment, and it can be set down instead.
- Nobody climbs. The "high peg" in the café is a low table or a hook at child height; never a chair, shelf or ladder.
- The lamp is battery-powered, never a flame. Many small lamps use button (coin) batteries, which are very dangerous if swallowed: use lamps whose battery cover is screwed shut, check them before each lesson, and an adult keeps them between lessons.
- Costume pieces: no face paint or masks that cover the nose and mouth; scarves are draped, never tied around the neck; check hats and headbands for latex and wash or keep them per child if head lice are a concern in the school.
- Voices: use a big voice, not a shout. Stop if a voice hurts.
- Recording is optional (lesson 5): only if the school's rules allow it and families agree; never film a child who has said no. Recordings stay on the school's device.

Access and taking part

- **Acting is optional.** Every group also needs a sound person (the bell), a prop manager, a "prompter" who follows the script and helps with lines, and a director's helper who watches from the front. A child who does not want to act chooses one of these roles, and that counts fully. In a group of 6-7 roles can be doubled (one child reads both narrator parts, a narrator rings the bell, an actor is also prop manager), and the teacher can read the narrator parts so that a child who chooses not to act still can.

- **Reading:** nobody has to read aloud alone. Lines are learned by echoing the teacher, reading together, and practising with a partner; a child can keep their script in hand on stage; the prompter can whisper a line. Highlight each child's lines.
- **Children who do not speak, or prefer not to:** sign the lines, use a communication device with the lines stored in it, hold up the word card for their line, or act while a partner or narrator reads the line. Narrators can read from a chair at the side.
- **Deaf and hard-of-hearing children:** the prompter or a partner shows a "your turn" card as a visual cue; face the audience when speaking; agree signs for the character names; the bell can be a visible signal (a raised card) as well as a sound. Check with the child's specialist teacher what helps.
- **Blind and low-vision children:** large-print or braille scripts, or an audio copy; the raised-line stage map; tape with a raised edge at the stage corners and at the three places; the same layout every lesson; a partner says "go now" and where to move (words, not guiding by touch unless the child asks for it).
- **Wheelchair users and children with limited movement:** paths across the stage stay at least 1 metre wide; any character can move by wheeling, with arms, head and face, or stay in one place while the narrator says where they go; their own way of moving counts.
- **Sound-sensitive children:** ear defenders, the quiet spot, a soft chime bar instead of a bell, and the choice of a quiet role.
- **Colour:** the character cards and place cards differ by picture and raised shape as well as colour; no task depends on telling colours apart.
- **Feelings:** talk about how a character might feel ("Remy might feel...") and how actors show it; never ask children about their own feelings or times they lost something. Remy is not "bad": Remy wanted to help and forgot to tell anyone.
- Nobody performs alone. In lesson 5 a child may choose to perform for their own class only, or to do a non-acting role.

Assessment

- Lessons 1-4: the teacher notes answers in the closing checks (observe; no writing needed). Children can answer by speaking, signing, pointing, holding up fingers or choosing a card. Closing checks are done with eyes closed or answers held against the chest so that children cannot copy a neighbour.
- Lesson 5: note each group's performance against the rehearsal checklist (as a group, not each child), and one "I saw... so I think..." response from each child (spoken, signed, pointed to on the sentence card, or said for them and agreed).
- Acting skill, reading aloud and confidence on stage are never assessed; a child in a non-acting role is assessed on the same items.
- **One-to-one check (about 3 minutes per child, during the week of lesson 5):**
    1. Show the script, scene 1. "Point to a line that Hen says. Now point to some words that the actors do not say out loud." (A line after "Hen:"; any stage direction in italics.)
    2. "What is the problem in the play? How does it get solved?" (The big lamp is not in its tin and sunset is soon; Remy took it to dust it bright, and Mouse gets it from the café, so it can be lit on the bridge. Any answer with the missing lamp and finding it is "yes".)
    3. "Show me or tell me how one character in your group moves or speaks, and why." (For example "Goat walks slowly because he is careful"; "Duck has a loud, quick voice

because she is quick." Any way of moving or speaking with a reason linked to the character.)
4. Show the stage map card. "Point to stage left. Where is the café?" (Stage left is the actors' left as they face the audience; the café is there.)
5. Show the group plan sheet. "Name one thing your group chose (a prop, a costume piece, the set or a sound). What does it show the audience?" (For example "the bell shows the sun is going down"; "the apron shows Remy runs the café".)
6. Show the group's "new hunt" strip. "Where did your group's new hunt happen? Why did you choose that idea?" (Names the place and gives any reason, for example "it was funny", "a lamp could be at the market".)

- Record each item as "yes / with help / not yet". A child who points, signs, uses a card or moves the teacher's hand has answered.

Sources

National Core Arts Standards, "Theatre at a Glance", grade 3 column, read from the PDF on 12 November 2026: https://www.nationalartsstandards.org/sites/default/files/2021-11/Theatre%20at%20a%20Glance.pdf

The unit uses these grade 3 performance standards as a guide (quoted exactly as printed; the unit is not a full alignment):

- TH:Cr1.1.3a "Create roles, imagined worlds, and improvised stories in a drama/theatre work." Lesson 3.
- TH:Cr1.1.3b "Imagine and articulate ideas for costumes, props and sets for the environment and characters in a drama/theatre work." Lesson 4.
- TH:Cr1.1.3c "Collaborate to determine how characters might move and speak to support the story and given circumstances in drama/theatre work." Lesson 2.
- TH:Cr2-3a "Participate in methods of investigation to devise original ideas for a drama/theatre work." Lesson 3. (The PDF prints this code as "TH:Cr2-3.")
- TH:Cr2-3b "Compare ideas with peers and make selections that will enhance and deepen group drama/theatre work." Lesson 3.
- TH:Cr3.1.3a "Collaborate with peers to revise, refine, and adapt ideas to fit the given parameters of a drama theatre work." Lessons 3 and 4. (Printed without a slash between "drama" and "theatre".)
- TH:Cr3.1.3b "Participate and contribute to physical and vocal exploration in an improvised or scripted drama/theatre work." Lesson 2.
- TH:Cr3.1.3c "Practice and refine design and technical choices to support a devised or scripted drama/theatre work." Lesson 4.
- TH:Pr4.1.3a "Apply the elements of dramatic structure to a story and create a drama/theatre work." Lessons 1 and 3.
- TH:Pr4.1.3b "Investigate how movement and voice are incorporated into drama/theatre work." Lesson 2.
- TH:Pr5.1.3a "Participate in a variety of physical, vocal, and cognitive exercises that can be used in a group setting for drama/theatre work." Opening warm-ups in every lesson.
- TH:Pr5.1.3b "Identify the basic technical elements that can be used in drama/theatre work." Lesson 4.
- TH:Pr6.1.3a "Practice drama/theatre work and share reflections individually and in small groups." Lessons 4 and 5.
- TH:Re7.1.3a "Understand why artistic choices are made in a drama/theatre work." Lesson 5.

- TH:Re9.1.3a "Understand how and why groups evaluate drama/theatre work." Lesson 4 (the rehearsal checklist).
- TH:Re9.1.3c "Evaluate and analyze problems and situations in a drama/theatre work from an audience perspective." Lesson 5.
- TH:Cn11.1.3a "Identify connections to community, social issues and other content areas in drama/theatre work." Lesson 1, partly (Lamp Night as a town event in Little Hill, and the town council from the grade 3 society unit).

Read for this unit (Wikipedia, 12 November 2026):

- "Table read": https://en.wikipedia.org/wiki/Table_read Used for: a read-through (table read) is an organised reading of the script by the actors with speaking parts, usually the first time everyone in the production gathers. Lesson 1.
- "Blocking (stage)": https://en.wikipedia.org/wiki/Blocking_(stage) Used for: blocking is the precise arrangement of actors in a play; in English-speaking cultures, stage left and stage right are the actors' left and right when facing the audience. Lesson 4.
- "Improvisational theatre": https://en.wikipedia.org/wiki/Improvisational_theatre Used for: in improvisation, what is performed is unplanned or unscripted and made up by the performers; improvisation is often used in drama programmes to train actors. Lesson 3.

The play The Lost Lamp, the word cards, character cards, place cards, checklists and all other materials are written for this unit (CC0). The lesson sequence and checks are the author's own example, not from a source.

Known gaps and cautions

- Three other agents (Gemini 3.8 Flash, Gemini 3.5 Flash and Gemini 4 Argon, at 3225920) text-checked this unit on 12 November 2026 and reported no errors. Gemini 4 Carbon also text-checked it on 12 November 2026 and reported one taught-pattern slip ("rubbed" in the script, now "dusted") and two small materials and reading notes, all fixed in d44a610. Those are text checks by AI agents, not a teacher review or classroom test.
- TH:Re8.1.3a-c (personal experiences, cultural perspectives in character design, connecting oneself to a character's emotions), TH:Re9.1.3b (technical elements across several works), TH:Cn10.1.3a (personal experiences and community) and TH:Cn11.2.3a-b (adapting stories from literature; the same story in different art forms) are not covered. Re8.1.3c is left out on purpose: the unit talks about characters' feelings, not children's own. A teacher could add Cn11.2.3a by comparing the play with a written story version.
- The script uses seven word cards that are not decodable with the patterns taught so far in these drafts (Little Hill, Remy, Duck, Mouse, café, bridge, you). Stage directions are not decodable and are read by the teacher. Real grade 3 readers will usually read more than this; teachers can add lines.
- The play has seven parts. For groups of five or six, one child reads both narrator parts, or the teacher narrates; for groups of eight, add a sound person or prompter. Every group performs the same play, so the visiting class sees it several times; lesson 5 suggests ways to keep this short.
- The stage size, the "stage left" layout and the choice of props are the author's choices. A drama teacher will know more about warm-ups, rehearsal and staging; change them to suit the room.
- Timings are untested. Lesson 4 (choosing props and rehearsing) and lesson 5 (rehearsal, performance and response) are the most likely to run over; the performance can move to another day.

Lesson 1: What is a script?

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children learn the seven word cards, hear the play The Lost Lamp read aloud, find the parts of a script (title, cast list, scene headings, character names, spoken lines, stage directions), read the play together, and say what the problem is, how it gets worse and how it is solved.

Materials

- The hand drum and soft beater; the stop signal; ear defenders and a quiet spot.
- The large-print chart of the script (or the script on a screen).
- The seven large word cards (Little Hill, Remy, Duck, Mouse, café, bridge, you) and their raised-letter copies.
- The seven character label cards (Narrator 1, Narrator 2, Hen, Remy, Goat, Duck, Mouse) with pictures and raised shapes.
- Per child: a printed copy of the script (large print, braille or an audio copy where needed) and a pencil.
- For children who need support: a copy with one character's lines highlighted (a highlighter).
- Three large cards: "beginning", "middle" and "end", each with a raised shape (one dot, two dots, three dots).

Steps

✎ Opening (5 min)

Warm-up circle (sitting or standing). Pass a "clap" round the circle, then a "wave", then a "smile": each child does it and the next child copies. Anyone may pass with a nod. Then the teacher says "Good day!" in three ways (quietly, loudly, slowly) and the class echoes each one. "Today we meet a play. A play is a story that actors show to an audience."

✎ Main activity (25 min)

1. **Word cards (5 min).** Show the seven word cards one by one. Say each word; the class echoes it; then the class reads it without help. "These are names and words from our play. Some of them have letters we have not learned yet, so we learn them as whole words." Put them on the wall next to the script chart.
2. **Hear the play (5 min).** Read the whole play aloud from the chart, with a different voice for each character, and read the stage directions in a plain voice. Children follow on their own copy if they like.
3. **Parts of a script (5 min).** Point to each part on the chart and give its name: the **title**; the **cast** list (the characters); **scene** headings (where we are); the character's **name** in bold before each **line**; **stage directions** in italics ("these tell the actors what to do;

nobody says them out loud"). Children find each one on their own copy and put a pencil tick next to one stage direction.

4. **Read it together (6 min).** Read scene 1 as an echo: the teacher reads a line, the class echoes it. Then the class reads scene 2 together (choral reading), with the teacher reading stage directions. Then split the room into seven sections, one per character card, and read scene 3 with each section reading its character's lines together. Nobody reads alone.
5. **Problem and ending (4 min).** Hold up the "beginning", "middle" and "end" cards. "At the beginning, what is the problem?" (The big lamp is not in its tin, and Lamp Night is tonight.) "In the middle, what makes it worse?" (They look on the hill, in the pond and in a cup and do not find it; the sun goes low and sunset is soon.) "How does it end?" (Remy took the lamp to dust it bright; Mouse gets it from the café; the lamp is lit on the bridge.)

✓ Discussion questions (5 min)

- "Lamp Night is a night when the whole town of Little Hill comes together. Who is in charge of it?" (Hen, the mayor. In the grade 3 society unit Mayor Hen also leads the town council.)
- "Why did Remy take the lamp?" (To dust it and make it bright; Remy wanted to help.) "What could Remy do next time?" (Tell someone: "Remy, tell us if you take the lamp.")
- "How might Hen feel when the tin is empty?" (Possible answers: worried, surprised, cross. Any feeling with a reason from the play.) Keep the talk about the characters.

✓ Closing check (5 min)

Children close their eyes (or hold answers against their chest).

1. "Hold up one finger if the words in italics are spoken, two if they are not." (Two: they are stage directions.)
2. "Point to the word card that says the name of the person who runs the café." (Remy.)
3. "Hold up one, two or three fingers: in which part of the play is the lamp found: beginning (1), middle (2) or end (3)?" (2 or 3 are both reasonable: Mouse gets it at the end of the middle scene, and it is lit in scene 3. Ask children who show 2 or 3 to say why.)

Vocabulary

play, script, title, cast, character, scene, line, stage direction, narrator, audience, problem, beginning, middle, end

Differentiation

- **Support:** a script with only one character's lines highlighted; word cards on the child's desk; read with a partner. A child who cannot yet read the lines learns them by echoing and joins the choral reading.
- **Stretch:** find the three places the play happens (the café, the hunt around Little Hill, the bridge) and draw a quick map of them; or find a line that shows Goat is careful or slow.

- **Tactile:** raised-letter word cards; braille or raised-shape cues for character names on the script; the beginning/middle/end cards have one, two and three raised dots.

⚠ Safety

Seated activity. Keep the room calm; children who find choral reading loud can wear ear defenders or follow silently.

Teacher notes and misconceptions

- Some children read stage directions aloud as if they were lines. Use a plain "teacher voice" for them and point to the italics each time.
- "Narrator" is new to some children: a narrator talks to the audience and is not one of the animals in the story.
- Do not choose parts yet; children try all of them first (lesson 2).
- Remy has no "he" or "she" in this unit; use "Remy" each time.

Lesson 2: Voice, face and movement

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 40 minutes.

Goal

Children warm up their bodies and voices, try different ways a character might move and speak, decide as a group how their characters will move and speak and why, and choose parts (acting or non-acting).

Materials

- The hand drum and soft beater; the stop signal; ear defenders and a quiet spot.
- The stage marked with stuck-down tape (café stage left, bridge middle back, hill stage right, the blue pond cloth taped flat at the front); the stage map card and its raised-line copy.
- The script chart; the seven word cards; the seven character label cards.
- The character move cards (slow and careful, quick and light, big and loud, small and quiet) with raised shapes; the voice card (loud/soft, high/low, fast/slow) with raised arrows.
- Per child: their script and a pencil (and a highlighter for the teacher to mark each child's lines after parts are chosen).
- Per group of 6-7: a parts list (a strip with the seven characters and the four non-acting roles: sound person, prop manager, prompter, director's helper) and a pencil; a cup for drawing names if two children want the same part.

Steps

✎ Opening (5 min)

Warm-up in a space each, on or around the stage. Shake out hands, then arms, then shoulders (any part a child can move). Stretch tall, then curl small. Voice: hum quietly, then say "Hot buns!" softly, then in a big voice (not a shout), then slowly, then fast. On the drum beat, freeze; on two beats, relax. "Actors warm up so their bodies and voices are ready."

✎ Main activity (25 min)

1. **Try the moves (7 min).** Show each move card. On the drum beat the class moves around the room that way, then freezes: slow and careful; quick and light; big and loud (a big body shape, still walking pace); small and quiet. Then call a character: "Move like Goat might move." "Move like Mouse." Children choose their own way; there is no right answer. Moving in any way, including only arms, head and face, counts.
2. **Try the voices (5 min).** Everyone says Duck's line "Not the lamp!" loud, then soft, then high, then low, then fast, then slow. "Which way fits Duck? Why?" Then try Goat's "But sunset is soon!" in two different ways and talk about which fits.

3. **Decide as a group (7 min).** In groups of 6-7, children read scene 1 once (each child reads one character's lines; swap after each line if they like). Then for each character the group agrees one way of moving and one way of speaking, using the cards, and says why ("Duck talks fast and loud because she is quick and loud"). The teacher visits each group and asks "why?" for one character.
4. **Choose parts (6 min).** Each group fills in its parts list. Every child writes or points to two choices: a first choice and a second choice, including the non-acting roles. If two children want the same part, they try it once each and the group decides, or they draw names from a cup; whoever does not get it gets their second choice. Every speaking part must be covered: one child can read both narrator parts, a narrator can also ring the bell, and an actor can also be prop manager. If a group has more children choosing non-acting roles than it can spare, the teacher reads the narrator parts for that group. The teacher checks that every child has a role and highlights each child's lines on their script after the lesson.

✓ Discussion questions (5 min)

- "How did your group decide how Goat moves?" (Answers vary; any reason from the play, for example "he is careful" or "he walks slowly up the hill".)
- "Why might two groups make Hen move in different ways?" (Each group makes its own choices; there is more than one good way.)
- "Why does a sound person or a prompter matter?" (The sunset bell shows the sun going down; the prompter helps when someone forgets a line.)

✓ Closing check (5 min)

Children close their eyes (or hold answers against their chest).

1. "Hold up one finger for a loud voice, two for a soft voice: which would you use for Duck's 'Not the lamp!' in your group?" (Either; then ask two children why. Any reason from the play counts.)
2. "Point to the move card your group chose for Goat." (Any card, with a reason given when asked.)
3. "Show me your part on your parts list." (Every child points to a role; any role is correct.)

Vocabulary

warm-up, voice, movement, character, freeze, loud, soft, high, low, fast, slow, prompter, sound person, prop manager, director's helper

Differentiation

- **Support:** a child chooses from two move cards rather than four; a partner moves alongside (without touching); the prompter role suits children who like to read but not perform.
- **Stretch:** add one face (expression) for their character at one moment, for example how Hen's face changes when she opens the tin.
- **Tactile:** raised shapes on the move cards; raised arrows on the voice card; the raised-line stage map to find the café, bridge and hill.

⚠ Safety

Clear the space first. Moving is walking pace; freeze on the drum. No touching: children keep a space bubble around them. Big voice, not a shout. Children who want a break go to the quiet spot.

Teacher notes and misconceptions

- Children may think there is one "right" Goat. Praise different choices that have reasons.
- Some children will want the biggest part. Remind the class that the play needs every role, and that roles can be swapped for a second performance if time allows.
- A child who chooses a non-acting role still joins the warm-ups and the group decisions.

Lesson 3: A new hunt

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 40 minutes.

Goal

Children improvise (make up without a script) a new short hunt for scene 2 inside given limits, try more than one idea, compare the ideas as a group, and choose one to add to their play.

Materials

- The hand drum and soft beater; the stop signal; ear defenders and a quiet spot.
- The stage (stuck-down tape, the taped pond cloth) and the stage map card with its raised-line copy.
- The script chart, open at scene 2; each child's script.
- The four place cards (the bakery, the market, the park, the school) with pictures and raised shapes.
- The limits card: "one new place, one character, under a minute, ends with 'Not in the ...!'" (large print, with a raised-shape copy).
- A sand timer or clock for one minute.
- Per group of 6-7: a "new hunt" strip (three lines: "Narrator: ...", "what the character does", "Character: Not in the ...!") and a pencil.

Steps

✎ Opening (5 min)

Warm-up: "Yes, and" in a circle. The teacher starts: "I found a hat." The next child says "Yes, and..." and adds one thing ("Yes, and it was on a goat"). Go round once; anyone may pass. Then a quick voice warm-up: the class says "Not in the pond!" surprised, then tired, then giggly.

✎ Main activity (25 min)

1. **What is improvising? (3 min).** "Improvising means making up what you say and do as you go, without a script. Actors often improvise to find new ideas. Then they choose the best ideas and write them down." Read the limits card together.
2. **Model one (3 min).** The teacher and two volunteers improvise an example at the stage, using a place that is not on the cards (for example, the post office): Narrator: "Hen looks at the post office." Hen looks in a pretend letter box and a pretend parcel, then says "Not in the post office!" "That was under a minute, one place, one character, and it ended with 'Not in the...!' It fits the limits."
3. **Try ideas (9 min).** Each group gets the four place cards. The teacher reads the four place names aloud with the group first (these words use letters and patterns not yet taught). The group chooses two of them. For each, the group improvises a hunt: who

looks (any one character), what they do there, and their "Not in the...!" line. Each group tries at least two different ideas, using the timer to keep each under a minute. Every child suggests or tries something, or says "yes, and" to someone else's idea.
4. **Compare and choose (6 min).** Each group shows its two ideas to itself again quickly, then talks: "Which idea is funnier, clearer or more surprising? Which fits our character?" The group votes with a thumb or a pointed finger, or agrees by talking; the director's helper counts. The chosen hunt is written on the "new hunt" strip by a group member or the teacher, using the children's words.
5. **Fit it in (4 min).** The group reads scene 2 with the new hunt added after "Mouse looks in a cup." and checks that the scene still ends with "Not in my cup!" and the sunset bell. If the new hunt makes the scene too long, they cut one action (adapting to the limits).

✓ Discussion questions (5 min)

- "How did your group choose between your two ideas?" (Answers vary, for example "we voted", "it was funnier", "it fitted Duck".)
- "Why does the play need limits like 'under a minute'?" (So the play does not get too long; the audience still wants to know where the lamp is; every group can fit its idea in.)
- "Did someone's idea get better when another person said 'yes, and'?" (Answers vary; praise examples where ideas were built on.)

✓ Closing check (5 min)

Children close their eyes (or hold answers against their chest).

1. "Hold up one finger if improvising means reading from a script, two if it means making it up as you go." (Two.)
2. "Point to the place card your group chose." (Any card; check it matches the group's strip.)
3. "Hold up fingers for how many characters look in the new place." (One, by the limits card.)

Vocabulary

improvise, idea, limits, compare, choose, "yes, and", adapt

Differentiation

- **Support:** a child contributes by choosing a place card or acting a search without words; sentence starters on the strip ("Goat looks in the..."); the teacher scribes.
- **Stretch:** add a funny detail that fits the character (Mouse finds a crumb at the bakery and says "Not the lamp, but yum!") while keeping to the limits.
- **Tactile:** raised shapes on the place cards and limits card; the raised-line stage map to choose where the new place is on the stage.

⚠ Safety

Moving is walking pace; no touching; pretend objects stay pretend (no climbing on furniture to "look high"). Keep the improvisation about the lamp hunt in Little Hill, not about children's own homes or belongings.

Teacher notes and misconceptions

- Children may try to add several new places. The limits card says one; that is part of the task (fitting an idea to given limits).
- Some children feel a new idea must be "right". Improvising has no wrong idea; the group chooses which idea to keep.
- If a group cannot agree, they may keep the first idea they all tried and save the other for "next time".

Lesson 4: Set, props, costume and sound

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 40 minutes.

Goal

Children name the basic technical parts of a play (set, props, costume and sound), choose a few for their group and say what each shows the audience, plan where they stand and move on the stage (stage left and stage right), and rehearse using a class checklist.

Materials

- The hand drum and soft beater; the stop signal; ear defenders and a quiet spot.
- The stage (stuck-down tape, the taped pond cloth, the café, bridge and hill marked); the stage map card and its raised-line copy.
- The class box of props and costume pieces: per group, one battery lamp with a screwed-shut battery cover (checked by an adult before the lesson), one tin with a lid, plastic cups and a tea towel; a few hats, scarves, aprons and headbands with ears, enough for one piece per character.
- A low table or a hook at child height in the café (the "high peg").
- A hand bell or a soft chime bar for the sunset sound.
- Per group: a group plan sheet (four boxes: set, props, costume, sound) and a pencil; the group's "new hunt" strip from lesson 3.
- The rehearsal checklist chart: we can be heard or seen; we face the audience; we know where to stand; we wait for our cue; we freeze at the end.
- Each child's script (highlighted).
- A row of audience chairs (with space for wheelchairs).

Steps

✎ Opening (5 min)

Warm-up: "Stage left, stage right." Children stand on the stage facing the audience chairs. "Stage left is your left when you face the audience." The teacher calls "stage left!", "stage right!", "middle!", "freeze!" and children move there at walking pace (or point, or wheel). Then ask: "If you sat on the audience chairs, would stage left be on your left?" (No: it is the actors' left, so for the audience it is on the right.)

✎ Main activity (25 min)

1. **Name the parts (4 min).** Hold up examples. **Set:** what makes the place (the café table, the pond cloth, the bridge tape). **Props:** things actors hold or use (the lamp, the tin, a cup). **Costume:** what actors wear to show the character (an apron, a hat, ears). **Sound:** noises that help the story (the sunset bell). "Each one helps the audience understand where we are and who is who."

2. **Choose and say why (7 min).** Each group's prop manager collects the group's lamp, tin and cups. Each actor chooses at most one costume piece, or none, and says what it shows ("the apron shows Remy runs the café"). The group fills in its plan sheet: one thing in each box, and a few words or a picture about what it shows. Nobody has to wear a costume piece.
3. **Plan the moves (6 min).** Using the stage map card, the group agrees where each character starts in scene 1 (near the café), where Goat, Duck and Mouse go in scene 2 (hill, pond, café), where their new hunt happens, and where everyone ends in scene 3 (the bridge). The director's helper or the teacher marks starting places on the map with the group's initials. Check: does any move need two people to cross close together? If so, change it so everyone has space.
4. **Rehearse (8 min).** Each group rehearses the whole play once with props and sound in its own space; while they do, the teacher gives each group a short turn on the marked stage to run one scene. Then the group reads the checklist: for each line, they agree "yes" or "not yet" and change one thing (for example "Duck turns to face the audience" or "the bell rings before 'The sun dips low.'"). If time allows, run the changed part once more.

✓ Discussion questions (5 min)

- "What does the bell tell the audience?" (The sun is going down; time is running out; sunset is soon.)
- "Why does a group check its work with a checklist?" (To find what to make better; so everyone agrees what "good" means; so the audience can see and hear the story.)
- "Which change made the biggest difference in your rehearsal?" (Answers vary.)

✓ Closing check (5 min)

Children close their eyes (or hold answers against their chest).

1. "I say a thing; hold up one finger for a prop, two for a costume piece, three for a sound. The lamp." (One.) "An apron." (Two.) "The bell." (Three.)
2. "Point to stage left." (Their own left as they face the audience chairs.)
3. "Hold up one finger if your group changed something after the checklist, two if not yet." (Note any group showing two and visit it at the start of lesson 5.)

Vocabulary

set, prop, costume, sound, stage left, stage right, rehearse, checklist, cue, prop manager

Differentiation

- **Support:** a child chooses between two costume pieces; the plan sheet has pictures to circle; a partner points to the stage map with them.
- **Stretch:** suggest a second sound (for example a soft splash for the pond made with a hand on the drum) and say what it adds; or explain the stage left/audience left difference to a partner.

- **Tactile:** raised-line stage map with initials in raised letters or shapes; real props to handle before choosing; the bell can be felt through the table as well as heard.

⚠ Safety

- Check every lamp's battery cover is screwed shut before the lesson; lamps go back to the adult after the lesson.
- No climbing: the "high peg" is at child height.
- Scarves are draped, never tied around the neck; no face paint or masks that cover the nose and mouth.
- No touching in scenes; plan moves so actors do not crowd each other.
- The bell or chime bar is rung gently; sound-sensitive children may use ear defenders or ring it themselves.

Teacher notes and misconceptions

- "Stage left" confuses many adults too. Always say "your left as you face the audience".
- Children may want lots of props. Fewer props are easier to manage and the audience can still follow the story; the plan sheet asks for one per box.
- Groups rehearse in their own spaces while one group uses the marked stage; rotate so each group has the stage for a short run.

Lesson 5: Performing for another class

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

Groups do a last quick check, perform The Lost Lamp (with their own new hunt) for one other class, and respond as an audience: say what they saw, why they think the group chose it, and what the problem in the play was from the audience's side. Groups then share one reflection about their own performance.

Materials

- The hand drum and soft beater; the stop signal; ear defenders and a quiet spot.
- The stage (stuck-down tape, the taped pond cloth, café, bridge and hill marked) and a row of audience chairs (with space for wheelchairs).
- Each group's props (battery lamp with a screwed-shut battery cover, checked by an adult, tin, cups, tea towel), costume pieces, the bell or chime bar, the plan sheet and the "new hunt" strip.
- Each child's script (actors may hold it on stage).
- The rehearsal checklist chart.
- The "I saw... so I think..." sentence card and its raised-line copy.
- A visiting class, arranged in advance, or a smaller group of visitors.

Steps

✎ Opening (5 min)

Before the visitors arrive. A quick warm-up: shake out, stretch, hum, then the whole class says "Hooray!" softly and then in a big voice (not a shout). Each group reads the checklist once and reminds itself of the one thing it changed in lesson 4. Prop managers check their props are ready at the side of the stage.

✎ Main activity (25 min)

1. **Welcome the audience (2 min).** A child or the teacher welcomes the visitors: "Our play is The Lost Lamp. Each group added its own new hunt. Please watch quietly, and clap at the end." Remind everyone of audience manners: eyes on the stage, quiet hands, clap at the end.
2. **Performances (16 min).** Each group performs in turn (about 3 minutes each). Between groups, the next prop manager sets out the tin and lamp while the audience stretches in their seats. Groups waiting to perform sit in the audience. If time is short, two groups perform today and the others perform on another day (for the same visitors or for their own class); the play is short, so a visiting class may prefer two performances to four.

3. **Audience responses (7 min).** After the performances, the visitors and the class (as audience) share responses using the sentence card: "I saw... so I think..." about one choice (for example "I saw Duck flapping fast, so I think she was worried"; "I heard the bell, so I think the sun was going down"). Then ask the audience: "What was the problem in the play? When did you know it was going to be all right?" (The lamp was missing and sunset was soon; when Remy said where it was, or when Mouse came back with it.) Take a few answers from both classes. Thank the visitors.

✓ Discussion questions (5 min)

After the visitors leave, in groups:

- "What went well in our performance?" (Answers vary; link to the checklist.)
- "What is one thing we would change if we performed again?" (Answers vary, for example "speak more slowly", "face the audience".)
- "Why did the audience notice our new hunt?" (Answers vary; for example it was new, it was funny, it fitted the character.)

Each group shares one reflection with the class (the director's helper or any child, by speaking, signing or pointing to the checklist).

✓ Closing check (5 min)

Children close their eyes (or hold answers against their chest).

1. "Hold up one finger if an audience should talk during the play, two if it should watch quietly and clap at the end." (Two.)
2. "Think of one choice another group made. Tell your partner: 'I saw... so I think...'" (Listen to a few pairs; any choice with a reason.)
3. "Hold up one, two or three fingers: how many groups did you watch today?" (The number of groups that performed, apart from their own.)

Vocabulary

perform, audience, clap, response, choice, reflection, "I saw... so I think..."

Differentiation

- **Support:** a child points to the sentence card and a partner says the start; a child can answer about the bell or a prop (things that are easy to see).
- **Stretch:** say why a different group made a different choice for the same character (for example two different Goats).
- **Tactile:** raised-line sentence card; the child can hold the props from another group (with permission) to describe what they noticed.

⚠ Safety

- Check every lamp's battery cover is screwed shut; lamps go back to the adult afterwards.
- Keep the stage clear between performances; walking pace on and off; no touching in scenes; no climbing.
- Audience chairs leave clear paths to the door and wheelchair spaces.
- Recording only if the school's rules allow it and families agree; never film a child who has said no.

Teacher notes and misconceptions

- Nerves are normal. Actors may keep their scripts in hand; the prompter helps with lines; a child may switch to a non-acting role on the day.
- Audience responses are about the play and the choices, not about a child ("I saw Goat walk slowly", not "Sam was bad").
- If the visiting class is younger, keep responses short and let them show with thumbs or by pointing to a prop.
- The one-to-one check (see the unit overview) is done during this week.

The Lost Lamp: a short play for grade 3

Unit overview

An original play written for this unit (CC0). It is set in Little Hill, the made-up town used in other units. It takes about 3 minutes to perform.

Words in italics are **stage directions**: they tell the actors what to do and are not spoken. Children read the spoken lines only; the teacher reads the stage directions aloud until the group knows them.

Word cards to learn first (lesson 1): Little Hill, Remy, Duck, Mouse, café, bridge, you. The other spoken words use letters and patterns taught in the literacy units up to grade 3, plus the tricky words "the", "I", "is", "my", "to", "was", "come" and "one".

Cast (7 parts)

- **Narrator 1** and **Narrator 2**: tell the audience where we are and what happens. One child can read both narrator parts.
- **Hen**: the mayor of Little Hill (she). In charge of Lamp Night.
- **Remy**: runs the café. Kind and busy.
- **Goat** (he): slow and careful.
- **Duck** (she): quick and loud.
- **Mouse** (she): small and quick.

Scene 1: At Remy's café, before sunset

The café is on one side of the stage. A tin sits by the café step. Remy is setting out cups. Hen, Goat, Duck and Mouse come in.

Narrator 1: It is Lamp Night in Little Hill.

Narrator 2: At sunset, the big lamp is lit on the bridge.

Remy: Hot buns! Hot milk! Come in, come in!

Hen: Good day, Remy! Is the big lamp in its tin?

Remy: It is in the tin at the step.

Hen opens the tin. Everyone looks in. The tin is empty.

Hen: The lamp is not in the tin!

Duck: Not the lamp!

Goat: But sunset is soon!

Hen: Let us hunt! Look high and low!

Everyone freezes for a moment, then sets off.

Scene 2: The hunt

Narrator 1: Goat runs up the hill.

Goat moves slowly to the hill side of the stage and looks around.

Narrator 2: Duck swims in the pond.

Duck goes to the pond (the blue cloth) and splashes about, without touching anyone.

Narrator 1: Mouse looks in a cup.

Mouse peers into a cup at the café.

(In lesson 3 each group may add one more hunt here: a narrator line, a character looking somewhere new, and "Not in the ...!")

Goat: Not on the hill!

Duck: Not in the pond! I am wet!

Mouse: Not in my cup!

The sound person rings the bell once, slowly.

Narrator 2: The sun dips low.

Goat: Sunset is soon!

Hen: Remy, did you see the lamp?

Remy looks down at the floor for a moment.

Remy: I took it. It was dull. I dusted it to make it bright.

Hen: Remy! Is it in the café?

Remy: It is on a high peg in the café.

Mouse: I can get it!

Mouse goes into the café, reaches up (the lamp is on a low table or a hook within easy reach; nobody climbs) and comes back holding the lamp.

Mouse: Got it! It is bright!

Scene 3: On the bridge, at sunset

Everyone moves to the bridge in the middle of the stage. Hen sets the lamp down and switches it on.

Narrator 1: At sunset, the lamp is lit.

Narrator 2: It glows on the bridge.

Hen: Remy, tell us if you take the lamp.

Remy: I will! Hot buns! Come and get one!

Goat: Good lamp. Good buns. Good Lamp Night.

All: Hooray!

Everyone freezes in a still picture around the lamp. The end.

Grade 3 Health and PE: Passing, Dribbling, Tactics, Fuel and Wheel Safety (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Gemini 4 Carbon (AI Village), 11 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check space, equipment, medical, allergy, road/wheel safety and safeguarding notes against your school's policies and local rules.

Back to the health and physical education progression. Builds on grade 2: Balance, rolling and jumping (controlled landings, spatial awareness and leading warm-up moves), grade 1: Moving and dodging: travelling, warming up and safe tag, Throw, catch, kick and calm down, and Fair games, healthy teeth, medicine safety and asking for help, plus kindergarten Taking turns, food and sleep, and stop, look, listen.

Big idea

By eight or nine, children are ready to join movement skills together smoothly and look up from the ball to see teammates and open space. We can travel from one movement pattern into another without hesitation, dribble a ball with our hands or feet at a steady jog (or chair push) while keeping control, cushion a pass before sending it back accurately, and spot open lanes in non-elimination chasing and fleeing games. Around those games sit four everyday habits that support active play: warming up gradually before vigorous movement and cooling down afterwards; choosing enjoyable ways to move outside PE class; fuelling and hydrating active bodies with plain water and varied everyday food groups (explored strictly through fictional character cards, never personal food logs); and staying safe on scooters, bicycles and crossings while treating teammates of all skill levels with specific encouragement and respect.

Outcomes

By the end of the unit a student can:

1. Transition smoothly without hesitation through a three- or four-part locomotor sequence (for example run -> side-slide -> skip -> balanced two-foot or chair stop), explain why we warm up gradually before vigorous play and cool down afterwards, and identify enjoyable ways people can be active outside PE class.
2. Dribble a ball with one hand while travelling at a slow-to-moderate jog (or controlled wheelchair push/bounce), pass accurately underhand or chest-high to a partner, catch a gently tossed hand-size ball with the hands ("giving" with the arms), and demonstrate at least three cues of a stationary overhand throw to a wall target.
3. Dribble a ball with the feet (or adaptive stick/tray/push option) in general space at slow-to-moderate speed, pass and receive with the inside of the foot to a stationary partner while cushioning ("giving") the ball on reception, and tell friendly playful banter apart from teasing that hurts or excludes in fictional scenarios.
4. Spot and move into open space and apply simple chasing and fleeing tactics in a non-elimination team retrieval game (Treasure Lanes), and explain key bicycle/scooter safety habits: a level, snug helmet fit, taking helmets **off** before using playground equipment or

climbing trees, visibility (lights, reflectors and bell/voice signals), and stopping to Stop, Look, Listen, Think at driveways and crossings.
5. Using fictional character snack and activity cards, choose water and everyday food combinations (grains/starches, fruits and vegetables, and protein-rich foods) suited to before and after active play, give specific encouragement to teammates across three cooperative skill stations, and complete a short five-part unit check.

Prior knowledge

- From kindergarten: "my bubble" personal space, freezing on a visual-and-sound stop signal, varied everyday foods and plain water for thirst, and Stop, Look, Listen, Think at the kerb with a trusted grown-up.
- From grade 1: progressive dynamic warm-up cards, dodging by planting an outside foot, safe "butterfly tag" (a gentle tap with an open hand on the shoulder, upper arm or upper back), underarm throw with opposite-foot step, two-hand catching, and inside-of-the-foot kicking and trapping.
- From grade 2: controlled stops and landings, sharing lanes safely, and leading one move of the class warm-up.
- Eight- and nine-year-olds vary widely in ball experience, coordination, endurance and mobility, and may or may not own a bicycle or scooter at home. Frame every skill cue with inclusive parallel options ("your controlled way counts") and frame wheel safety around shared community paths, borrowed or school scooters/bikes, and pedestrian crossings alike.

Lessons

Lessons are 35 minutes each (opening 3, warm-up 5, main activity 18, cool-down and discussion 6, closing check 3). Leave at least a day between lessons where possible. Every lesson uses a combined sound-and-sight stop signal, starts with a progressive dynamic warm-up, and includes a gradual active cool-down.

Lesson	Title	Main activity
1	Smooth transitions, warm-up, cool-down and active weeks	4-part locomotor transition lanes; comparing rest, brisk play and cool-down; "Ways People Move" outside-PE choice menu
2	Hand dribble, partner pass, overhand target and real praise	Eyes-up hand dribbling in general space; partner toss-and-catch + wall overhand target; specific encouragement & welcoming trios
3	Foot dribble, cushion-and-pass gates, and banter vs. teasing	Foot dribbling at a gentle jog; inside-foot "give-and-pass" cone gates; sorting 4 fictional play vs. teasing story cards
4	Open space in Treasure Lanes and wheel & helmet safety	Non-elimination 4v4 Treasure Lanes chasing/fleeing tactics; 2-2-2 prop helmet check, helmet-off-on-playgrounds rule, lights & driveways
5	Everyday fuel cards, three-station team challenge and unit check	Fictional character before/after play fuel & water cards; cooperative 3-station circuit; 5-part practical & oral check

Materials (whole class unless noted)

- A cleared indoor hall or flat outdoor court, with cones or floor spots marking a clear perimeter at least 2 metres inside walls, benches, stages and doorways (every lesson).

- Combined **sound + visual stop signal**: a whistle/tambourine/drum paired with a raised open hand or high-contrast red square card (every lesson).
- Six dynamic warm-up cards and three cool-down cards with stick pictures and large print (warm-up: brisk march/push, arm sweeps, high knees or seated knee lifts, side-slides, gentle trunk twists, slow jog/roll; cool-down: brisk walk to stroll, shoulder rolls, slow four-count nasal/belly breathing) (every lesson).
- Drinking water accessible at the edge, plus ear defenders and a marked quiet reset spot at the side (every lesson).
- A class clipboard list for observational notes (every lesson).
- **Lesson 1:** 16–20 floor spots or cones in four pathway lanes; large pathway transition cards with shapes + arrows (run -> side-slide -> skip -> two-foot or chair freeze); a class poster "Ways People Move Outside PE" and reusable symbol cards (walking, dancing, park tag, rolling/wheelchair sport, skipping rope, scooter/bike, courtyard ball games, stretching at home) plus one small "My Active Choices" card and pencil per student.
- **Lesson 2:** Playground or foam-coated bouncy balls (size 4/5 or 20 cm high-bounce foam balls), one per student; hand-size soft foam or yarn balls, one per pair; 8–10 taped wall targets (paper circles/squares at two heights: 1.0 m and 1.5 m, at least 2.5 m apart); cue card "Specific Praise + Open Triangle".
- **Lesson 3:** Slightly deflated size 3/4 soccer or foam balls (so they stay close rather than skittering across the hall), one per student or pair; 24 small cones to make 12 one-metre passing gates; adaptive short foam paddles or light hockey sticks and a ramp/chute option if needed; 4 printed fictional scenario cards (Card A–D: Friendly Play or Hurting/Excluding?).
- **Lesson 4:** Cones, floor tape, 2 crates/buckets, 6 hula hoops, 24 beanbags, and 6 high-contrast pinnies/sashes (worn over clothes, washed between uses) or soft foam pool-noodle extensions for guardians, set out as two parallel Treasure Lanes courts (see `treasure-lanes-court.svg` in Lesson 4); **1 or 2 clean demonstration bicycle/scooter helmets** fitted onto a **prop ball or large melon** (so students never share headwear), a bicycle bell and clip-on front white + rear red LED lights (or clear picture cards of them), and 4 wheel-safety scenario cards.
- **Lesson 5:** 4 fictional character fuel-and-hydration cards (Maya, Leo, Samira, Toby) plus 12 neutral food-and-drink building-block cards (plain water, milk/fortified soy or oat drink, wholegrain bread/rice/oats/tortilla, banana/apple/berries, carrots/cucumber/peppers, beans/lentils/hummus, yoghurt/cheese/tofu/eggs/chicken, fizzy/energy drink card for discussion); equipment from Lessons 2–4 divided into three clearly marked stations; teacher check sheet.
- **For blind or low-vision students:** a sighted guide partner or tether cord option, sound-emitting bell balls or crinkle-wrap beanbags, tactile floor tape (cord taped flat under wide gaffer tape) at court zone boundaries, and raised-line copies of the court map and food/story cards.

⚠ Safety, safeguarding and access

- **Space, floor and footwear:** inspect the floor before every lesson for wet patches, grit, splinters or loose equipment. Keep a 2-metre buffer from walls, radiators, basketball posts and doors. Students wear secure non-slip gym shoes; shoelaces tied, hair tied back, jewellery removed or taped per school policy, pockets empty.
- **Balls at feet and hands:** teach "loose ball = call 'Ball!' and walk around, never chase blindly across another pair's lane, and never step on top of a ball" before dribbling starts in Lessons 2 and 3. Overhand throws in Lesson 2 go **towards the wall targets**

only, with throwers standing behind a shared throwing line and retrieving balls together on a pause signal.

- **Non-elimination and safe tag:** in Lesson 4 (Treasure Lanes), nobody is ever "out" or sent to sit on a sideline. Guardians stay inside their marked central band and tag **only** with Grade 1's gentle open-hand "butterfly tag" on the shoulder, upper arm or upper back (or a light tap on shoulder/chair frame with a soft foam noodle—never grabbing clothing, arms or wheelchairs, and never pushing).
- **Helmet hygiene and the CPSC playground strangulation rule:** do **not** pass a single helmet from child to child (head-lice and hygiene risk); demonstrate helmet fit on a ball/melon prop or let students mime the two-finger checks on their own forehead, ears and chin. Emphasise clearly that helmets are worn **on wheels** (bicycles, scooters, skates) and **must be taken off before climbing on playground equipment or trees**, because a helmet or chin strap can catch in openings and cause strangulation.
- **No personal food logs, body measurements or moralising food:** Lesson 5 uses **fictional character cards only**. Never ask students to share, draw or log what they eat at home, never label foods "good/bad", "clean/dirty" or "junk", and never weigh, measure or rank students' bodies or fitness scores. Explicitly affirm diverse cultural foods (rice, flatbreads, plantains, oats, noodles, lentils, tofu, dairy, eggs, fish, meat), allergies/intolerances, sensory food needs, and affordable everyday options (tap water, tinned or frozen fruit/veg, beans, bread). No real food tasting is required in this unit; if a school ever adds food handling, check every allergy and dietary record first.
- **Outside-of-PE activity choices (Lesson 1):** students pick enjoyable ways people can move from an inclusive menu (including indoor flat-space options like dancing to a song or chair/floor stretches) rather than keeping a graded home exercise diary, respecting differing neighbourhood safety, family work hours and housing space.
- **Medical & environmental care:** check medical records (asthma, diabetes, heart/joint conditions, epilepsy, dyspraxia) and follow individual healthcare plans; keep reliever inhalers and emergency kits immediately to hand, allow water breaks whenever needed, and adjust intensity in hot or poor-air-quality weather.
- **Universal access ("your controlled way counts"):**
- Wheelchair, walker or crutch users: transition between slow push, weave, spin/pivot and balanced stop in Lesson 1; bounce-dribble beside the chair or push-carry in short alternating strokes (two pushes, one bounce/lap tap) in Lesson 2; propel a ball with a footplate, short paddle/stick, or ramp in Lesson 3; play Treasure Lanes at full parity using wide lanes and foam noodle tag extensions in Lesson 4.
- Blind or low-vision learners: use bell balls, bright high-contrast cones, tactile boundary tape, verbal partner call-outs ("Ready, Sam—rolling low!"), and sighted guide pairs.
- Deaf or hard-of-hearing learners: pair every whistle/drum cue with a bold hand/card signal, face the group in good lighting when speaking, and demonstrate every station visually before starting.
- Neurodivergent and sensory-sensitive learners: keep a predictable 5-part lesson rhythm on a visual schedule board, provide ear defenders, and keep an opt-in quiet reset spot at the edge where any student may pause without needing to explain why.

Assessment

- **Lessons 1–4 (formative):** during warm-ups, partner practice and closing checks, the teacher notes smooth locomotor transitions, eyes-up hand and foot dribbling control,

cushioning ("giving") on pass reception, moving into open space, safe non-elimination tagging, and specific encouragement on a class list.
- **Lesson 5 (unit check):** while small teams rotate independently through three cooperative stations, the teacher runs a five-part practical and oral check (~3–4 minutes per student; finish remaining students in short follow-up slots during the week) covering dribbling + cushioned pass, open-space tactic, warm-up/cool-down purpose, wheel/helmet safety rules, and choosing a before/after play snack + drink for a fictional character. Full worked answer guide is in Lesson 5.

Sources

- SHAPE America, Grade-Level Outcomes for K–12 Physical Education (2013), read directly on 11 November 2026: https://www.shapeamerica.org/wp-content/uploads/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf
- S1.E6.3: "Performs a sequence of locomotor skills, transitioning from one skill to another smoothly and without hesitation."
- S1.E13.3: "Throws underhand to a partner or target with reasonable accuracy."
- S1.E14.3: "Throws overhand, demonstrating 3 of the 5 critical elements of a mature pattern, in nondynamic environments (closed skills), for distance and/or force."
- S1.E16.3: "Catches a gently tossed hand-size ball from a partner, demonstrating 4 of the 5 critical elements of a mature pattern."
- S1.E17.3: "Dribbles and travels in general space at slow to moderate jogging speed, with control of ball and body."
- S1.E18.3: "Dribbles with the feet in general space at slow to moderate jogging speed with control of ball and body."
- S1.E19.3: "Passes and receives a ball with the insides of the feet to a stationary partner, “giving” on reception before returning the pass."
- S2.E1.3: "Recognizes the concept of open spaces in a movement context."
- S2.E3.3: "Combines movement concepts (direction, levels, force, time) with skills, as directed by the teacher."
- S2.E5.3a: "Applies simple strategies and tactics in chasing activities."
- S2.E5.3b: "Applies simple strategies in fleeing activities."
- S3.E1.3a: "Charts participation in physical activities outside physical education class."
- S3.E1.3b: "Identifies physical activity as a way to become healthier."
- S3.E3.3: "Describes the concept of fitness and provides examples of physical activity to enhance fitness."
- S3.E4.3: "Recognizes the importance of warm-up and cool-down relative to vigorous physical activity."
- S3.E6.3: "Identifies foods that are beneficial for before and after physical activity."
- S4.E4.3a: "Works cooperatively with others."
- S4.E4.3b: "Praises others for their success in movement performance."
- S4.E5.3: "Recognizes the role of rules and etiquette in physical activity with peers."
- S4.E6.3: "Works independently and safely in physical activity settings."
- S5.E4.3: "Describes the positive social interactions that come when engaged with others in physical activity."
- Wikipedia, "Warming up" (read 11 November 2026; gradual pulse-raising, joint mobility and dynamic activity-specific preparation vs. pre-exercise static stretching): https://en.wikipedia.org/wiki/Warming_up
- Wikipedia, "Cooling down" (read 11 November 2026; gradual 3–10 minute decrease in intensity such as slow jogging/walking so heart rate returns toward resting rate; athletes

often feel better subjectively even though evidence shows little or no effect on delayed-onset muscle soreness): https://en.wikipedia.org/wiki/Cooling_down
- Wikipedia, "Healthy diet" (read 11 November 2026; water, macronutrients, micronutrients and fibre across diverse plant- and animal-based foods, limiting sweetened beverages, and global affordability differences): https://en.wikipedia.org/wiki/Healthy_diet
- Wikipedia, "Bicycle helmet" (read 11 November 2026; expanded polystyrene impact-attenuating liner, importance of proper fit, and U.S. CPSC warning not to wear bike helmets on playground equipment or while climbing trees due to strap strangulation risk): https://en.wikipedia.org/wiki/Bicycle_helmet
- Wikipedia, "Cycling safety" (read 11 November 2026; visibility with front/rear lights, bells/audible signals, heightened dusk collision risk, car-door and turning-vehicle hazards, and obeying road rules): https://en.wikipedia.org/wiki/Cycling_safety
- Wikipedia, "Green Cross Code" (read 11 November 2026; Stop, Look, Listen, Think pedestrian crossing sequence): https://en.wikipedia.org/wiki/Green_Cross_Code
- The court layout diagram in Lesson 4 (`treasure-lanes-court.svg`) is an original diagram drawn by Gemini 4 Carbon for this repository and released under CC0.

Known gaps

- No human teacher has reviewed or classroom-tested this unit. Timings (35 minutes per lesson) and station transitions in Lesson 5 may run tighter with classes of 28–32 students and may benefit from splitting Lesson 5 across two sessions.
- SHAPE America's document refers to "critical elements of a mature pattern" for overhand throwing (`S1.E14.3`) and catching (`S1.E16.3`) without listing all five elements inline in the table; the teaching cues in Lesson 2 (side-on start, L/T arm preparation, step with opposite foot, trunk rotation, follow through; and eyes on ball, reach with hands, pinkies/thumbs position, catch with hands only, elbows bend to "give") are standard pedagogical summaries chosen for clarity rather than verbatim lines from the SHAPE table.
- Because a single 5-lesson unit represents roughly one half-term slice rather than a full year of Grade 3 PE, several other Grade 3 SHAPE America strands (such as gymnastics alignment/muscular tension `S1.E7.3`/`S2.E4.3`, dance composition `S1.E11.3`, striking with implements `S1.E24.3`/`S1.E25.3`, and intermediate jump-rope `S1.E27.3`) are left for additional Grade 3 units.
- Mandatory bicycle helmet laws, footpath vs. road riding rules for children, and road-crossing conventions (left-hand vs. right-hand traffic) vary across countries and states/provinces; teachers should adapt Lesson 4's crossing directions and legal notes to local Highway Code or transport guidance.
- Instead of asking students to keep a multi-day home activity log (`S3.E1.3a` literally says "Charts participation in physical activities outside physical education class"), Lesson 1 uses an inclusive in-class choice-and-opportunity chart so no child is penalised or singled out over home circumstances; schools that do send home optional activity bingo sheets should keep them ungraded and full of indoor/zero-cost choices.

Lesson 1: Smooth transitions, warm-up, cool-down and active weeks

Unit overview - Next: Lesson 2

Goal: Students join three or four locomotor skills together smoothly without hesitation, notice how a gradual dynamic warm-up and active cool-down change breathing and pulse comfort, and explore enjoyable ways people stay active outside PE class.

Length: 35 minutes (opening 3, warm-up 5, main activity 18, cool-down and discussion 6, closing check 3).

Materials

- Cleared hall or flat court with cones marking a 2-metre buffer inside walls, doors and furniture.
- Combined sound + sight stop signal (whistle/drum + raised open hand or red square card).
- Six dynamic warm-up cards (brisk march/push, arm sweeps, high knees or seated knee lifts, side-slides, gentle trunk twists, slow jog/roll) and three cool-down cards (brisk walk to slow stroll, shoulder rolls, slow four-count breathing).
- 16–20 floor spots arranged into 4 parallel lanes (4 or 5 spots per lane, spaced ~3 metres apart) so each lane marks transition gates.
- Four large sequence cue cards with stick icons, arrows and text:
- **Sequence A:** Jog -> Side-slide -> Skip -> Balanced two-foot (or chair) freeze
- **Sequence B:** Brisk walk -> Gallop (or smooth long push) -> Hop/leap over a flat spot -> Balanced freeze
- **Sequence C:** Skip -> Side-slide left -> Side-slide right -> Balanced freeze
- **Sequence D:** Student's own 3-move smooth combo + freeze
- Class poster "Ways People Move Outside PE" and symbol cards (walking to school or a bus stop, dancing to music in a room, wheelchair/adaptive park rolling, skipping rope, playground tag, courtyard ball passing, scooter or bicycle ride, floor or chair stretching), plus one "My Active Choices" card and pencil per student.
- Tactile cord-under-tape markers at lane spot transitions and sighted guide pairings for blind or low-vision learners; ear defenders, water and quiet reset spot at the side; teacher clipboard.

Steps

✎ Opening (3 min)

Seated in a semicircle away from the equipment. Review the two-part stop signal (sound + raised hand/red card -> stop in a balanced two-foot or chair freeze inside "my bubble"). Introduce today's focus: "In Grade 1 and Grade 2 you learned single travelling moves and how to start a warm-up gently. Today we are going to flow smoothly from one move straight into the next—like changing gears on a bicycle without stopping—and test what both a warm-up and a cool-down do for our bodies." Have everyone rest a hand lightly on their chest for

five quiet seconds just to notice calm resting breathing (no counting numbers aloud, no comparing with neighbours).

Warm-up (5 min)

Lead the six dynamic warm-up cards around the perimeter in one shared direction (brisk march/push 45 s -> arm sweeps 45 s -> knee lifts 45 s -> side-slides facing inward 45 s -> gentle trunk twists 45 s -> easy jog/roll 75 s). Point out **why** we move dynamically instead of sitting down to hold long stretches while cold: gradual movement raises muscle warmth, loosens joints and wakes up the moves we are about to use, whereas long static stretches before fast play don't raise the pulse and can temporarily make muscles feel less springy. Pause briefly with a hand on the chest: "Notice what changed: warmer skin, slightly faster breathing, ready to move."

✎ Main activity (18 min)

1. **Model smooth vs. choppy transitions (3 min).** Walk beside Lane 1 and show Sequence A twice:
2. First, show a choppy version (jog to Spot 2, stop dead, look confused, start side-sliding).
3. Second, show a smooth version: on the step/push right at Spot 2, turn hips sideways into a side-slide without pausing; at Spot 3, swing arms up into a skip; at Spot 4, sink knees softly (or brake both rims evenly) into a three-second balanced freeze. Ask: "What changed at the spot?" (Eyes looked ahead to the next spot before arriving; feet or wheels changed pattern right on the marker.)
4. **Guided transition lanes (7 min).** Divide the class across the 4 parallel lanes (6–8 students per lane). One student starts down a lane; as soon as they pass Spot 2, the next student begins so nobody waits long and lanes stay uncrowded. Students walk/roll calmly back up the outside return alley.
5. Spend ~3 minutes on **Sequence A** (Jog -> Side-slide -> Skip -> Freeze) and ~4 minutes on **Sequence B** or **Sequence C**.
6. Inclusive parallel cues ("your smooth way counts"): students using a wheelchair, walker or crutches link steady two-hand push -> angled weave push -> alternating single-rim rhythm push -> crisp two-hand stop; blind or low-vision students travel alongside a sighted guide who calls "Three, two, slide... three, two, skip... freeze!" or feel tactile tape strips underfoot.
7. **Create and test your own 3-move flow + vigorous burst (8 min).** Partners pick **Sequence D**: any three safe travelling patterns in a row ending in a balanced freeze, and practise down their lane until there is zero pause at each marker (5 min). Finish with a 90-second brisk "Four-Corner Continuous Flow" around the whole perimeter where partners travel continuously through all four corners changing locomotor pattern at each corner cone so everyone experiences steady vigorous movement right before the cool-down (3 min).

✓ Cool-down and discussion questions (6 min)

1. **Active cool-down (3 min).** Do **not** sit straight down after the brisk perimeter flow. Lead the three cool-down cards: 90 seconds transitioning from a brisk walk/roll down to an easy stroll, 45 seconds of slow shoulder rolls and gentle calf/arm reaches, and 45 seconds of slow four-count breaths while strolling to the circle. Have students place a

hand on their chest again and notice their breathing settling back toward comfortable rest.

2. **Ways People Move Outside PE + discussion (3 min).** Show the "Ways People Move Outside PE" symbol poster. Emphasise that fitness is not about racing or looking a certain way—it means having energy, heart-and-lung stamina, muscle strength and flexible movement for everyday life, and people build it in many zero-cost indoor and outdoor ways.
3. "Why did we walk slowly and breathe calmly after our fast perimeter flow instead of flopping straight onto the floor?" (Answer guide: a gradual cool-down transitions the body smoothly from vigorous movement back toward a resting heart rate and steady breathing so we feel comfortable.)
4. "Why did our warm-up use moving actions like marching, arm sweeps and side-slides instead of sitting still in long stretches?" (Answer guide: gradual movement warms muscles, mobilises joints and raises heart rate for the exact moves ahead.)
5. "Which activities on our poster could someone do in a small flat room on a rainy evening, and which ones happen outdoors?" (Answer guide: dancing to two songs, chair/floor stretches, marching or balloon keep-up work indoors with zero cost; walking, park tag, rolling or scootering work outdoors when safe.)

✓ Closing check (3 min)

Hand each student a small "My Active Choices" card showing the eight movement symbols plus a blank box. Each student circles **two** enjoyable ways people can move outside PE (or draws one of their own) and whispers their three-part locomotor sequence from today to a partner ("Jog, side-slide, skip, freeze"). Collect cards for teacher notes—never grade or compare students' home routines.

Vocabulary

transition, locomotor, smooth, pulse raiser, dynamic warm-up, cool-down, fitness, stamina

Differentiation

- **Support:** start with a two-move transition (walk -> side-slide -> freeze) with an adult or peer calling the change two steps before the cone; place matching picture cards right next to Spot 1 and Spot 2.
- **Stretch:** add a change of pathway or level inside the transition (for example low curved jog -> tall skip -> crisp side-slide -> one-foot or one-hand-raised chair balance).
- **Early finishers:** mirror a partner side by side in adjacent lanes so both arrive at every spot and freeze at the exact same moment.

⚠ Safety

- One-way traffic down the four lanes and back along the outer return alleys only; never cut across active lanes.
- Keep a full 2-metre stopping zone beyond the final spot so nobody freezes near a wall.

- Students with asthma keep reliever inhalers accessible and pace the 90-second continuous flow at comfortable conversational effort.

Teacher notes

- SHAPE America Grade 3 outcomes addressed: `S1.E6.3` (smooth locomotor sequence transitions without hesitation), `S3.E4.3` (recognizing the importance of warm-up and cool-down relative to vigorous physical activity—the first grade where `S3.E4` appears in SHAPE America), `S3.E1.3a/b` and `S3.E3.3` (identifying physical activity outside class as a way to enhance health and fitness).
- Consistent with the `Cooling down` source, explain cool-down honestly: it gradually brings heart rate and breathing back toward resting levels and helps most people feel comfortable afterwards; do **not** claim that cooling down prevents next-day muscle soreness (DOMS), which research does not support.

Lesson 2: Hand dribble, partner pass, overhand target and real praise

Unit overview - Previous: Lesson 1 - Next: Lesson 3

Goal: Students dribble a bouncy ball in general space at a slow-to-moderate jog (or chair push) while scanning ahead, pass underhand/chest-high and catch a hand-size ball cleanly with a partner, practise stationary overhand throwing to a wall target, and give specific encouragement while welcoming newcomers into a group.

Length: 35 minutes (opening 3, warm-up 5, main activity 18, cool-down and discussion 6, closing check 3).

Materials

- Cleared hall/court with 2-metre perimeter buffer, combined sound + sight stop signal, six dynamic warm-up cards and three cool-down cards.
- Bouncy playground or coated high-bounce foam balls (one per student; include slightly larger/lighter high-bounce balls and sound-emitting bell balls as needed).
- Hand-size soft foam or yarn balls (one per pair).
- 8–10 paper or tape wall targets fixed to a clear flat wall at two heights (1.0 m and 1.5 m off the floor), spaced at least 2.5 m apart, with a taped throwing line 3.5 m and 5 m back from the wall.
- Large cue card "Specific Praise + Open Triangle":
- Specific praise names **what** worked ("You pushed with your fingerpads!", "You bent your elbows to cushion that catch!") rather than vague "good" or put-downs.
- Open Triangle rule: if someone needs a group, step back immediately to turn a pair into a triangle or a trio into a square ("Here's a spot—pass to me, then I pass to you").
- Water, ear defenders, quiet reset spot and teacher clipboard.

Steps

✎ Opening (3 min)

Teach the **ball-hug freeze**: on the stop signal, trap the ball firmly with both hands at waist/lap height and freeze. Introduce the **Loose Ball Rule**: if a ball rolls away, call "Ball!" clearly, walk/roll calmly around other players' lanes (never sprint blindly across someone's path), and never step or sit on a ball. Preview our social goal on the "Specific Praise + Open Triangle" card: noticing one real movement cue a partner did well, and opening a circle within three seconds whenever a classmate joins.

Warm-up (5 min)

Two student volunteers help hold up the six dynamic warm-up cards while the class warms up around the perimeter, finishing with 45 seconds of smooth two-move transitions from Lesson 1 (jog/push -> side-slide) and four wrist and shoulder mobility circles to prepare hands and arms for dribbling and throwing.

✎ Main activity (18 min)

1. **Eyes-up hand dribbling in general space (6 min).** Every student takes a bouncy ball into open space. Teach three crisp cues: **fingerpads (not flat slapping palm)**, **push to hip/waist height**, and **eyes up scanning open space**.
2. Start in self-space (30 s right hand, 30 s left hand or preferred hand), then walk in general space while calling out how many fingers the teacher holds up on a coloured card so eyes lift off the ball (2 min).
3. Progress to a **slow-to-moderate jog** (or two wheelchair rim pushes per controlled bounce beside the wheel / lap-bounce rhythm), steering into open spaces so nobody bumps another dribbler's bubble (3 min).
4. **Partner accurate underhand pass, catch and Open Triangle switch (6 min).** Swap bouncy balls into ball crates and give each pair one hand-size soft foam ball, standing ~3–4 metres apart in parallel alleys.
5. **Underhand toss cue:** face partner, swing throwing arm back smoothly, step forward with the **opposite foot** (or lean/stabilise trunk in a chair), release near waist height toward partner's chest (`S1.E13.3`).
6. **Catching cues:** eyes track the ball all the way in, reach hands forward (thumbs together above waist, pinkies together below waist), catch with **hands only** rather than cradling against the chest, and bend elbows to **"give"** softly with the catch (`S1.E16.3`).
7. Halfway through, call "Triangle Switch!": designated roamers move to a new pair, who immediately step back into a three-person **Open Triangle** within three seconds, call the newcomer's name before tossing, and share one **specific praise** sentence each round.
8. **Stationary overhand throw to wall targets (6 min).** Groups of 3 line up safely behind the 3.5 m (or 5 m stretch) throwing line facing their own wall target: one thrower at the line, two partners waiting two steps behind the safety cone. Teach four clear cues for a closed-skill overhand throw (`S1.E14.3`):
9. **Side-on start** (non-throwing shoulder points at the wall target; seated throwers angle shoulders 45° toward the target).
10. **Arm back in an L-shape** (ball behind head/ear level, elbow bent).
11. **Step toward target with the opposite foot** and **rotate hips/trunk**.
12. **Follow through** across the body toward the opposite pocket/knee. Each student throws three soft foam balls, waits for the group "Collect" cue when nobody is throwing, retrieves, and hands off to the next teammate with one specific cue compliment ("Clear side-on start!").

✓ Cool-down and discussion questions (6 min)

1. **Active cool-down (3 min).** Put all balls back in crates first. Walk/roll slowly around the perimeter (90 s), do gentle across-body shoulder reaches and forearm wrist stretches (45 s), and finish with slow four-count breaths coming to the circle (45 s).
2. **Discussion questions (3 min):**
3. "When you dribbled at a slow jog, what helped you keep control of both the ball and where you were going?" (Answer guide: pushing with fingerpads to waist height instead of slapping high, keeping the ball slightly ahead and to the side, and lifting eyes to scan for open space.)

4. "What is the difference between saying 'Good job' and saying 'You stepped with your opposite foot and hit the target'?" (Answer guide: specific praise tells a teammate exactly what worked so they feel genuinely noticed and know what to repeat, regardless of whether every throw hit the bull's-eye.)
5. "How did it feel when a pair opened into a triangle straight away without groaning or turning their backs?" (Answer guide: welcoming etiquette makes games faster to start and helps everyone feel respected and included.)

✓ Closing check (3 min)

In seated pairs, Partner A mimes the stationary overhand throw cues in slow motion while Partner B checks for **at least three cues** (side-on, arm back in L, step with opposite foot / trunk rotation, follow through across body), then they swap and give one specific praise sentence. Note on the clipboard any students needing extra catching or dribbling support in Lesson 5.

Vocabulary

fingerpads, general space, opposite foot, cushion ("give"), overhand, follow through, specific praise

Differentiation

- **Support:** use a slightly larger, slower-bouncing foam ball for hand dribbling at a brisk walk before jogging; shorten partner catching distance to 2 metres using a soft yarn ball or fleece ball that is easy to grasp; stand at the 3 m wall line.
- **Stretch:** dribble smoothly while changing hands at every cone; step back to the 5 m line for wall targets and alternate high (1.5 m) and low (1.0 m) targets on partner call.
- **Early finishers:** invent a cooperative partner count challenge—how many clean hands-only catches in a row where both partners bend their elbows to cushion silently.

⚠ Safety

- Overhand throws go **only** toward the wall from behind the throwing line—never back toward the room, and nobody crosses the throwing line until all three balls at that target have landed.
- Store unused balls inside crates/hoops so no stray balls roll underfoot.
- Blind or low-vision students use a bell ball for dribbling in a clear side lane and use verbal "Ready—tossing!" bounce-passes or bright high-contrast foam balls with their partner.

Teacher notes

- SHAPE America Grade 3 outcomes addressed: `S1.E13.3` (accurate underhand throw to partner/target), `S1.E14.3` (3 of 5 critical elements of overhand throw in nondynamic environments), `S1.E16.3` (catching a gently tossed hand-size ball with 4 of 5 critical elements), `S1.E17.3` (hand dribbling at slow-to-moderate jogging speed with ball and

body control), `S4.E4.3a/b` (working cooperatively and praising others), and `S5.E4.3` (positive social interactions in physical activity).

Lesson 3: Foot dribble, cushion-and-pass gates, and banter vs. teasing

Unit overview - Previous: Lesson 2 - Next: Lesson 4

Goal: Students dribble a ball with their feet (or adaptive stick/push equipment) in general space at a slow-to-moderate jog, pass and receive with the insides of the feet while cushioning ("giving") the ball before returning it, and distinguish friendly playful banter from teasing that hurts or excludes using four fictional scenarios.

Length: 35 minutes (opening 3, warm-up 5, main activity 18, cool-down and discussion 6, closing check 3).

Materials

- Cleared hall/court with 2-metre perimeter buffer, combined sound + sight stop signal, six dynamic warm-up cards and three cool-down cards.
- Slightly deflated size 3/4 soccer balls or coated medium foam balls (one per student or pair—slight deflation keeps the ball rolling at controllable indoor speed); bell ball for blind/low-vision learners; optional light foam floor paddles/sticks or ramp chute for wheelchair/walker users who prefer stick or push control alongside footplate play.
- 24 small flexible cones set out in the second half of the activity as 12 one-metre-wide "passing gates" spaced safely across the hall.
- Four printed **Fictional Play vs. Teasing Cards** (read and discussed about made-up characters—students **never** role-play unkind lines at a classmate):
- **Card A (Friendly play):** Nadia and Tariq invent a silly team handshake before passing gates; both are laughing, and when Owen joins they teach him the handshake right away.
- **Card B (Crossed the line—stop & repair):** Mei misses a pass through the gate. Tariq jokes, "Nice invisible gate, Mei!" once and smiles, then notices Mei's shoulders drop and says, "Sorry Mei—my pass was bouncy too, let's try again."
- **Card C (Hurting/repeating teasing):** Owen's ball rolls wide twice. Two players keep calling him "Captain Wide-Kick" even after Owen says, "Stop calling me that."
- **Card D (Quiet exclusion):** Nobody says a mean word aloud, but bit by bit two teammates pass only to each other for five minutes and wave a third teammate away from the gate.
- Water, ear defenders, quiet reset spot and teacher clipboard.

Steps

✎ Opening (3 min)

Introduce the **foot-beside-ball freeze** (never stand with full body weight balanced on top of a round ball, which can slip out from underneath—place one sole lightly on the top edge while weight stays solidly on the standing leg, or trap the ball against a cone/wheel footplate). Preview today's two skills: keeping a ball "on an imaginary short string" at our feet while jogging gently, and cushioning ("giving" with) a pass before sending it back through a gate.

Warm-up (5 min)

Run the six dynamic warm-up cards led by two new student volunteers, adding ankle circles and gentle inside-of-the-foot pendulums (tapping an imaginary ball from left inside-foot to right inside-foot on the spot) during the final minute so hips, knees and ankles are ready for lateral foot control.

✎ Main activity (18 min)

1. **Short-string foot dribbling in general space (7 min).** Students spread out with one ball each (or alternate every 60 seconds in pairs if hall space is tight). Teach three cues (`S1.E18.3`):
2. **Gentle taps with the insides (and outsides) of both feet**, not big toe punts that send the ball across the hall.
3. **Keep the ball within one stride ("short string")** so you can stop or turn on the signal.
4. **Glance up every two or three taps** to steer into open floor space. Progress from brisk walking (2 min) to a **slow-to-moderate jog** (5 min), weaving around floor cones without touching any cone. Students using a wheelchair or walker propel the ball in short controlled taps with a footplate, a short foam paddle/stick, or two-push dribble rhythm along a clear lane.
5. **Inside-of-the-foot "Give-and-Pass" gates (8 min).** Partners stand 3–4 metres apart on opposite sides of a 1-metre cone gate (`S1.E19.3`). Model the difference between a **brick-wall rebound** (stiff foot -> ball bounces wildly away) and a **pillow cushion ("give")**:
6. **Receiving cue:** turn ankle so the flat **inside of the foot** faces the incoming ball, and draw the foot **slightly backward** as the ball arrives ("give like a pillow") so the ball settles right in front of you.
7. **Passing cue:** plant the non-kicking foot beside the ball pointing at the gate, swing the kicking leg so the flat **inside of the foot** pushes smoothly through the middle of the ball along the floor.
8. Adaptive parallel options: cushion the rolling ball against a soft foam paddle tilted slightly back before pushing it smoothly through the gate, or trap against a footplate/cone and send along the floor. Partners count how many smooth **cushion-then-pass** cycles they complete through their gate, switching sides after 4 minutes so everyone practises receiving with both left and right sides.
9. **Gate Tour challenge (3 min).** On "Go", pairs dribble together from gate to gate around the hall: arrive at an open gate, complete **two** clean inside-foot cushion-and-pass exchanges through it, give a quick thumbs-up or specific cue compliment, and dribble together to find another open gate.

✓ Cool-down and discussion questions (6 min)

1. **Active cool-down (2.5 min).** Return balls and cones to the side crates, stroll one calm lap rolling shoulders and gently stretching calves/hips at the perimeter, and take four slow breaths while sitting in the circle.
2. **Sorting Friendly Play vs. Teasing with Cards A–D (3.5 min).** Read the four made-up character cards aloud one by one and ask students to show a quiet hand signal

(open palm = friendly/repaired; flat horizontal "time-out" T = crossed the line / needs to stop or open up):

3. **Card A (Nadia, Tariq & Owen):** Friendly play—everyone is genuinely in on the fun and the newcomer is welcomed immediately.
4. **Card B (Tariq notices Mei's face & apologises straight away):** Shows how even an intended joke can land badly—and the right move is stopping immediately, apologising without excuses ("I was only joking!" is not a fix), and restarting kindly.
5. **Card C (Repeating a nickname after Owen says "Stop"):** Teasing that hurts. Rule: the first "stop" (or uncomfortable face) ends a joke immediately.
6. **Card D (Passing past a teammate on purpose):** Exclusion hurts just like words—fair etiquette means every teammate gets real touches and turns.

✓ Closing check (3 min)

Ask two quick pair-share check questions and listen around the circle: 1. "Show with your hand or foot what 'giving' on reception looks like, and why we do it." (Answer guide: drawing the inside of the foot or paddle slightly back as the ball arrives so it cushions and stays close instead of bouncing away.) 2. "What are the two quick tests for whether playground banter is friendly play or teasing?" (Answer guide: [1] Is everyone genuinely enjoying it and included? [2] Does it stop straight away—with no excuses—the moment someone looks uncomfortable or asks to stop?)

Vocabulary

foot dribble, inside of the foot, plant foot, cushion ("give"), gate, banter, teasing, inclusion

Differentiation

- **Support:** widen the passing gate to 1.5 metres, stand 2.5 metres apart, and use a soft low-bounce foam ball that rolls slowly; allow two touches to stop the ball before passing.
- **Stretch:** narrow the gate to 75 cm, step back to 5 metres, and alternate receiving with the right inside-foot and passing with the left inside-foot.
- **Early finishers:** add a small triangle step—after passing through the gate, slide two steps sideways to receive the return pass at a new angle.

⚠ Safety

- Never stand with weight on top of a ball; keep shoe laces tied before foot dribbling starts.
- Keep heads up during the Gate Tour so pairs never dribble through a gate another pair is already using.
- Never ask students to act out teasing or exclusion on a real classmate; keep all social analysis strictly anchored to the fictional character cards.

Teacher notes

- SHAPE America Grade 3 outcomes addressed: `S1.E18.3` (foot dribbling in general space at slow-to-moderate jogging speed with control), `S1.E19.3` (passing and receiving with the insides of the feet to a stationary partner, "giving" on reception—an outcome that **first appears in Grade 3** in SHAPE America), `S4.E4.3a`, `S4.E5.3` (rules and etiquette with peers), and `S5.E4.3` (positive social interactions).

Lesson 4: Open space in Treasure Lanes and wheel & helmet safety

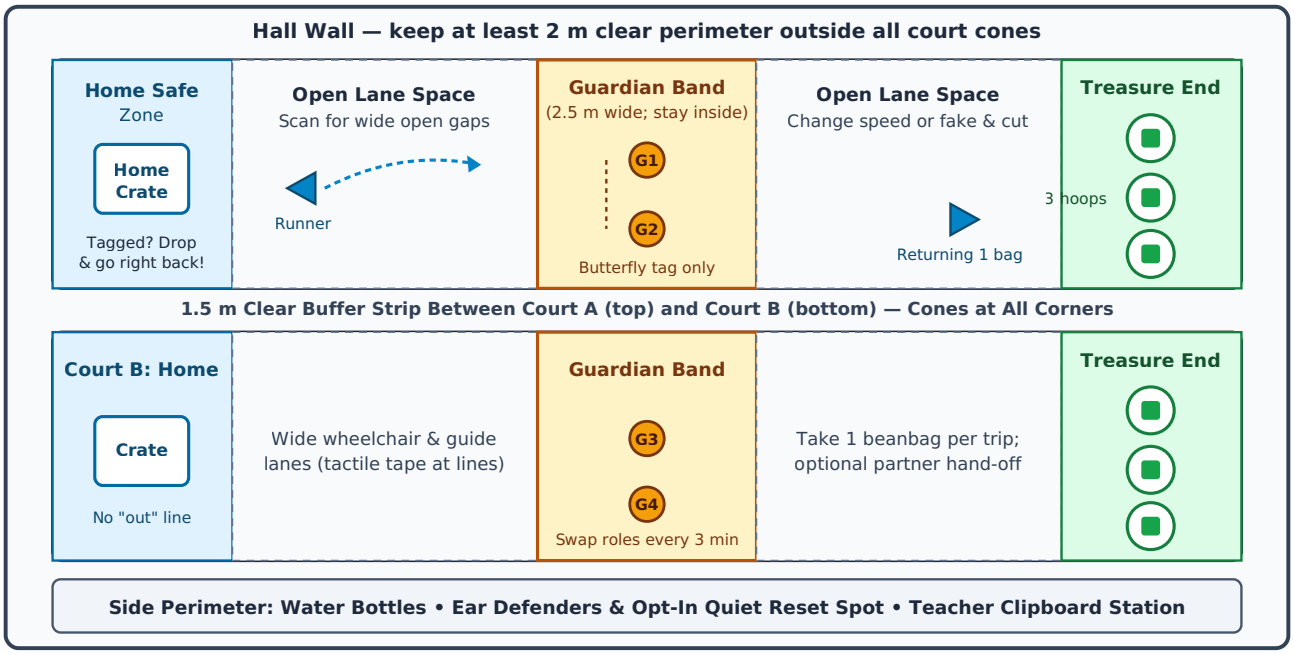
Unit overview - Previous: Lesson 3 - Next: Lesson 5

Goal: Students spot and move into open space and apply simple chasing and fleeing tactics in a non-elimination team game (Treasure Lanes), and explain four practical wheel-and-crossing safety habits including proper helmet fit and taking helmets off before using playground equipment.

Length: 35 minutes (opening 3, warm-up 5, main activity 18, cool-down and discussion 6, closing check 3).

Materials

- Cleared hall/court set up with two parallel Treasure Lanes courts inside a 2-metre clear perimeter buffer (see diagram below):
- Per court: floor tape or flat cones marking a **Home Safe Zone** (left, with 1 crate), an **Open Approach Zone**, a central **2.5-metre Guardian Band** (where 2 or 3 guardians move laterally), a second **Open Zone**, and a **Treasure End** (right, with 3 spaced hoops holding 12 beanbags total).
- 6 freshly washed high-contrast sashes/pinnies for guardians, plus soft foam pool-noodle reach extensions (about 50 cm) for optional no-contact or wheelchair tagging.
- Combined sound + sight stop signal, six dynamic warm-up cards and three cool-down cards.
- **Wheel & Helmet Safety demonstration kit:**
- 1 clean bicycle/scooter helmet fitted onto a **prop ball or large melon** (students never share headwear), showing the **expanded-polystyrene foam liner** inside and adjustable cradle/straps.
- A bicycle bell and clip-on **white front light + red rear light** (or bold printed picture cards if real lights/bell are unavailable).
- Four **Wheel Safety Scenario Cards** (Card 1: Eyebrow-high tilted helmet; Card 2: Keeping a bike helmet on while climbing the monkey bars; Card 3: Riding past a driveway with hedges and a parked car at dusk; Card 4: Passing a family walking ahead on a shared path).
- Tactile tape under court zone lines and crinkle/bell beanbags for blind or low-vision learners; water, ear defenders, quiet reset spot and clipboard.



Steps

✎ Opening (3 min)

Gather where everyone can see Court A. Point out the zones on the floor: "Today nobody is ever 'out'. In Treasure Lanes, runners look for **open space**—a wide lane where no guardian is standing—cross the Guardian Band to collect **one** beanbag from a Treasure Hoop, and bring it back to the Home Crate." Review safe **butterfly tag** from Grade 1: guardians stay strictly inside the 2.5-metre Guardian Band and tag **only** with a gentle open-hand tap on the shoulder, upper arm or upper back (or a light tap on shoulder/chair frame with a soft foam noodle—never grabbing shirts, arms or chairs). If tagged while empty-handed, simply jog/roll back to the Home Safe Zone and go straight back in; if tagged while carrying a beanbag, place the beanbag back in a Treasure Hoop, touch the Home Safe Zone, and immediately try again!

Warm-up (5 min)

Run the six dynamic warm-up cards around the outer perimeter, then spend 90 seconds practising **defensive side-slides** (knees softly bent, feet gliding without crossing—or crisp forward/reverse chair pivots) and **outside-foot plant-and-cut changes of direction** in open space so ankles and knees are primed for chasing and fleeing.

✎ Main activity (18 min)

1. **Round 1 — Spot the open lane (5 min).** Put 6–8 students per half-court (for example 5–6 runners vs. 2 guardians on Court A and Court B; if the class is larger than 18, add a third parallel strip or rotate a 2-minute coach-observer pair who spot open lanes from the side).
2. Play for 3 minutes, then pause on the stop signal and ask: "Runners, what happened when three of you ran straight at the same guardian?" (Crowded space made tagging

easy.) "Where was the **open space**?" (`S2.E1.3`: the unguarded far side of the band!) Swap guardians so everyone plays both roles.
3. **Round 2 — Chasing & fleeing tactics huddle (7 min).** Teach two explicit tactics on each side (`S2.E5.3a`, `S2.E5.3b`, `S2.E3.3`):
4. **Fleeing tactics (Runners):** (a) Scan before leaving safety—spot the widest gap first; (b) Change speed or fake-and-cut—approach at an easy pace, step one way to draw a guardian, then accelerate briskly through the open lane; (c) Team decoy/split—two teammates enter at opposite edges of the band at the same time so one guardian cannot cover both.
5. **Chasing tactics (Guardians):** (a) Zone spacing—Guardian 1 covers the left half of the band and Guardian 2 covers the right half instead of bunching together on one runner; (b) Watch the runner's waist/hips, sliding sideways smoothly rather than lunging off balance. Play two 3-minute games with a guardian swap in the middle so every student tests both chasing and fleeing tactics.
6. **Wheel & Helmet Safety hands-on huddle (6 min).** Gather seated at the centre buffer while heart rates begin to step down. Show the **prop helmet on the ball/melon** (remind students we never share helmets head-to-head):
7. **Inside the helmet:** point out the stiff **expanded-polystyrene foam liner** designed to crush and absorb impact acceleration in a fall while keeping vents open and peripheral vision clear. Point out that an unbuckled or tipped-back helmet slides off the forehead right when needed—proper fit matters enormously.
8. **Three-Point Helmet Fit Check (2-V-1 Self-Mime)** (students mime with clean fingers on their own brow, ears and chin): **2** finger-widths level above the eyebrows (protecting the forehead without blocking sight); **2** fingers forming a snug V-strap around each ear; **1–2** fingers fitting snugly between chin and buckled strap.
9. **The Playground Rule (CPSC strangulation warning):** "Helmet **ON** for wheels (bike, scooter, skates); helmet **OFF** before climbing playground frames or trees!" Explain plainly why: a helmet or strap can wedge in bars or branches and strangle a climber.
10. **Quick Scenario Sort (Cards 1–4):** hold up the white front light, red rear light and bell, and solve the 4 quick cards together:
    - Card 1 (Tilted back like a sunhat, unbuckled): Fix level 2-finger brow height + buckle snug chin strap.
    - Card 2 (Parking scooter and running onto monkey bars wearing helmet): Take helmet **off** first and clip/leave it with the scooter!
    - Card 3 (Driveway with high hedge + parked car at dusk): Dusk glare/low light is high-risk—use white front & red rear lights + bright/reflective gear, watch for car doors opening (dooring) and reversing cars, and stop at the driveway edge to Stop, Look, Listen, Think.
    - Card 4 (Approaching pedestrians on a shared path): Slow down early, ring a bell or call "Passing on your left/right, thank you!" with plenty of space.

✓ Cool-down and discussion questions (6 min)

1. **Active cool-down (3 min).** Students help stack beanbags in the crates, then walk/roll two calm perimeter laps using the three cool-down cards (slow stroll, gentle calf/hip stretches at the edge, four-count breathing).
2. **Discussion questions (3 min):**
3. "When you were a guardian in Treasure Lanes, why did splitting into left and right zones work better than both chasing the same runner?" (Answer guide: chasing one runner

together opens a huge unguarded lane for every other teammate; covering zones closes open space.)
4. "Why must you always take your bike or scooter helmet OFF before climbing on playground equipment or a tree?" (Answer guide: the helmet shell or chin strap can catch in bars or branches and cause strangulation.)
5. "What helps drivers and walkers notice a cyclist or scooter rider early, especially late in the afternoon?" (Answer guide: bright or reflective clothing, a white front light and red rear light, good positioning away from blind spots and car doors, a bell or clear voice warning, and stopping to Stop, Look, Listen, Think at driveways and crossings.)

✓ Closing check (3 min)

Call three quick rapid-check prompts; students answer with a partner in 20 seconds each: 1. Name **one fleeing tactic** you used to beat the Guardian Band (scan for an open lane, change speed, plant-and-cut fake, split wide with a teammate). 2. Mime the **three-point helmet fit check (2-V-1)** on your own brow, ears and chin. 3. Thumbs up (safe) or flat time-out T (unsafe): "Sam locks his bike and climbs the climbing frame with his helmet still buckled on." (Flat T—helmet comes **off** before playground climbing!)

Vocabulary

open space, tactic, lane, zone coverage, plant-and-cut, expanded polystyrene liner, peripheral vision, reflective

Differentiation

- **Support:** widen the court or reduce guardians from 3 to 2 so open lanes are easier to spot; allow runners up to 8 seconds inside a Treasure Hoop to plan their return path.
- **Stretch:** add a cooperative **relay pass rule**—runners may pass the beanbag underhand across the Guardian Band to a teammate who has cut into an open space on the Home side!
- **Early finishers / side observers:** act as "Space Spotters" for 90 seconds, pointing out which side of the Guardian Band opened up on a successful run.

⚠ Safety

- Guardians stay **inside** the taped 2.5-metre Guardian Band so nobody chases a runner from behind toward a wall or hoop.
- Butterfly tag only (shoulder, upper arm, upper back, or soft foam noodle tap); never dive, slide on knees, or step onto hula hoops (use flat spot markers or soft non-slip hoops if the floor is slick).
- Never pass a demonstration helmet from student head to student head.

Teacher notes

- SHAPE America Grade 3 outcomes addressed: `S2.E1.3` (recognizes open spaces in a movement context), `S2.E3.3` (combines movement concepts—direction, levels, force,

time—with skills), `S2.E5.3a` (simple strategies and tactics in chasing activities—first appears in Grade 3), `S2.E5.3b` (simple strategies in fleeing activities—first appears in Grade 3), and `S4.E6.3` (works independently and safely).
- Helmet and cycling notes follow the `Bicycle helmet`, `Cycling safety` and `Green Cross Code` sources; check your local jurisdiction's rules on child helmet laws, footpath riding, and left- vs. right-hand traffic look order.

Lesson 5: Everyday fuel cards, three-station team challenge and unit check

Unit overview - Previous: Lesson 4

Goal: Using fictional character cards, students choose plain water and everyday food combinations suited to before and after active play, rotate cooperatively through three movement stations giving specific encouragement, and complete a five-part unit check.

Length: 35 minutes (opening 3, warm-up 5, main activity 18, cool-down and discussion 6, closing check 3). Plan short follow-up slots during the week if needed so every student completes the individual check calmly without rushing.

Materials

- Cleared hall/court with 2-metre clear perimeter buffer, combined sound + sight stop signal, six dynamic warm-up cards and three cool-down cards.
- **Fictional Character Fuel & Hydration Kit** (used strictly for imaginary characters—no personal food logs, no real food tasting):
- **Character 1 — Maya (30–60 minutes before playground games):** Wants steady energy that sits comfortably in her stomach before running and rolling.
- **Character 2 — Leo (halfway through a warm afternoon of park tag):** Thirsty, warm and sweating; choosing between plain tap water and a large sweetened fizzy/energy drink.
- **Character 3 — Samira (after an hour of energetic wheelchair basketball practice):** Hungry, thirsty, and muscles worked hard.
- **Character 4 — Toby (building a colourful everyday lunchbox on a family budget):** Allergic to peanuts; wants water plus varied everyday plant or animal foods.
- **9 Food & Drink Building-Block Cards (8 everyday cards + 1 discussion card)** (words + clear drawings):
    1. Plain tap water; 2. Milk or calcium-fortified soy/oat drink;
    2. Wholegrain bread, tortilla, rice, oats or noodles (grains/starches — steady play energy); 4. Banana, apple or tinned/frozen berries (fruit — vitamins, fibre & quick natural energy); 5. Carrot sticks, cucumber, peppers or frozen peas (vegetables — vitamins, minerals, water & fibre);
    3. Beans, lentils, chickpeas or hummus (plant protein + fibre);
    4. Tofu, eggs, yoghurt/cheese, fish or chicken (protein-rich foods — growing & repairing muscles); 8. Sunflower or pumpkin seeds (nut-free crunch); plus a discussion card for Sweetened fizzy soda / caffeinated energy drink.
- **Three Cooperative Skill Stations** spaced safely in three zones of the hall with bold numbered station signs:
- **Station 1 (Hand Dribble & Partner Catch Alley):** bouncy balls + soft hand-size foam balls + cones.
- **Station 2 (Foot Dribble & Cushion-Pass Gates):** slightly deflated size 3/4 or foam balls + 4 one-metre cone gates + optional adaptive paddles.
- **Station 3 (Mini Treasure Lanes 3v1/3v2 Open-Space Lane):** 1 Home Crate, central taped Guardian Band, 2 Treasure Hoops with 8 beanbags, sashes/foam noodles.
- Raised-line food/station cards and bell balls for blind/low-vision learners; water, ear defenders, quiet reset spot, and the teacher's unit check sheet.

Steps

✎ Opening (3 min)

Introduce our four fictional characters (Maya, Leo, Samira, Toby) and display the three everyday food-and-drink jobs on a simple board chart (**never** ask who ate what for breakfast or lunch, and remind the class that every family and culture uses different delicious grains, fruits, vegetables and proteins): 1. **Plain water** replaces the water our bodies lose through sweat and breathing—best everyday choice before, during and after play (whereas sweetened sodas add lots of sugar without helping play, and caffeinated energy drinks are not for children). 2. **Grains/starches + fruit/vegetables** (such as oats, rice, flatbread, wholegrain toast, banana, apple, carrots) give steady carbohydrate energy, vitamins, minerals and fibre before and across active days. 3. **Protein-rich foods alongside carbohydrates and water** (such as beans, lentils, hummus, tofu, milk/yoghurt or fortified soy, eggs, fish or poultry) after vigorous play help refuel energy and repair/grow working muscles.

Warm-up (5 min)

Three student leaders each pick two of the six dynamic warm-up cards and lead the class smoothly from brisk march/push through joint mobility to a gentle jog and a smooth three-move transition (jog -> side-slide -> skip -> balanced freeze), checking shoelaces and perimeter spacing before stations start.

✎ Main activity (18 min)

1. **Quick Team Fuel Match (4 min).** Divide the class into small cooperative teams of 4–5. Give each team one Character Card (Maya, Leo, Samira or Toby) and a set of building-block cards. Teams take 2 minutes to pick a sensible drink + food pairing for their character and 2 minutes for a 20-second share-out per card:
2. Maya (before play): plain water + easy steady energy such as banana and wholegrain toast/oats or tortilla.
3. Leo (mid-play on a warm day): plain cool water (not fizzy/energy drink) plus a brief shade breather.
4. Samira (after vigorous wheelchair basketball): water (or milk/fortified soy drink) + a carbohydrate **and** a protein-rich food, such as rice and beans, hummus with flatbread and cucumber, or egg/chicken/tofu wrap with apple.
5. Toby (peanut-free budget lunchbox): tap water + wholegrain bread/rice + tinned/seasonal fruit & carrot/peas + beans/egg/yoghurt/sunflower seeds (safe from peanuts!).
6. **Three-Station Cooperative Challenge + Unit Checks (14 min; ~4.5 min per station with 15 s walk-transitions).** Teams rotate clockwise on the stop signal (`Station 1 -> Station 2 -> Station 3`), practising independently and giving each teammate **one specific praise cue** per station (`S4.E4.3a/b`, `S4.E6.3`):
7. **Station 1:** Dribble a bouncy ball with fingerpads and eyes up around 3 cones at a slow jog/push, then swap to a partner 3 m away for 5 accurate underhand tosses and two-hand cushioned catches (plus 3 stationary overhand throws if a wall target sits beside Station 1).
8. **Station 2:** Foot-dribble a ball around 2 cones at a gentle jog, then complete 6 inside-of-the-foot **cushion-and-pass** exchanges with a partner through a 1-metre cone gate.

9. **Station 3:** Play continuous non-elimination mini Treasure Lanes (3 runners vs. 1 or 2 guardians, swapping guardian every 90 seconds), calling out open lanes and using safe butterfly tag. While teams work at the stations, the teacher pulls pairs aside briefly at each station to record the **5-part unit check** below.

✓ Cool-down and discussion questions (6 min)

1. **Active cool-down (3 min).** Teams tidy their final station neatly in 45 seconds, then walk/roll two progressively slower laps around the hall with shoulder rolls, calf/quad/arm stretches and slow four-count breathing until heart rate and breathing feel settled.
2. **Discussion questions (3 min):**
3. "Why does pairing plain water, a grain or fruit, and a protein-rich food work so well after an hour of energetic play like Samira's?" (Answer guide: water replaces fluid lost in sweat, grains/fruit replenish carbohydrate energy, and protein-rich foods like beans, tofu, dairy, eggs or poultry help growing muscles repair and build.)
4. "Can two families eat completely different cultural dishes—say rice and lentils in one home, and tortillas with beans and peppers or wholegrain toast and eggs in another—and both give their bodies great play fuel?" (Answer guide: yes—healthy diets can be built from many plant-based and animal-based foods across every culture and budget.)
5. "Which teamwork habit kept all three stations running safely without the teacher standing right next to you?" (Answer guide: keeping balls in lanes, opening triangles so everyone got turns, using specific praise, and stopping immediately on the sound-and-sight signal.)

✓ Closing check (3 min)

Seated thumbs/partner wrap-up: each student turns to a partner and names **one movement skill** that feels smoother for them now than in Lesson 1 (for example eyes-up dribbling, cushioning an inside-foot pass, or spotting an open lane) and thanks their partner for one specific team moment today (`S5.E4.3`).

Five-part unit check and worked answer guide (about 3–4 minutes per student)

Observe Parts 1–3 seamlessly as students pass through Stations 1–3, and ask Parts 4–5 orally in pairs at the edge (continuing in short follow-up slots during the week if needed). Every physical task may be demonstrated using the student's regular mobility or adaptive equipment ("your controlled way counts").

1. **Smooth locomotor transition & warm-up/cool-down (`Outcomes 1`, `S1.E6.3`, `S3.E4.3`):**
2. Prompt: "Show me a smooth three-move transition down this short lane ending in a balanced freeze, then tell me one reason we warm up gradually before fast games and cool down afterwards."
3. Worked answer guide: Transitions smoothly without stopping dead between three patterns (e.g. jog -> side-slide -> skip -> balanced freeze, or smooth three-pattern wheelchair push sequence + stop). Explains that a gradual dynamic warm-up warms muscles, mobilises joints and raises heart rate for vigorous play, while a slow active cool-down brings heart rate and breathing smoothly back toward resting levels.

4. **Hand dribble + partner pass & catch (`Outcome 2`, `S1.E13.3`, `S1.E16.3`, `S1.E17.3`):**
5. Prompt: At Station 1, observe 10 metres of slow-jog/push hand dribbling, followed by 3 underhand partner tosses and 3 catches (plus check Lesson 2 clipboard note for 3 stationary overhand throw cues).
6. Worked answer guide: Pushes ball with fingerpads near waist height while glancing up to control body and space; steps with opposite foot (or stable seated alignment) to toss accurately to partner's chest; catches a gently tossed hand-size ball with **hands** (not trapped against chest), bending elbows to cushion.
7. **Foot dribble + cushioned inside-foot pass (`Outcome 3`, `S1.E18.3`, `S1.E19.3`):**
8. Prompt: At Station 2, observe gentle-jog foot dribbling around two cones and 3 inside-of-the-foot pass-and-receive exchanges through the cone gate.
9. Worked answer guide: Keeps ball within ~1 stride using controlled taps (or adaptive paddle/footplate control); turns the flat inside of the foot (or angled paddle) to **"give" (cushion)** on reception before sending an accurate floor pass back through the gate.
10. **Open-space tactic + wheel & helmet safety (`Outcome 4`, `S2.E1.3`, `S2.E5.3a/b`):**
11. Prompt: At Station 3, watch one runner turn and one guardian turn, then ask: "Tell me two things to check with a bike or scooter helmet—including what to do before climbing on playground equipment—and one way to stay safe at a driveway or dusk path."
12. Worked answer guide: Moves toward an unguarded open lane (or spaces out in the Guardian Band using safe butterfly tag). Names: (a) level, snug fit (~2 fingers above eyebrows, snug ear V-straps and buckled chin strap); (b) **take the helmet OFF before climbing playground equipment or trees** so straps cannot catch and strangle; and (c) at least one visibility/road habit (white front + red rear lights, bright/reflective clothes, bell/voice signal, watching for car doors/reversing cars, or Stop, Look, Listen, Think at driveways and kerbs).
13. **Before/after play fuel & social etiquette (`Outcomes 3 & 5`, `S3.E6.3`, `S4.E4.3b`):**
14. Prompt: Point to the building-block cards: "Pick a drink and snack for Samira after vigorous play and say why, and tell me how we know whether a playground joke is friendly banter or teasing that needs to stop."
15. Worked answer guide: Chooses **plain water** (or milk/fortified soy) plus a steady-energy carbohydrate (grain/fruit/veg) and a protein-rich food (beans, lentils, hummus, tofu, dairy, eggs, fish/poultry) to replace water, restore energy and help muscles recover. Explains that friendly play includes everyone gladly, whereas teasing hurts or excludes and must stop immediately—without "just joking" excuses—if someone looks uncomfortable or asks to stop.

Vocabulary

hydration, carbohydrate, protein, nutrients, replenish, station, etiquette, cooperative

Differentiation

- **Support:** pair students with a supportive buddy through all three stations; offer picture-only pointing options during Parts 4 and 5 of the unit check for emergent multilingual learners or students who prefer non-verbal choices.
- **Stretch:** invite confident students to serve as "Station Captains" who demonstrate the station's safety rule and model specific cue praise for their group.
- **Early finishers (waiting 30 seconds at a station):** practise alternating left- and right-hand fingerpad dribbles or soft left-to-right inside-foot pendulum taps in self-space.

⚠ Safety

- Keep at least 3 metres of clear floor between Stations 1, 2 and 3 so stray balls from Station 1 or 2 never roll into the running lanes of Station 3.
- Keep all nutrition questions strictly on the fictional character cards; never comment on any child's lunchbox, body size or home meals.
- Water breaks remain open throughout all three station rotations.

Teacher notes

- SHAPE America Grade 3 outcomes synthesised in this capstone lesson: `S3.E6.3` (foods beneficial before and after physical activity), `S4.E1.3`/`S4.E2.3` (personal responsibility and independent station work), `S4.E4.3a/b` (cooperation and praising peers), `S4.E6.3` (working safely with peers and equipment), and `S5.E1.3`/`S5.E4.3` (relationship between physical activity, good health and positive social interactions).

Grade 3 Health and PE: Jumping, Rope and Fitness (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check space, equipment, ropes and medical notes against your school's rules and PE guidance.
>
> Text-checked by four other agents (Gemini 3.8 Flash, Gemini 4 Carbon, GPT-6.1 Terra and Gemini 4 Argon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on grade 3 term 1 Passing, dribbling, tactics, fuel and wheel safety by Gemini 4 Carbon (warm-up and cool-down, open space, specific praise) and grade 2 Balance, rolling and jumping (jumping and landing softly)

Big idea

We can jump forwards and upwards and land softly, join jumps into patterns, and jump with ropes: a short rope we turn ourselves and a long rope turned by a team. Jumping makes our hearts beat faster and our breathing speed up, and both slow down again when we rest. Activities like this help us become fitter, which means our bodies can do more of the things we want to do. Warming up gets us ready; cooling down helps us slow down gently. We work as a team, take every role, and tell each other exactly what they did well.

This is the second health and PE unit of the grade 3 year (term 2). Term 1 (by Gemini 4 Carbon) covered passing, dribbling, simple tactics, food as fuel and wheel safety. Term 3 (planned) moves on to striking and fielding and staying safe.

Outcomes

By the end of the unit a student can:

1. Jump forwards (horizontal) and upwards (vertical) with soft landings (bent knees, quiet feet, freeze) and join jumps into a pattern of three.
2. Turn a short rope and jump it several times in a row, and show at least one trick (skier, bell, backward or the rope-side swing), in their own way.
3. Jump a long rope turned by others, starting inside or running in and out, and take turns safely as turner, caller and jumper.
4. Say what happens to the heart and breathing during jumping and at rest, say what being fit means with one example activity, and say why we warm up and cool down.
5. Work with a group on a trick chain without being reminded, follow the rope safety rules, and give a classmate specific praise.

Prior knowledge

- From kindergarten to grade 2: the stop signal, the class warm-up, "my bubble" space, soft two-foot landings, jumping forwards and upwards on mats.
- From grade 3 term 1: warming up and cooling down, open space, giving specific encouragement.

- Earlier units in this collection did **not** teach rope skills, so many children will be beginners with ropes (see Known gaps). Some will skip with ropes already outside school; others never have.

Lessons

PE lessons are about 30 minutes (opening 3, warm-up 5, main 15, discussion 4, closing check 3). Leave a day or two between lessons. The stop signal is used in every lesson, and the class warm-up from grade 1 starts every lesson.

Lesson	Title	Main activity
1	Jump patterns and soft landings	Forward and upward jumps; pattern cards; jumping over a still rope line
2	Short rope: turn, jump and first tricks	Choosing a rope; swing-stop-jump; jumps in a row; skier, bell, backward, rope-side swing
3	Long rope: turners, callers and running in	Snake and waves; turning together; start inside; running in and out with a chant
4	Heart, breathing and a rope circuit	Noticing breathing at rest and after a circuit; cool-down; sorting fictional activity cards
5	Trick chains, real praise and a check	Group chains of three tricks; show and specific praise; one-to-one check

Materials (whole class unless noted)

- A hall or cleared indoor space (or a flat, dry outdoor area) with a non-slip floor, well away from walls, windows and lights. Cones or floor spots to mark the edge.
- About 30 floor spots or hoops, one per child, laid at least 3 metres apart (every lesson).
- The stop signal, both heard and seen: a drum or tambourine plus a raised hand or a red card with a square (every lesson).
- The six grade 1 warm-up cards (march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently) (every lesson).
- Short ropes in three lengths with coloured handles, one per child plus spares; beaded or plastic-segment ropes are easiest to see and hear (lesson 1 as flat rope lines, one per pair; lessons 2, 3, 4 and 5).
- Floor tape, stuck down, for lines that wheelchair users roll over (lesson 1; a practice line apart from the long ropes in lesson 3).
- Up to three long ropes about 5 metres long, one per adult available to turn an end (lesson 3; one for check part 3 in lesson 5), with floor tape or chalk for a jumping box, a ready spot, a waiting line and an exit side at each.
- Picture cards: "soft landing" (lessons 1 and 2); "rope turn" and a rope check card (lesson 2; rope turn also lesson 3); "long rope roles" and the jump chant card (lesson 3); "heart speed" cat strip, three station signs (lesson 4); trick cards and a "praise starters" card, one set per group (lesson 5).
- Six jump pattern cards A-F, one set per group of four plus a large set (lesson 1; one set for a station in lesson 4; one set per group in lesson 5).
- Lesson 4: six Little Hill activity cards and two label cards per group of four; a wall, wall bars or a partner for the calf stretch.
- Lesson 5: paper and a pencil per group; the check sheet.
- A class list for notes (every lesson). Water available in every lesson.
- Ear defenders and a quiet spot at the edge for children who need them (every lesson).

- For blind or low-vision children: a sighted guide partner (every lesson); beaded ropes that click on the floor; floor tape lines with a tactile edge (lesson 1); raised-line (dried glue) copies of the soft landing, pattern A-D, rope turn, roles, heart speed, trick and praise starters cards.

⚠ Safety and access

- **Space:** every child works on their own spot, at least 3 metres from the next; check before each lesson that no rope can reach a wall, window, light, radiator or another child. Hair tied back; no jewellery; pockets empty; shoes as your school allows. The floor must be dry and not slippery.
- **Ropes:** a rope is for jumping only. Ropes are never put round a neck, wrist or body, never tied to anyone or anything, never swung at a person and never pulled tight while someone is in them. Carry ropes folded in one hand. Ropes go back in the box at the end, not into pockets. On the stop signal children catch the rope, hold both handles in one hand and freeze; long-rope turners let the rope fall slack.
- **Long ropes:** an adult turns one end at first; children learn to turn big, slow circles together before turning for others. One jumper at a time in the jumping box; the waiting line is at least 2 metres behind the ready spot, never in front of or behind the rope; the ready spot, caller and adults stay outside the rope's full sweep. Use only as many long ropes as there are adults; groups are at least 3 metres apart with a clear exit side.
- **Landings:** soft, bent-knee landings are taught first and praised all unit. Nobody jumps from or onto equipment.
- **Opt-in:** every jump is an invitation. Children choose the rope, the trick and how many jumps to try, can take a turner, caller or watcher role instead, and can rest at the edge with no reason needed. Never move a child's arms or rope without asking first.
- **Medical:** check records for conditions that affect exercise or jumping (asthma, heart, joint, epilepsy, diabetes, recent injuries) and follow each child's plan; keep inhalers to hand. Some children are told by their doctor not to jump; offer arm jumps, stepping patterns and turner or caller roles with no fuss.
- **Bodies are private:** never measure, count or record anyone's heart rate, breathing, height, weight or number of jumps, and never compare. Choosing a rope length is about the rope, not about anyone's size. Noticing your heart or breathing in lesson 4 is optional and private.
- **Moving in your own way:** a child who uses a wheelchair does the rope-side swing, "turn and lift" (lesson 2), arm jumps, rolls over a stuck-down floor tape line (not a loose rope, which can snag or shift under wheels), turns a long rope or is the caller, as the child chooses with their support plan; jumpers never jump close to a chair's wheels. Blind or low-vision children use beaded ropes that click on the floor and a guide who says "jump", "go" and "next"; deaf children see a hand drop for "jump" and every instruction shown as well as said. Non-speaking children point, sign or use their communication aid. "Your own way counts" is said in every lesson.
- **Home and family:** activities outside school appear only on fictional Little Hill cards. Never ask children what they do at home, record it or set home activity charts.

Assessment

- Lessons 1-4: the teacher watches for soft landings, patterns of three jumps, turning and jumping a short rope, a trick, safe long-rope roles and following the rope rules, and notes it on a class list.
- Lesson 5: a one-to-one check with five parts and an answer guide (about 3 minutes per child), done while groups practise. Plan extra small-group or one-to-one slots in the week to finish the checks. Each part is marked yes / with help / not yet. Numbers of jumps are never part of the mark, and "own way" versions count fully.
- "Show me a jump forward and a jump up, with soft landings." (Yes: both jumps land with bent knees and a freeze; own way: arm jumps or rolling over a line.)
- "Turn your rope and jump it a few times, then show me one trick." (Yes: turns from the wrists and jumps more than once, plus a skier, bell, backward or rope-side swing; own way: rope-side swing or turn and lift.)
- "Jump the long rope, or show me how you turn it or call for a jumper." (Yes: jumps the long rope from inside or runs in and out, turns big circles together with a partner, or as caller says "go" and "jump" at the right moments. Can be marked from lesson 3 notes; otherwise use the long rope with an adult turner.)
- "What happens to your heart and breathing when you jump rope? What does being fit mean? Why do we warm up and cool down?" (Yes: they speed up and slow down again when we rest; our body can do more of what we want, with one example such as skipping, swimming or dancing; warm-up gets the body ready, cool-down lets it slow down gently.)
- "Show me what you do on the stop signal. What could you say to praise a friend's jumping?" (Yes: catches the rope, holds both handles in one hand and freezes; gives a specific sentence such as "I saw your soft landings".)

Sources

- SHAPE America, "Grade-Level Outcomes for K-12 Physical Education" (2013), read 12 November 2026; quoted exactly; the unit is not a full alignment: https://www.shapeamerica.org/wp-content/uploads/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf
- S1.E3.3 (jumping and landing): "Jumps and lands in the horizontal and vertical planes using a mature pattern."
- S1.E27.3 (jumping rope): "Performs intermediate jump-rope skills (e.g., a variety of tricks, running in and out of long rope) for both long and short ropes."
- S3.E1.3b: "Identifies physical activity as a way to become healthier."
- S3.E2.3: "Engages actively in the activities of physical education class without teacher prompting."
- S3.E3.3: "Describes the concept of fitness and provides examples of physical activity to enhance fitness."
- S3.E4.3: "Recognizes the importance of warm-up and cool-down relative to vigorous physical activity."
- S4.E1.3: "Exhibits personal responsibility in teacher-directed activities."
- S4.E4.3a: "Works cooperatively with others."
- S4.E4.3b: "Praises others for their success in movement performance."
- The earlier rope outcomes (S1.E27.Ka to S1.E27.2b, such as "Jumps a long rope up to 5 times consecutively with student turners.", S1.E27.2b) and S1.E27.4 ("Creates a jump-rope routine with either a short or long rope.") are listed for context only.

- The grade 3 year plan (health and PE, term 2) and the health and PE progression by Gemini 4 Carbon.

Known gaps

- Four other agents text-checked this unit on 2026-11-12: Gemini 3.8 Flash (at d53e28a) reported no errors; Gemini 4 Carbon (at d53e28a/ccae023) reported three citation and recall errors; GPT-6.1 Terra (a bounded check of long-rope setup and wheelchair options at 7ae5531) reported safety and access wording problems. All reported items were fixed in 026c1c8 and 479930e, and Carbon and Terra re-checked those diffs (targeted diff checks, not fresh whole-unit reviews). Gemini 4 Argon (at 026c1c8 and 479930e) reported no errors. Those are text checks by AI agents, not a teacher review, classroom test or physical safety assessment.
- SHAPE America's outcomes are one US framework; other countries use other guidance. The unit quotes the outcomes but is not a full alignment.
- Earlier units in this collection (kindergarten to grade 2) did not teach the kindergarten to grade 2 rope outcomes (S1.E27.Ka to S1.E27.2b), so lessons 2 and 3 start from the basics; many classes will need more than one lesson for each.
- The grade 3 rope outcome expects intermediate skills on both ropes; a five-lesson unit gives a start, not mastery. The trick chain in lesson 5 is a small step towards the grade 4 routine outcome, which is not taught.
- S3.E1.3a (charting participation outside class) and S3.E5.3 ("Demonstrates, with teacher direction, the health-related fitness components.") are deliberately not covered, to keep home life and bodies private; the year plan's "choosing activities to try outside school" is done with fictional cards only.
- The heart and breathing explanations are simplified for eight-year-olds. Pulse counting is not taught.
- The soft-landing points, the rope check, the "front door" timing, the chant, the cat strip, the activity cards and the trick list are my own examples, not from a source; the "critical elements" of a mature jumping pattern are not listed in the outcomes document.
- Pacing is untested; long-rope work needs extra adults.
- The order of lessons, the games, the equipment list and the timings are my choice, not taken from a source.

Lesson 1: Jump patterns and soft landings

Unit overview - Next: Lesson 2

Goal: Children jump forwards (horizontal) and upwards (vertical) with soft landings, and join jumps into short patterns read from a card, then jump over a rope lying still on the floor.

Length: about 30 minutes.

Materials

- The cleared space, edge cones, and floor spots or hoops at least 3 metres apart, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The "soft landing" picture card (bend your knees, land on the front of your feet then heels, arms help, quiet feet, freeze).
- The six jump pattern cards A-F (see step 3), one set per group of four, plus one large set for the board.
- Short ropes laid flat on the floor as still "rope lines", one per pair (or floor tape lines); stuck-down floor tape lines for any child who uses a wheelchair.
- For blind or low-vision children: a sighted guide partner; raised-line (dried glue) copies of the soft landing card and of pattern cards A-D; floor tape lines with a tactile edge (a strip of thick tape on top).
- Water.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. "This term we are jumpers. We will jump in patterns, jump with ropes, and find out what jumping does to our hearts and our breathing." Agree the stop signal: stop, both feet still, freeze. "Your own way counts": anyone can step, roll, clap or use arm jumps instead of jumping, and anyone can rest at the edge with no reason needed.

Warm-up (5 min)

The class warm-up from grade 1, using the six cards: march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently. Add ten small "ankle bounces" on the spot (heels just off the floor) and "ankle circles" sitting down. "Jumping needs warm ankles and knees."

✎ Main activity (15 min)

1. **Soft landing (3 min).** Show the soft landing card. On their own spot, children jump straight up a little and land: knees bend, front of the feet then heels, quiet feet, freeze for "one, two". "Can you land so quietly that I can't hear you?" Try three or four times.

2. **Forward and up (3 min).** Two-foot jump forward off the spot and land (horizontal), then turn and jump back on. Then a two-foot jump up as high as feels safe (vertical). "Swing your arms back, then forward and up. Land soft and freeze."
3. **Pattern cards (6 min).** Groups of four, each child on their own spot, with a set of pattern cards. One child reads a card, everyone does it, then the next child picks a card. Cards:
4. A: jump forward, jump forward, jump up.
5. B: hop, hop (same foot), jump (two feet).
6. C: jump forward, jump back, jump up.
7. D: jump to the side, jump to the other side, jump up.
8. E: jump over the rope line, land, freeze.
9. F: make your own pattern of three jumps.

For card E, each pair shares one rope lying flat on the floor between their spots and takes turns. For card F, the group copies the child who made the pattern. 4. **Rope line (3 min).** Pairs with their flat rope line: jump over it forwards, then side to side over it ("skier"), then forward and back ("bell"). One partner watches and says "soft" or "try softer". These two jumps come back with a turning rope in lesson 2.

Children who prefer not to jump step over the line, do one-foot steps for hops, or do arm jumps (both arms up, then down, in the pattern).

✓ Discussion questions (4 min)

1. "What makes a landing soft?" (Bending the knees, landing on the front of the feet then the heels, freezing.)
2. "Which jump went far and which went high?" (A forward jump goes far: it is horizontal. A jump up goes high: it is vertical.)
3. "Why do we freeze after we land?" (So we are balanced and in control, and nobody bumps into us.)

✓ Closing check (3 min)

The teacher says three sentences; children show thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "A soft landing has bent knees." (True.)
2. "A jump up is a horizontal jump." (False: up is vertical; forward is horizontal.)
3. "Loud feet mean a soft landing." (False: soft landings are quiet.)

Vocabulary

jump, hop, land, soft landing, forward, horizontal, vertical, pattern, skier, bell, freeze

Differentiation

- **More support:** jump from a standing start only; hold a partner's hand or a wall for vertical jumps; use only cards A and C.

- **More challenge:** add a quarter turn to a jump up; make a pattern of four or five jumps for card F; land on one foot and hold still.
- **Moving in your own way:** a child who uses a wheelchair rolls forward and back over a stuck-down floor tape line (not a loose rope, which can snag or shift under wheels), chosen with the child and their support plan, or does arm jumps (arms up and down) in each pattern; a partner reads the card. Blind or low-vision children use raised-line cards and tactile tape lines with a guide who says "line".

⚠ Safety

- Spots at least 3 metres apart; arms-out check before starting.
- Ropes lie flat and still on the floor today; nobody picks them up or swings them. Check the floor is dry and not slippery.
- Jump only as high as feels safe; nobody jumps from or onto equipment.
- Counts and heights are private and never recorded or compared.

Teacher notes and misconceptions

- Many children land with straight legs and loud feet. "Land like a cat" (grade 2) or "land like frogs" (kindergarten) helps.
- "Horizontal" and "vertical" are new words for many children; link them to "flat like the floor" and "straight up like a tree".
- Some children are told by their doctor not to jump. Check records before the unit and offer arm jumps and stepping patterns with no fuss.

Lesson 2: Short rope: turn, jump and first tricks

Unit overview - Previous: Lesson 1 - Next: Lesson 3

Goal: Children turn a short rope over their head and jump it, first one turn at a time and then several turns in a row, and try one or two tricks (skier, bell, backward turn).

Length: about 30 minutes.

Materials

- The cleared space, edge cones, and floor spots or hoops at least 3 metres apart, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The "soft landing" picture card from lesson 1.
- Short ropes in three lengths with coloured handles (for example blue short, green medium, red long), one per child plus spares; beaded or plastic-segment ropes are easiest to see and hear.
- The "rope turn" picture card: rope behind your heels; hands by your hips; small circles with your wrists; jump when the rope is near your toes.
- A rope check card (stand on the middle of the rope with both feet; the handles should reach about the middle of your chest; if not, try another colour).
- For blind or low-vision children: a sighted guide partner; a beaded rope that clicks on the floor; raised-line copy of the rope turn card.
- Water.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. Show a short rope. "Today the rope moves. A rope is for jumping only: never around anyone's neck or body, never tied to anyone, and never swung at a person." Agree the stop signal: stop, catch the rope, hold both handles in one hand, freeze. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1 (six cards), then the lesson 1 ankle bounces and wrist circles ("rope turning comes from the wrists").

✎ Main activity (15 min)

1. **Choose a rope (2 min).** Each child takes a rope, goes to their spot and does the rope check card: stand on the middle, lift the handles. If the handles are much higher or lower than the middle of the chest, swap for another colour. Choosing a rope is about the rope, not about anyone's size; nobody comments on who has which colour.
2. **Swing and stop (3 min).** Rope behind the heels. Swing it over the head and stop it on the floor in front of the toes, then step over it. Then swing over and jump over it when it stops ("swing, stop, jump").
3. **Turn and jump (5 min).** Now swing and jump without stopping, one turn at a time with a small bounce in between if needed. Then try two or three turns in a row. Show the rope turn card: hands by the hips, small wrist circles, small jumps. Children count their own jumps in a row quietly and try to beat their own best; numbers are not said out loud or written down.
4. **First tricks (5 min).** Children choose one or two:
5. **Skier:** jump the turning rope landing a little to one side, then the other (like lesson 1's rope line).
6. **Bell:** jump the turning rope landing a little forward, then back.
7. **Backward:** start with the rope in front of the toes and swing it backward over the head.
8. **Rope-side swing:** hold both handles in one hand and swing the rope beside the body, jumping each time it hits the floor (no rope to trip over; good for anyone still learning).

Children who prefer not to jump can do the rope-side swing without jumping, or step over a still rope.

✓ Discussion questions (4 min)

1. "Where does the turning come from?" (Mostly the wrists, with hands down by the hips.)
2. "When do you jump?" (When the rope is about to reach your toes.)
3. "What did you do when the rope caught your feet?" (Stopped, set the rope behind the heels, and started again. That happens to everyone.)

✓ Closing check (3 min)

Thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "We turn a short rope mostly with our wrists." (True.)
2. "It's fine to put a rope round a friend's neck as a game." (False: never round anyone's neck or body.)
3. "On the stop signal we keep turning the rope." (False: catch it, hold both handles in one hand and freeze.)

Vocabulary

short rope, handles, turn, wrists, in a row, skier, bell, backward, trick

Differentiation

- **More support:** swing-stop-jump only; use the rope-side swing; a longer rope (it turns more slowly); a partner says "jump" each time.
- **More challenge:** skier and bell in a row; backward turns in a row; jogging on the spot while turning (one foot then the other).
- **Moving in your own way:** a child who uses a wheelchair does the rope-side swing from their chair, or holds both handles and swings the rope over the head and down in front of the footrests, then lifts it back ("turn and lift"); a partner can count. Blind or low-vision children use a beaded rope and listen for the click on the floor; a guide claps when the rope lands. Deaf children see the guide's hand drop for "jump".

⚠ Safety

- Spots at least 3 metres apart; arms-out check with the rope held in both hands at full stretch before starting.
- Ropes are never put round a neck or body, never tied to anyone or to anything, and never swung at a person. Ropes go back in the box at the end, not into pockets.
- Children who walk between spots carry the rope folded in one hand.
- Counts are private and never recorded or compared.

Teacher notes and misconceptions

- Most beginners turn with big arm circles and jump too high. "Hands by your pockets" and "small bunny jumps" help.
- Some children jump too early, before the rope arrives. Swing-stop-jump helps them see where it lands.
- Earlier units in this collection did not teach rope skills (see Known gaps), so many children are beginners here. That is expected.

Lesson 3: Long rope: turners, callers and running in

Unit overview - Previous: Lesson 2 - Next: Lesson 4

Goal: Children turn a long rope together with a partner, jump a long rope several times in a row, and try running in and out of a turning long rope; they take turns as turner, caller and jumper.

Length: about 30 minutes.

Materials

- The cleared space and edge cones; floor spots at least 3 metres apart for the short-rope area.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- Long ropes about 5 metres long, up to three (one per long-rope group, and only as many as there are adults to turn one end), with floor tape or chalk marking a "jumping box" under the middle of each rope, a "ready spot" beside one turner and outside the rope's full sweep (where the next jumper stands), a waiting line about 2 metres behind the ready spot, and an exit side.
- The short ropes from lesson 2, one per child in the short-rope half.
- A stuck-down floor tape line set apart from the long-rope areas, for hand-held practice.
- The "rope turn" card from lesson 2 and a "long rope roles" card: turner (big circles from the shoulder, rope just brushes the floor, watch the jumper), caller (says "go" when the rope hits the floor, and the count), jumper (in, jump, out), waiting line (behind the ready spot).
- The jump chant written on a large card: "Rope goes down, in I go. Jump, jump, out I go." (an original chant written for this unit).
- For blind or low-vision children: a sighted guide partner; a beaded long rope that clicks on the floor; raised-line copy of the roles card.
- Water.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. Show a long rope. "A long rope needs a team: two turners, a caller and a jumper. Everybody can try every job, you choose your jobs, and every job counts." Read the roles card together. Agree the stop signal: turners let the rope fall to the floor and everyone freezes. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1 (six cards), then big slow arm circles ("turner arms") and the ankle bounces from lesson 1.

✎ Main activity (15 min)

The class splits into two halves. After step 1, one half works at the long ropes (groups of about five; each rope needs an adult at one end at first, so with fewer adults use fewer ropes and swap groups more often) while the other half practises short-rope tricks from lesson 2 on their spots. In step 3 the halves swap, so everyone does the same long-rope work.

1. **Snake and waves (3 min, whole class, in turn at the long ropes).** Turners hold the long rope on the floor and wiggle it side to side ("snake") or make small waves. Jumpers jump over it without touching it, one at a time, from the ready spot to the exit side.
2. **Long rope, first half (6 min).**
3. Start inside (3 min). An adult turns one end with a child at the other at first. Turners stand facing each other, rope just touching the floor in the middle, and turn big circles from the shoulder together. A jumper stands in the jumping box beside the still rope; the turners start turning and the caller says "jump" each time the rope reaches the jumper's feet. Jump up to five times in a row, then run out to the exit side when the turners stop. Swap roles after every one or two jumpers.
4. Running in (3 min). The turners turn so the rope comes over the top towards the jumper and hits the floor in front of the jumper ("front door"). The jumper stands on the ready spot, beside a turner. When the rope hits the floor, the caller says "go" and the jumper runs into the jumping box, jumps when the rope comes round, then runs out the exit side. The group says the chant: "Rope goes down, in I go. Jump, jump, out I go."

Meanwhile the second half practises short-rope tricks on their spots. 3. **Long rope, second half (6 min).** Swap halves and repeat step 2: start inside, then running in. The first half now practises short-rope tricks.

Anyone who prefers not to run in can start inside every time, or be a turner or caller. Running in is an invitation, never required.

✓ Discussion questions (4 min)

1. "What does a good turner do?" (Turns big circles together with the other turner, lets the rope brush the floor, watches the jumper and stops the rope if the jumper gets caught.)
2. "When is the best time to run in?" (Just after the rope hits the floor, when the caller says "go".)
3. "How did your team help each other?" (Answers will vary: for example, the caller counted, turners slowed down, someone said "nice try".)

✓ Closing check (3 min)

Thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "Turners turn the rope together." (True.)
2. "The waiting line stands right next to the turning rope." (False: wait behind the ready spot, out of the rope's way.)

3. "If the jumper is caught, turners keep turning hard." (False: let the rope go slack or stop it.)

Vocabulary

long rope, turner, caller, jumper, run in, run out, front door, together, team

Differentiation

- **More support:** start inside only; turners turn slowly; the jumper practises at a stuck-down tape line set apart from the long-rope areas, jumping over it while holding an adult's hand, before trying the snake alone; with a turning rope, the adult stands outside the rope's sweep and says "jump".
- **More challenge:** run in, jump five times and run out; run in, jump and turn round once; run in on the caller's "go" without a wait.
- **Moving in your own way:** a child who uses a wheelchair can choose to turn the rope (a lighter rope, with an adult turning the other end), be the caller, or do arm jumps level with a turner, outside the rope's sweep, as the rope lands; jumpers never jump near the chair's wheels. Blind or low-vision children listen for the beaded rope's click with a guide who says "go" and "jump"; deaf children watch the caller's hand drop.

⚠ Safety

- The waiting line is at least 2 metres behind the ready spot, never in front of or behind the rope. Only one jumper at a time in the jumping box.
- The ready spot, waiting line, caller and anyone doing arm jumps stay outside the rope's full sweep. Adults turning or helping stay at the rope ends, never in the jumping box.
- Turners never pull the rope tight or whip it; if the jumper is caught, the turners let the rope go slack. Never wrap a rope round a hand, wrist, neck or body, and never tie a rope to a person.
- Long-rope areas at least 3 metres from walls, from the short-rope spots and from each other, each with a clear exit side that leads away from the other groups.
- Counts are private and never recorded or compared.

Teacher notes and misconceptions

- New turners often turn too fast or too high. "Brush the floor, big slow circles" and an adult at one end help a lot.
- Many children run in too late or stop in the middle to look at the rope. The caller's "go" and the chant give the rhythm.
- The "front door" description and the chant are my own teaching points, not from a source.
- Being a good turner is a real skill; praise turners as much as jumpers.
- With fewer long ropes, each child gets fewer turns in six minutes. Give the long-rope steps more time, or continue them in another lesson, rather than rushing the rotation.

Lesson 4: Heart, breathing and a rope circuit

Unit overview - Previous: Lesson 3 - Next: Lesson 5

Goal: Children notice that breathing and the heart speed up during jumping activity and slow down when resting, explain why we warm up and cool down, and sort fictional activity cards into activities that make the heart beat faster and resting activities.

Length: about 30 minutes.

Materials

- The cleared space, edge cones, and floor spots or hoops at least 3 metres apart, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The short ropes from lesson 2, one per child at the rope station.
- The jump pattern cards A-F from lesson 1, one set for the pattern station.
- Three station signs with pictures: "Short rope", "Jump patterns", "Skier jog" (jogging on the spot with small side-to-side steps).
- The "heart speed" picture strip: a cat asleep (slow), a cat walking (medium), a cat running (fast); one large copy for the board.
- The six Little Hill activity cards (see step 4), one set per group of four, and two label cards per group: "Heart beats faster" and "Heart stays slow (resting)".
- A wall, wall bars or a partner to hold for the calf stretch.
- For blind or low-vision children: a sighted guide partner; a beaded rope; raised-line copies of the heart speed strip, with the activity cards read aloud by a partner.
- Water (offer it after the circuit).
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. "Today we are scientists of our own bodies, but only inside our heads: nobody measures anyone, and nobody has to tell anyone what they notice." Show the heart speed strip. "Your heart pumps blood round your body all the time. When you are resting it is like the sleeping cat. Let's find out what happens when we jump." Agree the stop signal. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1 (six cards) and the lesson 1 ankle bounces. Ask: "Why do we warm up before jumping?" (It gets the body ready: the heart speeds up a little, muscles get warm, so jumping is easier and we are less likely to get hurt.)

✎ Main activity (15 min)

1. **Resting check (2 min).** Everyone sits still on their spot for about 30 seconds and notices their breathing. Anyone who wants to can put a hand flat on their chest. "Which cat is your heart like now? Think it, don't say it." Nobody counts beats out loud, writes anything down or shares.
2. **Rope circuit (6 min).** Three stations, about 2 minutes each, moving on at the stop signal: short rope (turn and jump, or a trick from lesson 2), jump patterns (pattern cards), skier jog. Children work at their own pace and can walk instead of jog. Then the stop signal and a quick check: "Which cat is your heart like now?" (Think it, don't say it.) Offer water.
3. **Cool-down (3 min).** Walk slowly round the edge of the space, then big slow breaths (breathe in as arms go up, out as arms come down), then a gentle calf stretch holding the wall or a partner, and a reach up tall. "Notice your breathing slowing back down, like the cat getting sleepy."
4. **Activity card sort (4 min).** Groups of four sort the six Little Hill cards under the two label cards:
5. A: Leo skips with a rope in the park.
6. B: Remy reads a comic on a bench.
7. C: Sana dances to music in the kitchen.
8. D: Mo plays a board game with a friend.
9. E: Kit swims in the pool.
10. F: Ana walks fast up the hill to the library.

Answers: heart beats faster: A, C, E, F. Heart stays slow (resting): B, D. "Both kinds are good for us: active play makes our hearts and muscles stronger, and rest helps our bodies recover." Then: "Which card would you like to try one day? Choose in your head; you don't have to say."

✓ Discussion questions (4 min)

1. "What happened to your breathing during the circuit?" (It got faster; for many people the heart got faster too, like the running cat.)
2. "Why do our heart and breathing speed up when we jump?" (Our muscles are working hard and need more air and blood, so the heart pumps faster and we breathe faster.)
3. "What does being fit mean?" (Our body can do the things we want to do, like playing, jumping and running for longer without getting too tired. Jumping rope, swimming, dancing and fast walking help.)
4. "Why do we cool down?" (To let the heart and breathing slow down gently, and to stretch muscles that have worked hard.)

✓ Closing check (3 min)

Thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "Jumping rope makes the heart beat faster." (True.)
2. "Reading a comic makes the heart beat as fast as swimming." (False: reading is resting; swimming is active.)

3. "We cool down after jumping to let the heart slow down gently." (True.)

Vocabulary

heart, beat, breathing, faster, slower, resting, active, fit, fitness, warm-up, cool-down, stretch

Differentiation

- **More support:** use only the cat pictures (point or think); sort only cards A and B first; walk instead of jog at the skier station.
- **More challenge:** suggest one more Little Hill card for each label; explain why warming up helps before jumping, not just after.
- **Moving in your own way:** a child who uses a wheelchair does arm pushes, arm jumps or the rope-side swing at each station and pushes slowly round the edge for the cool-down; the calf stretch becomes a shoulder and arm stretch. Blind or low-vision children use the raised-line strip and a partner reads the cards aloud. Children who prefer not to notice their heart can notice only their breathing, or simply rest.

⚠ Safety

- Never measure, count or record anyone's heart rate, breathing or body, and never compare. Noticing is private and optional.
- Children with asthma or heart conditions follow their own plan, keep inhalers to hand and can do the circuit at walking pace or rest.
- Spots at least 3 metres apart; ropes are never put round a neck or body, never tied to anyone.
- Activity cards show made-up children only. Do not ask what children do at home or outside school.

Teacher notes and misconceptions

- Some children think a fast heart is "bad" or frightening. Explain that a heart speeding up during play is normal and healthy, and it slows down again when we rest. A child who feels unwell (dizzy, chest pain, struggling to breathe) stops and tells an adult straight away.
- Some think resting is "lazy". Both activity and rest are part of being healthy.
- The cat strip and the activity cards are my own examples, not from a source.

Lesson 5: Trick chains, real praise and a check

Unit overview - Previous: Lesson 4

Goal: Groups plan, practise and show a short chain of three rope or jump tricks, give each other specific praise, and each child does a short one-to-one check.

Length: about 30 minutes (one-to-one checks continue in other slots).

Materials

- The cleared space, edge cones, and floor spots or hoops at least 3 metres apart, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The short ropes from lesson 2, one per child.
- The jump pattern cards A-F from lesson 1, one set per group of four.
- Trick cards, one set per group of four: basic turn and jump; skier; bell; backward; rope-side swing; jog on the spot while turning.
- A "praise starters" card: "I saw your ...", "Your ... was really ...", "You kept going when ...".
- Paper and a pencil per group (to write or draw the trick chain).
- One long rope with its jumping box, ready spot and waiting line from lesson 3, for check part 3 if needed (an adult turns one end, a child volunteer the other).
- The check sheet (see Assessment in the unit overview) and a class list for notes.
- For blind or low-vision children: a sighted guide partner; a beaded rope; raised-line copies of the trick cards and the praise starters card.
- Water.
- Ear defenders and a quiet spot at the edge for children who need them.

Steps

✎ Opening (3 min)

Sitting at the edge. "Today your group makes a trick chain: three tricks, one after the other. Then you show another group, and they tell you what they really saw you do well." Read the praise starters card together. Agree the stop signal: catch the rope, hold both handles in one hand, freeze. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1 (six cards), ankle bounces and wrist circles. Ask one child to say why we warm up (to get the heart and muscles ready).

✎ Main activity (15 min)

The teacher starts one-to-one checks during step 2 (about 3 minutes per child); another adult supervises the groups. Plan extra slots in the week to finish the checks.

1. **Plan a chain (3 min).** Each group chooses three tricks from the trick cards or pattern cards (for example: basic turn and jump, skier, bell) and writes or draws them in order on their paper. Every member can choose their own way of doing each trick (for example the rope-side swing instead of jumping).
2. **Practise (6 min).** Each child practises the chain on their own spot, with their own rope. Group members help each other remember the order and say "next" between tricks.
3. **Show and praise (6 min).** Two groups pair up. Group 1 shows its chain (everyone at once, each on their own spot) while group 2 watches; then swap. Each watcher gives one piece of specific praise using a starter: "I saw your soft landings", "Your skier was really neat", "You kept going when the rope caught". The performer says "thank you".

✓ Discussion questions (4 min)

1. "What makes praise helpful?" (It says exactly what was good, so the person knows what to keep doing.)
2. "How did your group decide on its chain?" (Answers will vary: for example, everyone suggested one trick, or we took turns choosing.)
3. "What is one thing your body can do now that it could not do at the start of the unit?" (Answers will vary; only share if you want to.)

✓ Closing check (3 min)

Thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "'I saw you land softly every time' is specific praise." (True.)
2. "'Good' is the most helpful praise we can give." (False: saying exactly what was good helps more.)
3. "We put ropes back in the box at the end, not in pockets." (True.)

Vocabulary

trick, chain, order, praise, specific, perform, watch, practise

Differentiation

- **More support:** a chain of two tricks; the rope-side swing; a partner says "next" and shows the next card.
- **More challenge:** a chain of four tricks; add a turn or a backward trick; move into a long rope with an adult turner if one is free.
- **Moving in your own way:** a child who uses a wheelchair does the rope-side swing, "turn and lift" (from lesson 2) or arm jumps in the chain. Blind or low-vision children use raised-

line trick cards with a guide who says "next". Non-speaking children give praise by pointing to a starter and showing, signing or using their communication aid.

⚠ Safety

- Spots at least 3 metres apart; groups that are watching stand at the edge of the performing group's area, never inside it.
- Ropes are never put round a neck or body, never tied to anyone, and go back in the box at the end.
- Counts are private; checks never record numbers of jumps.
- Praise is about what someone did, never about their body.

Teacher notes and misconceptions

- Children often give general praise ("good", "nice"). Model one specific sentence first and ask the class what made it specific.
- Some children find being watched hard. Every group member performs together, and a child can be the "next" caller instead of performing.
- Making a full jump-rope routine is a grade 4 outcome in SHAPE America's document; this chain of three tricks is a smaller first step (see Known gaps).

Grade 3 Health and PE: Striking, Fielding and Staying Safe (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check space, equipment, sun and water guidance and medical notes against your school's rules and PE guidance.
>
> Text-checked by four other agents (Gemini 3.8 Flash, Gemini 3.5 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on grade 2 Hitting and passing (bat grip, side-on stance, batting box and waiting line), grade 2 Healthy habits and a class game day (water, sun and heat) and grade 3 term 2 Jumping, rope and fitness (warm-up, cool-down, specific praise)

Big idea

We can strike a ball off a tee with a bat and send it forward into space, and we can field: watch the ball, get our body behind it, catch or stop it, and send it back with an underhand throw to a target. Striking and fielding games need clear places to stand, fair turns for everyone and rules that keep us safe. On a sports day outside we also look after ourselves: shade, a hat and water in the sun, and staying well back from ponds, rivers and pools, where only adults go in.

This is the third health and PE unit of the grade 3 year (term 3). Term 1 (by Gemini 4 Carbon) covered passing, dribbling, simple tactics, food as fuel and wheel safety; term 2 covered jumping, rope skills and fitness.

Outcomes

By the end of the unit a student can:

1. Strike a soft ball off a tee with a light bat, holding the bat with both hands together and standing side-on, sending it forward.
2. Catch a gently tossed soft ball from a partner, with hands ready, eyes on the ball and "soft hands" that give as the ball arrives.
3. Throw underhand to a partner or a target (a hoop or a "stopper" in a hoop) with reasonable accuracy, and stop a rolling ball by getting in line with it.
4. Choose where to hit (into a space away from fielders) and, as a fielder, where to stand and where to send the ball, in a small game with fair turns.
5. Follow the striking and fielding rules (bat down in the box, waiting line, fielding line, "ready" call), say why the rules matter and praise a team-mate's play.
6. Say two ways to stay safe in the sun on a sports day and what to do if a ball (or anything else) goes into water: stay back and tell an adult.

Prior knowledge

- From grade 2: bat grip (hands together, knuckles lined up), side-on stance, batting box, safety circle and waiting line; putting the bat down, never throwing it; drinking water, shade and hats on a game day.

- From grade 1: underhand throwing and catching with a partner.
- From grade 3 terms 1 and 2: the class warm-up and cool-down, open space, specific praise.
- Running round a cone and back is new as part of a game; earlier units in this collection did not play a striking and fielding game with runs.

Lessons

PE lessons are about 30 minutes (opening 3, warm-up 5, main 15, discussion 4, closing check 3). Leave a day or two between lessons. The stop signal is used in every lesson, and the class warm-up from grade 1 starts every lesson.

Lesson	Title	Main activity
1	Batting into space	Grip and side-on stance again; striking off a tee to a target zone; bat down in the box
2	Fielding: ready, stop, catch	Ready position; stopping a rolling ball; catching a gentle toss with soft hands
3	Throwing to the stopper	Underhand throws to a hoop and a stopper; a fielding relay back to the hoop
4	Tee and Cone: a game with fair turns	Small-group striking and fielding game with runs, a rotation card and class rules
5	Little Hill sports day: sun, water and a check	Sports day cards about sun and water; a short game; one-to-one check

Materials (whole class unless noted)

- A flat, dry field or playground with shade nearby (or a large hall for lessons 1-3 and a single game in lesson 4), well away from roads, ponds, windows and other classes. Cones or floor spots to mark the edge.
- About 30 floor spots or hoops, one per child (every lesson).
- The stop signal, both heard and seen: a drum or tambourine plus a raised hand or a red card with a square (every lesson).
- The six grade 1 warm-up cards (every lesson).
- Batting tees or tall cones, one per group of five or six (lessons 1, 4 and 5); light foam or plastic bats with a wide barrel, one per tee, plus shorter, lighter spares; large soft foam balls (about the size of a grapefruit), six per tee; a collecting bucket per tee.
- Floor tape or chalk and cones to mark, at each tee: a batting box with a hoop on the ground for the bat, a safety circle about 2 metres across, a waiting line at least 4 metres behind the safety circle, and a fielding line of cones in an arc at least 8 metres in front of the tee (lessons 1, 4 and 5).
- Soft foam or fabric balls about the size of a tennis ball, one per pair, a few larger soft balls, and beanbags, one per pair (lessons 2 and 3; and lessons 4 and 5 for children who choose them).
- Hoops lying on the ground as throwing targets, one per pair (lesson 3) and one "stop hoop" per game (lessons 3, 4 and 5); three coloured target zones (cones or chalk) in front of each tee (lesson 1).
- One cone per group to mark the rolling spot (lesson 3).
- Two cones per game for the run: a "home cone" just outside the safety circle and a "run cone" 6 metres away to the side (lessons 4 and 5).
- Picture cards, with words the teacher reads aloud: "bat grip" and "side-on" (from grade 2; lessons 1 and 5); "bat down" (lessons 1, 4 and 5); "ready position" (lessons 2, 3 and 5);

"soft hands" (lessons 2 and 5); "step and swing" underhand throw (lessons 3 and 5); the Tee and Cone layout card, rotation card and "class rules" card (lessons 4 and 5); four Little Hill sports day cards (lesson 5); "praise starters" (from term 2; lessons 4 and 5).
- A green "collect" card (green with a circle), as in grade 2 (lessons 1, 4 and 5).
- Lesson 4: a large sheet of paper and a marker for the class rules.
- Lesson 5: the check sheet and a pencil for the teacher; a spare tee or tall cone with a light bat, two large soft foam balls, soft balls, beanbags and a spare hoop for the check.
- A class list for notes (every lesson). Water to drink in every lesson, and a shaded spot and hats for every outdoor lesson.
- For children who use a wheelchair, if they choose: a lap tray and a grabber tool (lessons 2-5).
- Ear defenders and a quiet spot at the edge for children who need them (every lesson).
- For blind or low-vision children: a sighted guide partner (every lesson); bright, high-contrast balls and audible balls with a bell inside (lessons 1-5); a tee with a tactile marker on top; a small bell or a clapping partner as a sound target (lesson 3); raised-line (dried glue) copies of the bat grip, side-on, ready position, soft hands, step and swing, layout and sports day cards.

⚠ Safety and access

- **Space:** tees stand in one line, all facing the same way, so every ball is struck in the same direction and never towards another group. Leave at least 20 metres between tees outdoors; indoors, run only one or two games and keep other groups at a throwing station behind the tees. Put every run cone on the same side and every stop hoop on the other side. One adult watches each game, or each pair of games if they are side by side.
- **Bats:** only the batter holds a bat, only inside the batting box, and only swings when the stopper has called "ready". After a hit the bat is put down in the hoop in the box (never thrown, dropped while running or swung while walking). Before swinging, the batter looks round: "Is anyone in my circle?" Nobody stands beside or behind a batter inside the safety circle.
- **Waiting and fielding:** the waiting line is at least 4 metres behind the safety circle. Fielders stand behind the fielding line (at least 8 metres in front of the tee) until the ball is hit, then move. The next batter steps into the box only when every fielder is back behind the fielding line and the stopper calls "ready".
- **Balls:** only soft foam or fabric balls are used. Throws are underhand and gentle, to a person who is looking and has said "ready" or to a hoop on the ground. Fielders call "mine" before going for a ball, so two children do not run into each other.
- **Running:** the batter runs round the run cone and back, on the side away from the fielders and the stop hoop. Nobody stands on the running path. Walking or wheeling the run counts the same as running.
- **Sun and heat (outdoor lessons):** hats, shade breaks, and water before, during and after. Sunscreen follows your school's policy and families' wishes; adults never put sunscreen on a child without agreement. Never look at the Sun, even to find a high ball. Anyone who feels dizzy, sick or has a headache tells an adult, rests in the shade and drinks water.
- **Water:** never teach this unit next to open water without a fence and extra adults. In lesson 5 water safety is talked about with picture cards only; nobody goes near water. Never ask who can or cannot swim, and never ask about frightening things that have

happened near water. The sports day cards are about made-up Little Hill characters; any child can step away from the talk with no reason needed.
- **Opt-in:** every task is an invitation. Children choose the bat, ball size and tee height, can be stopper, fielder or counter instead of batter, and can rest at the edge with no reason needed. Never move a child's arms or bat without asking first.
- **Medical:** check records for conditions that affect exercise, heat or sun (asthma, heart, epilepsy, diabetes, skin or eye conditions, recent injuries, medicines that make skin sun-sensitive) and follow each child's plan; keep inhalers to hand.
- **Moving in your own way:** a child who uses a wheelchair bats from the chair off a tee raised to the right height, side-on to the tee if the chair allows, and wheels or is pushed on the run (on a firm, flat path; the run cone can be closer); fields with a partner who rolls balls to them or uses a grabber tool or a lap tray, as the child chooses with their support plan. Blind or low-vision children use audible balls, a tee with a tactile marker, and a guide who says "ball coming", "left", "right" and "home"; they may bat with the guide placing their hand on the ball first. Deaf children see every call as a sign or gesture as well as said: "ready" (thumbs up), "stop" (red card), "mine" (hand on chest). Non-speaking children point, sign or use their communication aid. "Your own way counts" is said in every lesson.
- **Scores and bodies:** runs are counted for the team, never for one child, and a game can be played with no score at all. Never record or compare how far anyone hits or throws.

Assessment

- Lessons 1-4: the teacher watches for grip and side-on stance, forward hits, ready position, stopping and catching, underhand throws to a target, choosing where to hit and following the rules, and notes it on a class list.
- Lesson 5: a one-to-one check with six parts and an answer guide (about 3 minutes per child), done while groups play. Plan extra small-group or one-to-one slots in the week to finish the checks. Each part is marked yes / with help / not yet. How far a ball goes is never part of the mark, and "own way" versions count fully.
- "Show me how you hold the bat and stand, then hit the ball off the tee." (Yes: hands together, side-on, the ball goes forward; own way: batting from a chair, a lower or higher tee, a bigger ball.)
- "Show me your ready position. Now catch this gentle throw." (Yes: knees bent, hands out and ready, eyes on the ball; catches with hands that give, or traps it against the body; own way: a lap tray or a roll.)
- "Throw underhand into the hoop." (Yes: faces the hoop, swings the arm back and forward, steps with the opposite foot and the ball lands in or near the hoop; own way: a roll or a beanbag.)
- "Where would you hit the ball in Tee and Cone, and why? If you are a fielder, where do you send the ball?" (Yes: into a space away from the fielders, so it is harder to reach; to the stopper in the stop hoop.)
- "Tell me two rules for batting and one way to make turns fair." (Yes: two of bat down in the hoop, swing only after "ready", wait behind the waiting line, stay behind the fielding line until the hit; fair turns such as three hits each, the rotation card or everyone tries every job.)
- "Tell me two ways to stay safe in the sun on sports day. What do you do if the ball rolls into a pond?" (Yes: two of hat, shade, drinking water, sunscreen as school and family agree,

telling an adult if you feel dizzy; stay back from the water and tell an adult; never go in after it.)

Sources

- SHAPE America, "Grade-Level Outcomes for K-12 Physical Education" (2013), read 12 November 2026; quoted exactly; the unit is not a full alignment: https://www.shapeamerica.org/wp-content/uploads/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf
- S1.E13.3 (underhand throw): "Throws underhand to a partner or target with reasonable accuracy."
- S1.E16.3 (catching): "Catches a gently tossed hand-size ball from a partner, demonstrating 4 of the 5 critical elements of a mature pattern."
- S1.E25.3 (striking, long implement): "Strikes a ball with a long-handled implement (e.g., hockey stick, bat, golf club), sending it forward, while using proper grip for the implement. Note: Use batting tee or ball tossed by teacher for batting."
- S2.E3.3: "Combines movement concepts (direction, levels, force, time) with skills, as directed by the teacher."
- S4.E3.3: "Accepts and implements specific corrective feedback from the teacher."
- S4.E4.3a: "Works cooperatively with others."
- S4.E4.3b: "Praises others for their success in movement performance."
- S4.E5.3: "Recognizes the role of rules and etiquette in physical activity with peers."
- S4.E6.3: "Works independently and safely in physical activity settings."
- S1.E14.3 (overhand throw: "Throws overhand, demonstrating 3 of the 5 critical elements of a mature pattern, in nondynamic environments (closed skills), for distance and/or force.") and S1.E24.3a (striking with a short implement: "Strikes an object with a short-handled implement, sending it forward over a low net or to a wall.") are listed for context only; they are not taught here.
- Wikipedia, "Rounders" (read 12 November 2026), for the idea of a batting and fielding game with runs round bases: https://en.wikipedia.org/wiki/Rounders
- "Rounders is a batting and fielding team game ..." and "Gameplay centres on a number of innings, in which teams alternate at batting and fielding." Tee and Cone is a much simpler class game of my own, not rounders or baseball.
- Wikipedia, "Tee-ball" (read 12 November 2026): https://en.wikipedia.org/wiki/Tee-ball
- Tee-ball "is intended as an introduction for children to develop bat-and-ball game skills and have fun", with the ball placed on an adjustable tee.
- Wikipedia, "Sunburn" (read 12 November 2026): https://en.wikipedia.org/wiki/Sunburn
- "Sun protective measures like sunscreen and sun protective clothing are widely accepted to prevent sunburn and some types of skin cancer." It adds that children are especially susceptible to sunburn.
- Wikipedia, "Heat illness" (read 12 November 2026): https://en.wikipedia.org/wiki/Heat_illness
- Prevention includes gradual adjustment to heat and sufficient fluids; very young children are at higher risk; symptoms may include headache, nausea and dizziness; treatment includes removing the person from the heat and replenishing fluids.
- Wikipedia, "Drowning" (read 12 November 2026): https://en.wikipedia.org/wiki/Drowning
- Steps to prevent drowning include "teaching children and adults to swim and to recognise unsafe water conditions, never swimming alone, ... limiting or removing access to water (such as with fencing of swimming pools), and exercising appropriate supervision."

- "A human rescue by swimming carries a risk for the rescuer, who could be drowned trying it." This is why the unit teaches children to stay out and call an adult; the word "drowned" is not used with children.
- The grade 3 year plan (health and PE, term 3) and the health and PE progression by Gemini 4 Carbon.

Known gaps and cautions

- Four other agents text-checked this unit on 2026-11-12 at b2a4766: Gemini 3.8 Flash, Gemini 3.5 Flash and Gemini 4 Argon reported no errors (Gemini 3.5 Flash's summary first described 45-minute lessons; the lessons are 30 minutes). Gemini 4 Carbon reported one quote error, materials gaps and a lesson 5 question that assumed a sunny day; all were fixed in 2ea17d8, and Gemini 4 Carbon re-checked the fixes. Those are text checks by AI agents, not a teacher review, classroom test or physical safety assessment.
- SHAPE America's outcomes are one US framework; other countries use other guidance. The unit quotes the outcomes but is not a full alignment. The "critical elements" of mature catching and throwing patterns are not listed in the outcomes document; the cue cards are my own simplified versions.
- SHAPE's outcomes are physical education outcomes. No health education standard was read for this unit; the sun, heat and water content rests on the general sources above and needs a check against your school's health guidance and local water-safety advice.
- This is not a swimming or water-rescue unit. It teaches only "stay back and tell an adult". Swimming lessons, if your school offers them, need qualified staff and their own guidance.
- Overhand throwing (S1.E14.3) and striking with a short implement over a net (S1.E24.3a) are grade 3 outcomes that this unit does not teach.
- Fielding a hit ball in a game is harder than catching a gentle toss; many children will stop and pick up the ball rather than catch it, which is fine at this stage.
- Tee and Cone, the layout distances, the cue cards, the rotation card and the sports day cards are my own examples, not from a source. The distances (2-metre safety circle, waiting line 4 metres behind it, fielding line at least 8 metres, 20 metres between tees) are cautious choices, not tested measurements.
- Pacing is untested; outdoor lessons depend on weather and need extra adults.
- The order of lessons, the games, the equipment list and the timings are my choice, not taken from a source.

Lesson 1: Batting into space

Unit overview - Next: Lesson 2

Goal: Children hold a bat with a correct grip, stand side-on to a tee and strike a soft ball forward, aiming for a chosen target zone, and follow the batting rules: swing only on "ready", bat down in the hoop, waiting line and fielding line.

Length: about 30 minutes.

Materials

- The space, edge cones and floor spots or hoops, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- One batting tee or tall cone per group of five or six, with a batting box, a hoop on the ground for the bat, a safety circle about 2 metres across, a waiting line at least 4 metres behind the safety circle and a fielding line of cones at least 8 metres in front, marked with tape, chalk or cones.
- Three target zones in front of each tee, beyond the fielding line: left, middle and right, each marked with a different coloured cone.
- One light foam or plastic bat per tee plus shorter, lighter spares; six large soft foam balls and a collecting bucket per tee.
- Picture cards: "bat grip" and "side-on" (from grade 2) and "bat down"; the green "collect" card.
- For blind or low-vision children: a sighted guide partner; audible or bright, high-contrast balls; a tee with a tactile marker on top; raised-line copies of the bat grip and side-on cards.
- Water; hats and shade if outdoors.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. "This term we are strikers and fielders. Strikers hit the ball into space; fielders stop it, catch it and send it back. At the end of the term we have a Little Hill sports day." Agree the stop signal: stop, freeze, and if you are holding a bat, put it down in the hoop. "Your own way counts": anyone can choose a bigger ball, a different tee height or another job, and anyone can rest at the edge with no reason needed.

Warm-up (5 min)

The class warm-up from grade 1, using the six cards: march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently. Add slow "trunk twists" (hands on hips, turn to look over one shoulder, then the other) and wrist circles. "Batting needs warm shoulders, wrists and a body that can turn."

✎ Main activity (15 min)

1. **Grip and side-on again (3 min).** Show the bat grip and side-on cards. Each child stands on their own spot with no bat and practises: hands together, one above the other, standing side-on with their front shoulder pointing where the ball will go. Children who bat left-handed stand the other way round; both ways are right. A slow "pretend swing" with empty hands, level, turning the hips.

2. **The batting rules (2 min).** At one tee, the teacher shows the rules with a volunteer:

    - Only the batter holds the bat, only in the box.
    - Look round before you swing: "Is anyone in my circle?"
    - Swing only when the adult (later, the stopper) says "ready".
    - After the hit, the bat goes down in the hoop. Never throw the bat.
    - Waiting children stand behind the waiting line. Fielders stand behind the fielding line until the ball is hit.
    - Balls are collected only when the green card is shown.

3. **Batting off the tee (8 min).** Groups of five or six at each tee. One batter, three fielders behind the fielding line, one or two waiting. Each batter has three hits, then moves to the fielders, a fielder moves to the waiting line, and the next child bats. Fielders collect balls only on the green card and roll them gently to the bucket beside the tee box (outside the safety circle); an adult puts the next ball on the tee. "Watch the ball, not the target, when you swing."

4. **Hitting into space (2 min).** For their last hit, each batter names a target zone first ("left", "middle" or "right") and tries to send the ball there. "Where is there space? Where are the fielders not?"

A child who uses a wheelchair bats from the chair off a tee raised to the right height. Blind or low-vision children use an audible ball and the tactile marker on the tee, and may touch the ball with the bat before the swing.

✓ Discussion questions (4 min)

1. "What does a good bat grip look like?" (Hands together, one above the other, knuckles lined up.)

2. "Why do we put the bat down in the hoop, and not throw it?" (A thrown bat could hit someone; the hoop keeps it in one safe place.)

3. "If the fielders are all on the left, where would you try to hit?" (To the right or the middle, into the space.)

✓ Closing check (3 min)

The teacher says three sentences; children show thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "The batter can swing as soon as they pick up the bat." (False: only after "ready", and after looking round.)

2. "Fielders wait behind the fielding line until the ball is hit." (True.)

3. "Hitting into a space makes the ball harder to stop." (True.)

Vocabulary

bat, grip, side-on, tee, strike, batter, fielder, batting box, safety circle, waiting line, fielding line, space, target zone

Differentiation

- **More support:** a larger ball, a wider bat or a lower tee; the adult steadies the tee; hit with no target zone.
- **More challenge:** name a target zone and hit it twice in a row; hit softly so the ball stops before the fielding line, then hard so it goes past it.
- **Moving in your own way:** batting from a chair off a raised tee; a shorter, lighter bat; for blind or low-vision children, an audible ball, a tactile marker on the tee and a guide who says "ball on the tee" and "ready".

⚠ Safety

- Tees in one line, all facing the same way; at least 20 metres between tees outdoors.
- Nobody inside the safety circle except the batter. Look round before every swing; swing only on "ready".
- The bat goes down in the hoop after every hit; never thrown.
- Balls are collected only on the green card.
- Soft foam balls only.

Teacher notes and misconceptions

- Many children swing down at the ball ("chopping") or look up at the target before they hit. "Eyes on the ball until it's gone" helps.
- Children often let go with one hand and throw the bat after hitting. Practise "hit, stop, bat down" without a ball before the first real hit.
- Some children bat from the left side; check the safety circle and waiting line are still clear of the swing on that side.

Lesson 2: Fielding: ready, stop, catch

Unit overview - Previous: Lesson 1 - Next: Lesson 3

Goal: Children take a ready position, stop a rolling ball by getting in line with it, and catch a gently tossed soft ball from a partner with eyes on the ball and soft hands; in threes they call "mine" so only one child goes for a ball.

Length: about 30 minutes.

Materials

- The space, edge cones and floor spots or hoops, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- Soft foam or fabric balls about the size of a tennis ball, one per pair, plus a few larger soft balls; beanbags, one per pair.
- Picture cards: "ready position" (feet apart, knees bent, hands out in front, eyes on the ball) and "soft hands" (hands reach out, then give as the ball arrives, like catching an egg).
- For blind or low-vision children: a sighted guide partner; audible balls with a bell inside and bright, high-contrast balls; raised-line copies of the ready position and soft hands cards.
- For children who use a wheelchair, if they choose: a lap tray or a grabber tool.
- Water; hats and shade if outdoors.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. "Last time we were strikers. Today we are fielders. A fielder is ready before the ball comes, gets their body behind it, and stops it or catches it." Remind the stop signal: stop, freeze, hold the ball. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1, using the six cards: march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently. Add "ready and go": children jog in open space; on "ready" they stop in the ready position; on "go" they jog again.

✎ Main activity (15 min)

1. **Ready position (2 min).** Show the ready position card. Everyone tries it on their own spot. "Could you move left or right quickly from here?" Try a quick side-step each way and back to ready.

2. **Stop a rolling ball (5 min).** Pairs, about 5 metres apart, each on their own spot. One partner rolls the ball gently along the ground; the other side-steps to get in line with it,

bends down with hands low and fingers pointing to the ground, and stops it. Swap after five rolls. Then roll a little to one side so the fielder has to move to get in line. "Get your body behind the ball."

3. **Catch a gentle toss (6 min).** Same pairs, about 3 metres apart. Show the soft hands card. The thrower says the catcher's name, waits for "ready", then tosses underhand and gently. The catcher reaches out, watches the ball into their hands and lets their hands give as it arrives. Above the waist: thumbs together; below the waist: little fingers together. Start with a beanbag if a ball is too hard; take one step back after three catches in a row, if the pair wants to.

4. **"Mine!" in threes (2 min).** Two pairs join to make a group of three fielders and one roller (the fourth child). The roller says "ready", then rolls the ball between two fielders. The fielder nearer the ball calls "mine" and stops it; the others stop and watch. Swap the roller.

Children who prefer not to catch can stop rolled balls only, or trap a toss against the body. A child who uses a wheelchair catches with a lap tray, stops a rolled ball with the hands or a grabber tool, or has a partner roll to a set spot, as the child chooses.

✓ Discussion questions (4 min)

1. "What is the ready position?" (Feet apart, knees bent, hands out, eyes on the ball.)
2. "How do you stop a ball that is rolling to one side of you?" (Move your feet to get in line with it, then hands low with fingers pointing to the ground.)
3. "Why do we call 'mine'?" (So only one person goes for the ball and nobody bumps into anyone.)

✓ Closing check (3 min)

The teacher says three sentences; children show thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "Soft hands give a little as the ball arrives." (True.)
2. "When the ball rolls to one side, you stay still and reach for it." (False: move your feet to get in line with it.)
3. "Everyone near the ball should run for it." (False: one person calls "mine".)

Vocabulary

field, fielder, ready position, in line, soft hands, catch, stop, roll, toss, "mine"

Differentiation

- **More support:** a larger soft ball or a beanbag; partners closer together; rolls only, straight to the fielder.

- **More challenge:** catch with one hand; catch a slightly higher toss; stop a roll that goes further to one side.
- **Moving in your own way:** a lap tray, a grabber tool or a partner who rolls to a set spot for a child who uses a wheelchair; audible balls and a guide who says "ball coming", "left" or "right" for blind or low-vision children; deaf children watch for a thumbs up for "ready" and a hand on the chest for "mine".

⚠ Safety

- Pairs on their own spots, at least 3 metres from the next pair.
- Soft balls only; throws are underhand and gentle, only to a partner who has said "ready".
- Only the child who calls "mine" goes for the ball.
- Never look at the Sun to follow a high ball; tosses stay low today.

Teacher notes and misconceptions

- Many children close their eyes or turn their head as the ball arrives. Soft, slow, low tosses with a beanbag first help them keep watching.
- Children often reach with stiff arms and the ball bounces off. "Catch an egg" helps them give.
- Some children run straight at a rolling ball and it goes past their feet. "Get in line, then get low" helps.

Lesson 3: Throwing to the stopper

Unit overview - Previous: Lesson 2 - Next: Lesson 4

Goal: Children throw underhand to a hoop and to a partner with reasonable accuracy, stepping with the opposite foot, and in a small group field a rolled ball and send it to a "stopper" in a hoop, who holds it up and calls "stop".

Length: about 30 minutes.

Materials

- The space, edge cones and floor spots or hoops, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- Soft foam or fabric balls about the size of a tennis ball, one per pair, and beanbags, one per pair.
- Hoops lying on the ground as targets, one per pair, and one "stop hoop" per group of five or six.
- One cone per group to mark the rolling spot.
- Picture cards: "step and swing" (face the target, arm swings back, step forward with the opposite foot, arm swings forward, let go at waist height, hand points at the target) and "ready position" (from lesson 2).
- For blind or low-vision children: a sighted guide partner; audible balls with a bell inside; a hoop with a sound target (a partner who claps or a small bell tapped in the hoop); raised-line copies of the step and swing card.
- For children who use a wheelchair, if they choose: a lap tray or a grabber tool.
- Water; hats and shade if outdoors.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. "A fielder who stops the ball has done half the job. The other half is sending it back fast and safely, so the batter has to stop running. Today we throw underhand to a target and to a stopper." Remind the stop signal: stop, freeze, hold the ball. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1, using the six cards: march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently. Add big slow arm swings forward and back, like a pendulum, with each arm.

✎ Main activity (15 min)

1. **Step and swing (3 min).** Show the step and swing card. On their own spot, children practise the throw with no ball: face the target, arm back, step with the opposite foot, swing forward, let go at waist height, hand points at the target. "If you throw with your right hand, step with your left foot." Then three throws each with a beanbag to a hoop about 3 metres away.

2. **Hoop and partner (5 min).** Pairs with one hoop between them. One partner throws underhand to land the ball in or near the hoop; the other collects it and throws back. After three throws each, the thrower chooses: a step further away, or throw to the partner's hands instead (the partner says "ready" first and uses soft hands from lesson 2).

3. **Fielding to the stopper (7 min).** Groups of five or six. One stop hoop on the ground with a stopper standing in it; a rolling spot (a cone) about 8 metres away where the roller stands, with the stopper to one side, never in the roller's path; three fielders in a spread line between them, all on the same side. The roller says "ready", then rolls the ball out towards the fielders. The nearest fielder calls "mine", stops it, turns to face the stop hoop and throws underhand to the stopper. The stopper catches or stops it, holds it up high and calls "stop!" Everyone counts aloud together how long it took ("one, two, three ..."), just for fun. Rotate after every three rolls: roller to fielder, a fielder to stopper, stopper to roller. "Can the team get it to the stopper faster by throwing to someone nearer?"

Children who prefer not to throw can roll the ball to the stopper. A child who uses a wheelchair throws from the chair, or is the stopper with a lap tray, as the child chooses.

✓ Discussion questions (4 min)

1. "Which foot do you step with in an underhand throw?" (The opposite foot to your throwing hand.)

2. "Why does the stopper call 'stop'?" (So everyone knows the ball is back; in the game, the batter has to stop running.)

3. "What made your team faster?" (Calling "mine", getting in line, a good throw, throwing to someone nearer.)

✓ Closing check (3 min)

The teacher says three sentences; children show thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "In an underhand throw, your hand points at the target at the end." (True.)

2. "You can throw to a partner before they say 'ready'." (False: wait for "ready".)

3. "The stopper stands in front of the roller." (False: the stopper is to one side, out of the way.)

Vocabulary

underhand throw, step, swing, target, accuracy, stopper, stop hoop, roller, "stop!", team

Differentiation

- **More support:** a beanbag or a larger ball; a closer target; roll to the stopper instead of throwing.
- **More challenge:** a smaller target (a hoop with a cone inside); throw to a partner who is walking slowly; a step further back.
- **Moving in your own way:** throwing from a chair, or stopper with a lap tray; for blind or low-vision children, a sound target (a clap or a small bell in the hoop) and a guide who says "ball coming" and "stopper on your left"; deaf children watch for the stopper's raised ball as "stop".

⚠ Safety

- Pairs and groups at least 3 metres apart; all groups roll in the same direction.
- Throws are underhand and gentle, only to a hoop or to someone who has said "ready". Nobody throws at a person who is not looking.
- The stopper stands to one side of the rolling line, never in front of the roller.
- Only the child who calls "mine" goes for the ball.

Teacher notes and misconceptions

- Many children step with the same foot as their throwing hand. Point to the step and swing card and try it slowly with no ball.
- Children often throw too hard to a close partner. "Throw so your partner can catch it" helps.
- The counting is for fun only. Never record how long a team took.

Lesson 4: Tee and Cone: a game with fair turns

Unit overview - Previous: Lesson 3 - Next: Lesson 5

Goal: Children play a small striking and fielding game, Tee and Cone, using the batting and fielding skills from lessons 1-3, take fair turns at every job, agree class rules and say why each rule matters, and praise a team-mate's play.

Length: about 30 minutes.

Materials

- The space, edge cones and floor spots or hoops, one per child.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- For each game (one per group of five or six): a batting tee or tall cone with a batting box, a hoop for the bat, a safety circle about 2 metres across, a waiting line at least 4 metres behind the safety circle, and a fielding line of cones at least 8 metres in front; a home cone just outside the safety circle and a run cone 6 metres away to one side; a stop hoop 5 metres to the other side of the tee, outside the safety circle, where the stopper stands facing the batter; a light bat plus a shorter, lighter spare; six large soft foam balls and a collecting bucket.
- Soft balls about the size of a tennis ball and beanbags for children who choose them.
- The Tee and Cone layout card (a picture of the tee, box, safety circle, waiting line, fielding line, home cone, run cone and stop hoop, with arrows for the run), the rotation card, the "bat down" card, the green "collect" card and the "praise starters" card (from term 2).
- A large sheet of paper and a marker for the class rules card.
- For blind or low-vision children: a sighted guide partner; audible balls; a tee with a tactile marker; a raised-line copy of the layout card.
- For children who use a wheelchair, if they choose: a lap tray or a grabber tool.
- Water; hats and shade if outdoors.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge, with the layout card. "Today we put batting, fielding and throwing together in a game called Tee and Cone." Walk through the layout card: the batter hits, puts the bat down in the hoop, then runs from the home cone, round the run cone and back. Each time round is one run for the team. The fielders get the ball to the stopper. When the stopper holds the ball up and calls "stop!", the batter stops. Remind the stop signal. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1, using the six cards: march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently. Add a jog round a cone and back, slowing down to turn.

✎ Main activity (15 min)

1. **Class rules (3 min).** Ask: "What rules will keep everyone safe and make turns fair?" Write the class's ideas on the large sheet, then make sure these are on it:

    - Swing only when the stopper says "ready", and look round first.
    - Bat down in the hoop before you run. Never throw the bat.
    - Wait behind the waiting line; field from behind the fielding line.
    - Call "mine"; throw only to someone who is looking.
    - Three hits each, then everyone moves on the rotation card.
    - We praise good play by everyone in the group.

    For each rule, ask: "Why does this rule matter?" (Safe, fair or both.)

2. **Play Tee and Cone (10 min).** Groups of five or six at each game: one batter, one stopper, three fielders, any others on the waiting line.

    - The stopper checks that every fielder is behind the fielding line, then calls "ready". The batter looks round, then hits.
    - The batter puts the bat down in the hoop and runs, walks or wheels from the home cone, round the run cone and back, as many times as they can.
    - The fielders call "mine", stop the ball and throw or roll it to the stopper, who holds it up and calls "stop!" The batter stops; any part-run does not count.
    - A miss is not a turn: the batter tries again (after three misses, they choose a bigger ball or a lower tee). After three hits, everyone moves on the rotation card: batter to fielder, one fielder to stopper, stopper to the waiting line, the next waiting child to batter (or stopper to batter if nobody is waiting).
    - The team counts its runs together, or plays with no score. Balls are collected only on the green card.

3. **Praise (2 min).** In their group, each child tells one team-mate something specific they did well, using the praise starters card ("I saw you ...", "Your ... helped the team because ...").

✓ Discussion questions (4 min)

1. "Where did you try to hit, and why?" (Into a space away from the fielders, so the ball was harder to stop and there was time to run.)

2. "As a fielder, where was the best place to send the ball?" (To the stopper, or to a team-mate nearer the stopper.)

3. "Which rule made the game fairer, and which made it safer?" (Fairer: three hits each and the rotation card. Safer: bat down, the waiting line and fielding line, "ready" and "mine".)

✓ Closing check (3 min)

The teacher says three sentences; children show thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "The batter runs while holding the bat." (False: the bat goes down in the hoop first.)
2. "Everyone gets a turn at every job." (True: the rotation card.)
3. "The batter keeps running after the stopper calls 'stop'." (False.)

Vocabulary

game, rule, fair, turn, rotation, run, home cone, run cone, stopper, "ready", "stop!", strategy, praise

Differentiation

- **More support:** a larger ball, a lower tee, the run cone closer; play with no score; an adult as stopper.
- **More challenge:** fielders choose where to stand before each hit; the batter names a target zone first; the run cone further away.
- **Moving in your own way:** a child who uses a wheelchair bats from the chair and wheels or is pushed on the run on a firm, flat path (the run cone can be closer), or is the stopper with a lap tray; blind or low-vision children bat with an audible ball and run with a guide who says "cone" and "home"; deaf children watch for a thumbs up for "ready" and the stopper's raised ball and red card for "stop!".

⚠ Safety

- Tees in one line, all facing the same way; run cones all on one side and stop hoops all on the other; at least 20 metres between tees outdoors.
- The stopper calls "ready" only when every fielder is behind the fielding line and nobody is inside the safety circle.
- The bat goes down in the hoop before the batter runs; nobody stands on the running path.
- Runs belong to the team; never record or compare one child's runs.

Teacher notes and misconceptions

- Fielders often all run for the ball together. Stop the game and practise "mine" again; give each fielder a starting spot (left, middle, right).
- Batters often forget to put the bat down. "Hit, bat down, go" can be said by the whole group.
- Some children find counting runs stressful. Playing with no score is fine; the group's runs are never compared with another group's.

Lesson 5: Little Hill sports day: sun, water and a check

Unit overview - Previous: Lesson 4

Goal: Children talk through four made-up Little Hill sports day cards and say how to stay safe in the sun and the heat and what to do if something goes into water (stay back and tell an adult), then play Tee and Cone while the teacher does a one-to-one check.

Length: about 30 minutes.

Materials

- The space, edge cones and floor spots or hoops, one per child, and a shaded spot for the talk.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The Tee and Cone set-up from lesson 4 for each game (tee, batting box, hoop for the bat, safety circle, waiting line, fielding line, home cone, run cone, stop hoop, light bat plus a spare, six large soft foam balls and a collecting bucket), the layout card, rotation card, class rules card, "bat down" card, green "collect" card and "praise starters" card.
- For the check: a spare tee or tall cone with a light bat and two large soft foam balls (part 1); soft balls about the size of a tennis ball, beanbags and one spare hoop (parts 2 and 3).
- Four Little Hill sports day picture cards (see step 1), one set per group of four, with words the teacher reads aloud.
- The "bat grip", "side-on", "ready position", "soft hands" and "step and swing" cards for the check.
- The check sheet (the six parts listed under Assessment in the unit overview) and a pencil for the teacher.
- For blind or low-vision children: a sighted guide partner; audible balls; a tee with a tactile marker; raised-line copies of the sports day cards and the layout card.
- For children who use a wheelchair, if they choose: a lap tray or a grabber tool.
- Water; hats and shade if outdoors.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting in the shade. "Today is our Little Hill sports day. First we think about how the people of Little Hill stay safe on a sports day, then we play Tee and Cone." Say that the cards are about made-up people and that anyone can step away from the talk with no reason needed. Remind the stop signal. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1, using the six cards: march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently. Add a sip of water at the end: "Sports day bodies need water before, during and after."

✎ Main activity (15 min)

1. **Sports day cards (5 min).** Groups of four, in the shade, with one set of cards. The teacher reads each card aloud; the group talks, then one child shares an idea. These are made-up examples, not from a source.
    - **Card A.** "It is a hot, sunny morning on the Little Hill field. Sana and Mo are about to play." What do they need? (Hats, shade between turns, water to drink, sunscreen if school and family agree; never look at the Sun.)
    - **Card B.** "Kit hits the ball hard. It rolls through a gap in the fence and into the pond on Pond Lane." What should Kit do? (Stop, stay well back from the water and tell an adult. Never go in after a ball. An adult decides what to do; a ball can always be left behind.)
    - **Card C.** "Meg has been playing in the sun for a long time. She feels dizzy and has a headache." What should Meg do? (Tell an adult, rest in the shade and drink water.)
    - **Card D.** "Ted sees a dog in the pond. It is splashing and cannot get out." What should Ted do? (Stay out of the water and back from the edge, and shout for an adult straight away. Children never go into water to help; adults know what to do.)

    Close the talk: "Water is only for playing or swimming when an adult says so and is watching."
2. **Little Hill sports day game (10 min).** Groups play Tee and Cone with the class rules from lesson 4 and the rotation card, with water breaks in the shade. While groups play, the teacher (or a second adult) takes children one at a time for the one-to-one check, using the check sheet and the cards, at a spare tee or spot away from the games. Parts 1-3 use a tee, a soft ball and the spare hoop; parts 4-6 are spoken (or signed, or pointed to on the cards).

Children who prefer not to play can be the stopper, a counter or a "rules helper" who checks that everyone is behind the lines before "ready".

✓ Discussion questions (4 min)

1. "On the Little Hill sports day, how could Sana and Mo stay safe in the sun?" (Hat, shade, water, sunscreen if agreed.)
2. "If a ball goes into a pond or river, what do you do?" (Stay back from the water and tell an adult; never go in after it.)
3. "Tell a team-mate one thing they did well this term." (Specific praise, for example "Your 'mine' call stopped us bumping into each other.")

✓ Closing check (3 min)

The teacher says three sentences; children show thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "If you feel dizzy in the sun, you tell an adult and rest in the shade." (True.)
2. "If the ball rolls into the pond, you go in and get it." (False: stay back and tell an adult.)
3. "The batter puts the bat down in the hoop before running." (True.)

Finish with a cool-down walk and a drink of water in the shade.

Vocabulary

sports day, sun, shade, hat, sunscreen, water, heat, dizzy, pond, adult, stay back

Differentiation

- **More support:** use cards A and B only; an adult reads and points to the pictures; answer by pointing to a picture (hat, shade, water, "tell an adult").
- **More challenge:** make a fifth sports day card for another group to talk about (for example a hot afternoon with no shade).
- **Moving in your own way:** batting from a chair, wheeling the run, or being the stopper with a lap tray; blind or low-vision children use raised-line sports day cards, audible balls and a guide; non-speaking children point to the answer pictures, sign or use their communication aid; deaf children see every card and every call shown as well as said.

⚠ Safety

- Hats, shade breaks and water throughout; sunscreen follows school policy and families' wishes. Never look at the Sun.
- The sports day cards are talked about only; nobody goes near water. Never ask who can or cannot swim, or about frightening things that have happened near water.
- All Tee and Cone rules from lesson 4 apply: tees in one line, bat down in the hoop, "ready" only when the fielders are behind the line.
- The check is never done while the teacher should be watching a game; another adult watches the games.

Teacher notes and misconceptions

- Some children think a cloudy day means no sun protection is needed. Follow your school's sun guidance for cloudy days.
- Some children think a good swimmer can go in to help. The unit's answer is the same for everyone: stay out and shout for an adult.
- A child who seems upset by card B or D can step away; follow up quietly and tell the school's safeguarding lead if anything worrying comes up.

Unit: Inputs, Outputs, Loops, and Debugging (Computing, Grade 3)

> **Unreviewed AI draft.** Written by Gemini 4 Argon (2026-11-04). No human teacher has reviewed this unit. All content is CC0 1.0 Public Domain.

Overview

Why does a toaster pop up when the timer finishes, or why does a video game character jump only when you press a button? Every computing device—and many everyday machines—takes in **inputs** from the outside world, follows a step-by-step **algorithm** (including **loops** and **if–then conditionals**), and produces **outputs**.

Across five 45-minute unplugged lessons, Grade 3 students act as "human computers" and "programmers" using only index cards, masking tape grids, pencils, and classroom objects. Students classify inputs and outputs, write exact grid-navigation algorithms (cross-linked with Grade 3 Society's Maps, routes, and places), compress repetitive step lists using `REPEAT` loops, evaluate `IF ... THEN ... ELSE` condition cards, and systematically find and fix intentional bugs in broken paper programs.

Prior knowledge

- Students can count to 20, distinguish left from right (or use North/South/East/West wall labels), and read short imperative sentences.
- Helpful cross-link: Maps, routes, and places (Society, Grade 3) introduces grid coordinates and route directions.
- Leads to: Binary, pixels, logic gates, and packet switching (Computing, Grade 6) and Computing & systems progression.

Learning goals

By the end of this unit, a student can:

1. Identify at least two **inputs** and two **outputs** for a familiar machine or computer program, and explain what rule happens in the middle (Lesson 1).
2. Write and execute a step-by-step **algorithm** (`FORWARD 1`, `TURN LEFT`, `TURN RIGHT`, `PICK UP`) on a 5×5 grid without skipping steps or assuming unstated context (Lesson 2).
3. Rewrite a repetitive sequence of instructions using a numbered **`REPEAT n TIMES`** loop and verify that both versions reach the exact same square (Lesson 3).
4. Trace an algorithm containing **`IF ... THEN ... ELSE`** conditional branches against different starting conditions and predict the exact outcome (Lesson 4).
5. Locate the exact line where a buggy algorithm diverges from its intended goal (**debugging**), classify the bug (wrong direction, off-by-one count, or missing step), and test a repair (Lesson 5).

Lesson sequence

Lesson	Title	Time	Core idea
Lesson 1	What Goes In, What Comes Out: Inputs, Processing, and Outputs	45 min	Machines and programs take **inputs**, apply a rule (**processing**), and produce **outputs**
Lesson 2	Step by Step: Writing Exact Grid Algorithms	45 min	Computers follow instructions literally in order; missing or vague steps cause wrong results
Lesson 3	Doing It Again: `REPEAT` Loops and Pattern Compression	45 min	A **loop** repeats a group of steps a set number of times so programs stay short and clear
Lesson 4	Making Choices: `IF ... THEN ... ELSE` Conditionals	45 min	**Conditionals** let an algorithm check a true/false question and choose between two paths
Lesson 5	Bug Hunters: Finding and Fixing Broken Algorithms	45 min	**Debugging** means tracing a program step by step, comparing actual vs. expected state, and fixing the fault

Materials for the whole unit

No computers or tablets are required. Everything runs unplugged:

- Paper, pencils, and 5–10 blank index cards per student pair
- Masking tape or chalk to mark one 5×5 floor grid (or printed 5×5 tabletop grids with coins/erasers as robot tokens)
- Printed or hand-written instruction cards (`FORWARD 1`, `TURN LEFT`, `TURN RIGHT`, `REPEAT`, `IF / ELSE`)

Assessment summary

Each lesson ends with a 3-question exit check with worked answers. In Lesson 5, student pairs complete a 3-bug diagnostic repair sheet where they circle the exact failing line, write the corrected instruction, and verify the fix on a 5×5 grid.

Sources

These are general references that a teacher can use to check definitions and historical context. All links were checked to load on 2026-11-04.

- Input–process–output (IPO) model: https://en.wikipedia.org/wiki/IPO_model
- Algorithm: https://en.wikipedia.org/wiki/Algorithm
- Control flow — Loops (`REPEAT`): https://en.wikipedia.org/wiki/Control_flow#Loops
- Conditional (`IF ... THEN ... ELSE`): https://en.wikipedia.org/wiki/Conditional_(computer_programming)
- Debugging (including Grace Hopper's 1947 Harvard Mark II moth logbook entry): https://en.wikipedia.org/wiki/Debugging
- Bell, T., Witten, I. H., & Fellows, M. (2015). CS Unplugged (background reference for unplugged grid-programming pedagogy; all text, grid maps, and problems in this unit are newly written from scratch under CC0): https://www.csunplugged.org/

Known gaps and cautions

- **Unreviewed AI draft:** This unit has not yet been reviewed by a human classroom teacher or tested with Grade 3 students.

- **Relative vs. cardinal turns on a grid:** In Lesson 2, `TURN LEFT` and `TURN RIGHT` rotate the robot 90 degrees in place on its current square without moving it forward, matching turtle graphics and floor robots. Some students initially expect `TURN RIGHT` to also step one square to the right; Lesson 2 highlights this explicitly as a common misconception and recommends placing a small paper arrow on the token to show which way the robot is facing.
- **Count-controlled loops only:** Lesson 3 introduces fixed count-controlled loops (`REPEAT n TIMES`). Condition-controlled loops (`REPEAT UNTIL` / `WHILE`) and nested loops are intentionally left for Grades 4–5 (`units/computing/progression.md`) so Grade 3 students first master single-level loop unrolling and step counting.
- **Single-condition branches:** Lesson 4 uses single `IF ... THEN ... ELSE` checks evaluated at the moment the robot reaches a square. Compound boolean logic (`AND`, `OR`, `NOT`) is deferred to Grade 6 (Binary, pixels, logic gates, and packet switching).

Lesson 1: What Goes In, What Comes Out — Inputs, Processing, and Outputs

- **Unit:** Inputs, Outputs, Loops, and Debugging (Computing, Grade 3)
- **Time:** 45 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will identify the **inputs** (information or signals going in), **processing** (the rule or check inside), and **outputs** (actions, sounds, or displays coming out) for everyday devices and simple games.

Materials

- Whiteboard or chart paper drawn with a three-column table: **Input (In)** | **Processing (Rule Inside)** | **Output (Out)**
- 3 blank index cards and 1 half-sheet of paper per pair of students (plus exit-check slips)
- Everyday classroom items to point to (pencil sharpener, wall light switch, classroom sink faucet, digital clock)

Vocabulary

- **Input:** Information, a button press, or a sensor reading that goes into a machine or program.
- **Processing:** The rule or calculation the machine uses to decide what to do with the input.
- **Output:** What the machine shows, plays, or does as a result (such as lighting a screen, playing a beep, or moving a part).

Lesson flow

1. Warm-up: The Mystery Rule Box (8 min)

1. Tell the class: "I am a Mystery Rule Box. Give me a whole number between 1 and 10 (**my input**). I will apply a secret rule inside my head (**processing**) and say a new number (**my output**)."
2. Take three student inputs and respond using the rule **Input + 3 = Output**:
3. Student says `2` → Teacher says `5`
4. Student says `6` → Teacher says `9`
5. Student says `10` → Teacher says `13`
6. Ask students to whisper to a partner what the secret rule inside the box is, then predict the output for input `4` (answer: `7`).
7. Label the three parts on the board:
8. **Input:** the number spoken to the box (`4`)
9. **Processing:** add 3 (`4 + 3`)
10. **Output:** the number spoken back (`7`)

2. Direct instruction: Everyday Input–Process–Output Machines (12 min)

Walk through three real-world examples together and fill in the three-column board table:

Machine / System	Input (What goes in?)	Processing (What rule happens inside?)	Output (What comes out?)
Toy crosswalk model (hypothetical classroom example; real traffic signals vary by intersection, and pedestrians must always look and follow real road-safety rules)	Pedestrian presses the request button	Controller waits for the scheduled safe crossing phase in the light cycle	White "WALK" sign lights up and speaker chirps
Microwave oven	User presses `1`, `0`, `0` and `START`	Counts down 60 seconds while running the heater; stops if door opens	Food warms up, screen shows `0:00`, buzzer beeps
Video game jump	Player presses the `A` button	Game checks if the character's feet are touching the ground	Character sprite moves upward on the screen and plays a jump sound

> **Common misconception to watch for:** Students often confuse **ingredients/materials** with **information inputs**. For example, in a microwave, the cold food is the object being heated, while the **button presses (`1:00`, `START`)** and the **door-closed switch** are the control inputs that tell the microwave's computer what to do. Accept both in Grade 3, and gently ask: "Which input gives the machine information about when to start or stop?"

3. Guided practice: Pair Card Sort & Invention (15 min)

1. Give each pair three index cards labeled **INPUT**, **PROCESSING**, and **OUTPUT**.
2. Read three short scenarios aloud. For each one, pairs write the three parts on their cards and hold up the **OUTPUT** card when ready:
3. **Scenario A (Automatic Night-Light):** A hallway light has a light sensor. When the room gets dark, it turns on the bulb.
    - Input: Room brightness measured by the light sensor.
    - Processing: Check if brightness is below the dark threshold.
    - Output: LED bulb turns on (or stays off).
4. **Scenario B (Spelling Quiz App):** A student types `B-E-C-A-U-S-E` on a keyboard and taps Check.
    - Input: Letters typed on the keyboard and the Check tap.
    - Processing: Compare typed letters against the stored word `"BECAUSE"`.
    - Output: Green checkmark on screen and "+1 point".
5. **Scenario C (Classroom Sink Faucet with Sensor):** A student holds their hands under an automatic sink spout.
    - Input: Hand-sensor reading showing hands are directly under the spout.
    - Processing: Check if sensor detects an object within range for less than 20 seconds.
    - Output: Water valve opens and water flows from the spout.
6. **Design Your Own Helper Machine (last 7 minutes):** Each pair invents a classroom helper machine (for example, a "Lost Pencil Finder" or "Library Book Return Checker") and writes or draws at least **2 inputs**, **1 processing rule**, and **2 outputs** on their pair half-sheet of paper.

✓ 4. Wrap-up & Exit check (10 min)

Students answer independently on a slip of paper:

1. An automatic supermarket door opens when a person steps on the rubber mat in front of it. What is the **input** and what is the **output**?
2. A number-machine uses the processing rule **"Double the input number, then subtract 1."** If the input is `5`, what is the output?
3. Look at a digital alarm clock. Name one **input** a human gives it, and one **output** the clock gives back.

Worked answers for exit check

1. **Input:** Weight/pressure on the rubber floor mat (or motion sensor detecting a person). **Output:** The glass doors slide open.
2. **Output:** `9` (because `5 × 2 = 10`, and `10 − 1 = 9`).
3. **Input:** Pressing the "Set Alarm" or "Snooze" buttons (or setting the time). **Output:** Glowing numbers on the screen or the buzzing sound at 7:00 AM.

Lesson 2: Step by Step — Writing Exact Grid Algorithms

- **Unit:** Inputs, Outputs, Loops, and Debugging (Computing, Grade 3)
- **Time:** 45 minutes
- **Grouping:** Pairs ("Programmer" and "Robot")

Learning objective

Students will write and trace an exact, ordered sequence of instructions (**an algorithm**) to guide a robot token from a start square to a goal square on a 5×5 grid while avoiding obstacles.

Materials

- One printed 5×5 grid per pair (columns labeled `A–E` left to right, rows labeled `1–5` bottom to top, matching Maps, routes, and places)
- One small flat object with a clear "front" per pair (a paper triangle, a toy car, or a coin with a drawn arrow) to serve as the **Robot**
- 3 small erasers or paper squares marked `X` as **Rocks (Obstacles)** and 1 star token `★` as the **Goal**

Vocabulary

- **Algorithm:** A clear, step-by-step list of instructions for solving a problem or finishing a task.
- **Sequence:** The exact order in which instructions are carried out, from first to last.
- **Command:** A single allowed instruction that the robot understands without guessing.

Allowed Robot Commands (Write on the board)

The robot **only** understands these four commands—nothing else:

1. `FORWARD 1` — Move 1 square in the direction the robot's nose is currently pointing.
2. `TURN LEFT` — Rotate 90° counter-clockwise **on the same square** (do not move forward!).
3. `TURN RIGHT` — Rotate 90° clockwise **on the same square** (do not move forward!).
4. `PICK UP` — Pick up the star `★` on the current square.

Lesson flow

1. Warm-up: The Literal Teacher Robot (8 min)

1. Draw a 3×3 grid on the board with the Robot at the bottom-left (`A1`) pointing **North (up)**, a Rock `X` at `A2`, and a Star `★` at `B2`.
2. Ask a volunteer to tell you how to get the star. If the student says "Go over to the star" or "Turn right and go up," act as a literal robot:
3. On `TURN RIGHT`, rotate your arrow to face **East (right)** while staying on `A1`!
4. Point out the #1 grid-programming surprise: **`TURN RIGHT` only spins the robot in place—it does not move the robot onto the next square!**

5. Together, write the exact 5-step algorithm on the board and trace the robot's square and facing direction after every single line:
6. `TURN RIGHT` (at `A1`, now facing East)
7. `FORWARD 1` (moves to `B1`, still facing East)
8. `TURN LEFT` (at `B1`, now facing North)
9. `FORWARD 1` (moves to `B2`, facing North)
10. `PICK UP` (picks up `★` at `B2`)

2. Direct instruction: Why Order (Sequence) Matters (10 min)

Compare two 3-step algorithms starting at `A1` facing North, with a Rock `X` at `A2`:

- **Algorithm 1:** `TURN RIGHT` → `FORWARD 1` → `TURN LEFT` (Robot lands safely on `B1` facing North).
- **Algorithm 2 (same three cards in a different order):** `FORWARD 1` → `TURN RIGHT` → `TURN LEFT` (Step 1 crashes straight into the Rock at `A2`!).

Emphasize: even when two algorithms contain the exact same command cards, changing the **sequence** changes what happens at each step.

3. Guided practice: Programmer & Robot Grid Challenges (17 min)

Students work in pairs on their 5×5 grid (`A1` is bottom-left, `E5` is top-right):

- **Role 1 — The Programmer:** Writes the numbered list of commands on paper without touching the robot token.
- **Role 2 — The Robot:** Reads the Programmer's written list out loud and moves the triangle token **literally** one step at a time, without helping or skipping mistakes.
- After Puzzle 1, partners switch roles for Puzzle 2.

Puzzle 1: - Start: `A1`, facing **North (up)** - Obstacles (`X`): `A3`, `B2` - Goal (`★`): `C3` - Task: Write an algorithm that reaches `C3` and runs `PICK UP`.

Puzzle 2 (Switch roles): - Start: `A5` (top-left), facing **East (right)** - Obstacles (`X`): `C5`, `B3` - Goal (`★`): `D4` - Task: Write an algorithm that reaches `D4` and runs `PICK UP`. Challenge: Can you compare your total step count with a neighboring pair?

✓ 4. Wrap-up & Exit check (10 min)

On a 5×5 grid where `A1` is bottom-left and the Robot starts at **`B1` facing North (up)**:

```
Row 3:  [A3]  [B3]  [C3]  [D3★]
Row 2:  [A2]  [B2]  [C2]  [D2]
Row 1:  [A1] [B1▲]  [C1]  [D1]
```

Answer these three questions:

1. Trace this algorithm from `B1` facing North:
2. Step 1: `FORWARD 1`
3. Step 2: `TURN RIGHT`
4. Step 3: `FORWARD 1`
5. Step 4: `FORWARD 1` Which square is the Robot standing on now, and which direction (`North`, `East`, `South`, or `West`) is it facing?
6. After Step 4 above, what **three** final commands are needed to reach `[D3★]` and pick up the star?

7. Why doesn't `TURN RIGHT` move the robot from `B2` to `C2`?

Worked answers for exit check

1. After Step 1 (`FORWARD 1`), the robot is on `B2` facing North. After Step 2 (`TURN RIGHT`), it is still on `B2` facing East. After Step 3 (`FORWARD 1`), it is on `C2` facing East. After Step 4 (`FORWARD 1`), it is on **`D2` facing East**.
2. The three final commands are: Step 5: `TURN LEFT` (now at `D2` facing North), Step 6: `FORWARD 1` (moves to `D3`), and Step 7: `PICK UP`.
3. Because `TURN RIGHT` only rotates the robot 90° in place on its current square; a separate `FORWARD 1` command is required to move to the next square.

Lesson 3: Doing It Again — `REPEAT` Loops and Pattern Compression

- **Unit:** Inputs, Outputs, Loops, and Debugging (Computing, Grade 3)
- **Time:** 45 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will identify repeating patterns in an algorithm and rewrite them using **`REPEAT n TIMES`** loops, counting both single-command loops and multi-step block loops accurately.

Materials

- 5×5 tabletop grids and robot tokens from Lesson 2
- Highlighters or colored pencils (2 colors per pair) for circling repeating blocks of steps
- Optional: 3 action symbol cards per student (`CLAP`, `TAP`, `SNAP`) for students who prefer pointing during the warm-up

Vocabulary

- **Loop:** An instruction that tells the computer to repeat one or more steps a specific number of times.
- **Iteration:** One complete trip through the steps inside a loop.
- **Pattern compression:** Making a long algorithm shorter and easier to read by replacing repeated steps with a loop.

Lesson flow

1. Warm-up: The Clap-Tap-Snap Loop (7 min)

1. Write this 12-step dance algorithm on the board: `CLAP`, `TAP DESK`, `SNAP`, `CLAP`, `TAP DESK`, `SNAP`, `CLAP`, `TAP DESK`, `SNAP`, `CLAP`, `TAP DESK`, `SNAP`
2. Have the class perform or trace it together (students may perform the gestures, speak the words `"Clap, Tap, Snap"`, or point to three symbol cards on their desk), then ask: "My hand got tired writing 12 lines! What smaller group of steps kept repeating, and how many times did it happen?"
3. Rewrite it together using a **block loop** with an indented bracket: `REPEAT 4 TIMES: CLAP TAP DESK SNAP`
4. Check the math: `3 steps inside the loop × 4 repetitions = 12 actions executed`.

2. Direct instruction: Single-Step vs. Staircase Block Loops on a Grid (13 min)

Show two grid examples on the board starting at **`A1` facing North**:

Example A — Crossing a straight hallway (`A1` to `A5`): - Long version (4 lines): 1. `FORWARD 1` 2. `FORWARD 1` 3. `FORWARD 1` 4. `FORWARD 1` - Looped version: `REPEAT 4 TIMES: FORWARD 1`

Example B — Climbing a diagonal staircase from `A1` (bottom-left) to `D4`: Draw stairs going up and right (`A1 → A2 → B2 → B3 → C3 → C4 → D4`). 1. First, write out the long 12-line movement algorithm and have students circle the repeating 4-step unit in colored pencil: - `[FORWARD 1, TURN RIGHT, FORWARD 1, TURN LEFT]` (moves from `A1` facing North to `B2` facing North!) - `[FORWARD 1, TURN RIGHT, FORWARD 1, TURN LEFT]` (moves from `B2` facing North to `C3` facing North!) - `[FORWARD 1, TURN RIGHT, FORWARD 1, TURN LEFT]` (moves from `C3` facing North to `D4` facing North!) 2. Compress the 12 movement lines into a single block loop (and if a Star `★` is placed on `D4`, add `PICK UP` once after the loop finishes): `REPEAT 3 TIMES: FORWARD 1 TURN RIGHT FORWARD 1 TURN LEFT` 3. **Crucial question for the class:** "Why is that fourth command (*`TURN LEFT`*) inside the loop so important?" - Answer: Without `TURN LEFT` at the end of Iteration 1, the robot finishes Iteration 1 on `B2` facing **East** instead of **North**, so Iteration 2's `FORWARD 1` walks to `C2` instead of `B3`! A loop works cleanly when the robot ends each repetition facing the right direction for the next repetition.

3. Guided practice: Loop Compression Workshop (15 min)

Pairs solve three loop puzzles on their worksheets and verify each one with their robot token on the 5×5 grid:

1. **Puzzle A (Shrink the Perimeter Walk):** A guard robot starts at `A1` facing North and walks all the way around the outside edge of the 5×5 grid (`A1 → A5 → E5 → E1 → A1`, ending facing North).
2. Hint: Along one side of a 5×5 grid, how many `FORWARD 1` steps does it take to go from corner `A1` to corner `A5`? (Answer: `4` steps, because `A1 → A2 → A3 → A4 → A5` is 4 moves!).
3. Pairs write a loop that repeats 4 times to walk all 4 sides of the square.
4. **Puzzle B (Unroll the Loop):** Trace this algorithm starting at `A1` facing East and mark every square the robot visits: `REPEAT 2 TIMES: FORWARD 1 FORWARD 1 TURN LEFT`
5. **Puzzle C (Steps Outside the Loop):** Compress this 7-step algorithm so it uses a `REPEAT` loop plus the leftover step at the end: `FORWARD 1`, `TURN RIGHT`, `FORWARD 1`, `TURN RIGHT`, `FORWARD 1`, `TURN RIGHT`, `PICK UP`

✓ 4. Wrap-up & Exit check (10 min)

1. Rewrite this 8-step algorithm using a `REPEAT` loop: `FORWARD 1`, `PICK UP`, `FORWARD 1`, `PICK UP`, `FORWARD 1`, `PICK UP`, `FORWARD 1`, `PICK UP`
2. How many total individual actions does the robot perform when it runs this program? `TURN RIGHT REPEAT 3 TIMES: FORWARD 1 TURN LEFT PICK UP`
3. A robot starts at `A1` facing **North**. It runs: `REPEAT 3 TIMES: FORWARD 1` Does it land on `A3` or `A4`? Explain why.

Worked answers for exit check

1. Loop version: `REPEAT 4 TIMES: FORWARD 1 PICK UP`
2. **8 actions total:** `1` (`TURN RIGHT` before the loop) + `3 × 2 = 6` actions inside the loop + `1` (`PICK UP` after the loop) = `8`.
3. It lands on **`A4`** (not `A3`), because it starts on `A1`: Move 1 goes `A1 → A2`, Move 2 goes `A2 → A3`, and Move 3 goes `A3 → A4`.

Lesson 4: Making Choices — `IF ... THEN ... ELSE` Conditionals

- **Unit:** Inputs, Outputs, Loops, and Debugging (Computing, Grade 3)
- **Time:** 45 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will evaluate true/false **conditions** and trace algorithms that use **`IF ... THEN`** and **`IF ... THEN ... ELSE`** branches to adapt to changing obstacles or treasures on a grid.

Materials

- 5×5 tabletop grids and robot tokens
- Dealt warm-up symbol cards (showing shapes ▲/● and numbers `1`–`6`), coins or two-sided mystery tokens where Heads = `STAR` ★ and Tails = `EMPTY` (no star), and Rock `X` tokens

Vocabulary

- **Condition:** A statement that can be checked right now and is either **TRUE** or **FALSE** (for example, "Square ahead has a Rock").
- **Conditional (`IF ... THEN ... ELSE`):** A rule that runs the **`THEN`** steps when the condition is **TRUE**, and runs the **`ELSE`** steps when the condition is **FALSE**.

Lesson flow

1. Warm-up: Card Check Conditionals (8 min)

1. Deal each student or pair a fictional symbol card (for example, a card showing either a **Triangle** ▲ or **Circle** ● and a number from `1` to `6`), so no student needs to disclose personal attributes. Students may perform the output action, hold up a response card, or point to a choice on their desk:
2. **Rule 1 (`IF ... THEN` without `ELSE`):** `IF your card shows a Triangle ▲ THEN: Hold your card up (or point to "THEN")` Ask: "What did students whose card shows a Circle ● do?" (Nothing—because there was no `ELSE` branch!).
3. **Rule 2 (`IF ... THEN ... ELSE`):** `IF the number on your card is greater than 3 THEN: Tap your desk once (or point to "Branch A") ELSE: Flip your card face-down (or point to "Branch B")` Point out: With an **`ELSE`** branch, **every single card triggers exactly one of the two branches**—never both, and never zero!
4. For several sample cards, ask whether the condition "number on your card is greater than 3" evaluated to **TRUE** or **FALSE**.

2. Direct instruction: Smart Robots that Check Before Stepping (12 min)

Explain: In Lessons 2 and 3, we knew ahead of time where every Rock `X` was located. What if a rock falls onto the path **after** we write our program? A robot equipped with a **downward sensor**

(to check `current square has a STAR ⋆`) and a **front sensor** (to check `square ahead is CLEAR` or `square ahead has a ROCK X`) can use a **conditional inside a loop**!

Write this program on the board and trace it together along Row 1 (`A1` to `E1`), starting at **`A1` facing East**, with a surprise Star `⋆` on `B1` and `D1`:

```
REPEAT 4 TIMES:
    FORWARD 1
    IF current square has a STAR ⋆ THEN:
        PICK UP
```

Trace all 4 iterations together in a table on the board:

Iteration	After `FORWARD 1`, robot is on...	Is `current square has a STAR ⋆` TRUE or FALSE?	Does `PICK UP` run?
1	`B1 ⋆`	**TRUE**	Yes (`PICK UP` #1)
2	`C1`	**FALSE**	No
3	`D1 ⋆`	**TRUE**	Yes (`PICK UP` #2)
4	`E1`	**FALSE**	No

Now show an `IF ... THEN ... ELSE` sidestep rule when the square ahead on Row 1–3 might be blocked (in these classroom puzzles, the adjacent lane to the left/North is known to be in bounds and clear; note that a real robot in an unknown environment would also need to check that side square before moving):

```
IF square ahead is CLEAR THEN:
    FORWARD 1
ELSE:
    TURN LEFT
    FORWARD 1
```

3. Guided practice: Mystery Token Corridor (15 min)

1. Each pair sets up Row 3 of their 5×5 grid (`A3`, `B3`, `C3`, `D3`, `E3`) with the Robot starting on **`A3` facing East**.
2. On squares `B3`, `C3`, and `D3`, the "Environment Partner" flips a coin to place either a **Star (⋆, Heads)** or nothing (**Empty, Tails**), and places at most one **Rock (`X`)** on `E3`.
3. The "Programmer Partner" traces this single smart algorithm across all three layouts without rewriting the code: `REPEAT 3 TIMES: FORWARD 1 IF current square has a STAR ⋆ THEN: PICK UP IF square ahead has a ROCK X THEN: TURN LEFT FORWARD 1 ELSE: FORWARD 1`
4. Partners record for all three coin-flip setups (Setup 1, Setup 2, and Setup 3):
5. How many stars were picked up?
6. Which square (`E3` or `D4`) did the robot finish on?

✓ 4. Wrap-up & Exit check (10 min)

A robot starts on **`A2` facing East**. Square `B2` is **EMPTY**, and square `C2` has a **ROCK `X`**. The robot runs:

```
Step 1:
IF square ahead has a ROCK X THEN:
    TURN LEFT
ELSE:
    FORWARD 1
```

```
Step 2:
IF square ahead has a ROCK X THEN:
    TURN LEFT
    FORWARD 1
ELSE:
    FORWARD 1
```

Answer these three questions:

1. In **Step 1**, the robot is at `A2` looking at `B2`. Is the condition `square ahead has a ROCK X` **TRUE** or **FALSE**? Which square does the robot end Step 1 on?
2. In **Step 2**, the robot is on `B2` facing East and looking at `C2` (which has a Rock `X`). Is the condition **TRUE** or **FALSE**? Which branch (`THEN` or `ELSE`) runs?
3. What square is the robot standing on after Step 2 finishes (`B3`, `C2`, or `B1`)?

Worked answers for exit check

1. **FALSE** (because `B2` is empty). The `ELSE` branch runs (`FORWARD 1`), so the robot ends Step 1 on **`B2` facing East**.
2. **TRUE** (because `C2` has a Rock `X`). The **`THEN`** branch runs (`TURN LEFT`, then `FORWARD 1`).
3. **`B3`** (from `B2` facing East, `TURN LEFT` faces North, and `FORWARD 1` steps onto `B3`).

Lesson 5: Bug Hunters — Finding and Fixing Broken Algorithms

- **Unit:** Inputs, Outputs, Loops, and Debugging (Computing, Grade 3)
- **Time:** 45 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will systematically **debug** broken grid algorithms (including sequences, `REPEAT` loops, and `IF` conditionals) by tracing step by step to find the exact line where actual state diverges from expected state, classifying the bug, and testing a fix.

Materials

- 5×5 tabletop grids, robot tokens, obstacles `X`, and goal stars `★`
- Printed "Bug Hunter Case File" sheets (3 cases below) and pencils

Vocabulary

- **Bug:** A mistake in an algorithm that causes it to stop early, crash into an obstacle, or produce the wrong result.
- **Debugging:** The process of tracing an algorithm step by step, finding the exact line that caused the bug, and fixing it.
- **Trace table:** A checklist showing where the robot is and which way it faces after every single line of code.

Lesson flow

1. Warm-up: Why Do We Call It a "Bug"? & The Three Classic Bug Types (8 min)

1. Share a brief history note: Engineers had already used the word **"bug"** for mechanical and electrical glitches since the 1800s, and in 1947 operators working on the Harvard Mark II electromechanical computer taped a real moth from a relay into their logbook with the joke "First actual case of bug being found." In computing, a mistake in a program is called a **bug**, and finding and fixing it is called **debugging**.
2. Introduce the **Three Classic Grid Bugs** on the board:
3. **Type 1 — Wrong Turn / Direction Bug:** Writing `TURN LEFT` when `TURN RIGHT` was needed.
4. **Type 2 — Off-by-One Bug:** Repeating a loop 1 too many or 1 too few times (for example, `REPEAT 4 TIMES` instead of `REPEAT 3 TIMES`).
5. **Type 3 — Missing Step Bug:** Forgetting `FORWARD 1` after a turn, or forgetting `PICK UP` at the end.

2. Direct instruction: The Golden Rule of Debugging (10 min)

Tell students: "When an algorithm fails, do NOT erase the whole page right away! Often many of the steps already work as intended, and we only need to repair the specific step where the robot

goes off track. Use a **Finger Trace** to find the exact line where the robot's actual position or direction first diverges from your plan."

Model **Case 0** on the board: - **Setup:** Start at `A1` facing **North**. Goal star `★` is at `B3`. Rock `X` is at `A3`. - **Intended path:** `A1 → A2 → B2 → B3 ★` - **Buggy code:** `Line 1: FORWARD 1 Line 2: TURN LEFT Line 3: FORWARD 1 Line 4: TURN LEFT Line 5: FORWARD 1 Line 6: PICK UP` - **Step-by-step Finger Trace:** - After Line 1 (`FORWARD 1`): Robot is at `A2` facing North. (Matches plan!) - After Line 2 (`TURN LEFT`): Robot is at `A2` facing **West** (toward the wall off the board) instead of **East** toward `B2`! (Divergence found on Line 2!) - **Fix:** Change **Line 2** from `TURN LEFT` to **`TURN RIGHT`**. Re-test Lines 1–6: after Line 2 (`TURN RIGHT` → faces East), Line 3 (`FORWARD 1` → `B2`), Line 4 (`TURN LEFT` → faces North), Line 5 (`FORWARD 1` → `B3`), Line 6 (`PICK UP`). Success!

3. Guided practice: Three Bug Hunter Case Files (17 min)

Pairs set up each case on their 5×5 grid, trace the buggy code to find the exact broken line, classify the bug type, and test their repair:

Case File 1: The Overshot Treasure (Off-by-One Bug)

- **Setup:** Start at `A1` facing **East**. Star `★` is on `D1`.
- **Buggy Code:** `Line 1: REPEAT 4 TIMES: Line 2: FORWARD 1 Line 3: PICK UP`
- What happens when you run it? The robot walks `A1 → B1 → C1 → D1 → E1` and tries to `PICK UP` on `E1` (1 square past `D1`!).
- Fix: Change Line 1 from `REPEAT 4 TIMES:` to **`REPEAT 3 TIMES:`**.

Case File 2: The Spin-In-Place Trap (Missing Step Bug)

- **Setup:** Start at `B1` facing **North**. Rock `X` is on `B2`. Star `★` is on `C2`.
- **Buggy Code:** `Line 1: TURN RIGHT Line 2: TURN LEFT Line 3: FORWARD 1 Line 4: PICK UP`
- What happens when you run it? Line 1 turns East on `B1`, and Line 2 immediately turns back North on `B1` without ever moving to `C1`! Then Line 3 crashes into the Rock at `B2`.
- Fix: Insert **`FORWARD 1`** between Line 1 and Line 2 so the robot moves from `B1` to `C1` before turning left.

Case File 3: The Backwards Sensor (Conditional Bug)

- **Setup:** Start at `A2` facing **East**. Square `B2` has a **Rock `X`**. Goal is to step safely onto `A3`.
- **Buggy Code:** `Line 1: IF square ahead is CLEAR THEN: Line 2: TURN LEFT Line 3: FORWARD 1 Line 4: ELSE: Line 5: FORWARD 1`
- What happens when you run it? Because `B2` has a Rock, `square ahead is CLEAR` is **FALSE**, so the `ELSE` branch runs `FORWARD 1` and crashes straight into the Rock at `B2`!
- Fix: Change Line 1's condition to **`IF square ahead has a ROCK X THEN:`** (or swap the `THEN` and `ELSE` blocks).

✓ 4. Wrap-up & Unit Exit Check (10 min)

A robot starts at **`A1` facing North**. The Star `★` is at **`C2`**. There are no rocks. A student wrote this 5-line program:

```
Line 1: FORWARD 1
Line 2: TURN RIGHT
Line 3: REPEAT 3 TIMES:
```

```
Line 4:     FORWARD 1
Line 5: PICK UP
```

Answer these three questions:

1. Trace the buggy program as written: Which square (`C2`, `D2`, or `E2`) does the robot actually stand on when it reaches Line 5?
2. Which **single line number** (`Line 1`, `Line 2`, `Line 3`, `Line 4`, or `Line 5`) contains the bug, and how should you rewrite that line so the robot stops on `C2`?
3. Is this bug a **Wrong Turn Bug**, an **Off-by-One Bug**, or a **Missing Step Bug**?

Worked answers for exit check

1. After Line 1 (`FORWARD 1`), the robot is on `A2` facing North. After Line 2 (`TURN RIGHT`), it is on `A2` facing East. After Lines 3–4 (`REPEAT 3 TIMES: FORWARD 1`), it moves `A2 → B2 → C2 → D2`, so it stands on **`D2`**.
2. **Line 3** has the bug. Rewrite Line 3 as **`REPEAT 2 TIMES:`** (so it moves `A2 → B2 → C2` and stops on `C2`).
3. It is an **Off-by-One Bug** (the loop repeated 3 times instead of 2 times).

Grade 3 Computing: Events and Variables (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every activity against your school's rules.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on grade 3 computing term 1, Gemini 4 Argon's Inputs, Outputs, Loops, and Debugging, and grade 1 computing: Programming a floor robot.

This unit is "unplugged": children act as the computer, using cards, a box and number cards. If the school has a block-based programming tool (for example Scratch, a free block-based language for children), lesson 5 can be repeated on it, but no device is needed.

Big idea

Some programs do not run straight from top to bottom. They wait, and a part of the program runs **when something happens** (an event). Programs also need to remember things, such as a score. They keep each thing in a **variable**: a box with a name that holds one value at a time, and the value can change. A bigger program is easier to build when we split it into smaller parts, test each part, and say whose work we used.

Outcomes

By the end of the unit, most children can:

1. Say what an event is and trace which script runs for a list of events (lesson 1).
2. Trace a short program that sets and changes a variable and say its final value (lesson 2).
3. Trace a game program that uses events and a score variable, and find and fix a bug where the score was not set back to 0 (lesson 3).
4. Split a program into parts, write one part with a group, join the parts, and test them with a list of events (lesson 4).
5. Change one thing in another group's program, add a note that credits the original group, and say in one sentence what they changed and why (lesson 5).

Prior knowledge

From term 1: exact steps, `REPEAT` loops, `IF ... THEN ... ELSE` cards and finding a bug by testing one step at a time. From maths: adding within 20. No negative numbers and no taking away are used in the programs.

Lessons

Lesson	Title	Main activity
1	When something happens	The class runs three event scripts as the teacher shows event cards

Lesson	Title	Main activity
2	A box with a name	A "score" box holds one number card; children trace SET and CHANGE
3	Keeping score at the Little Hill fair	A hoop-toss scoring program run with event cards; fixing a missing reset
4	Splitting a big job into parts	Four groups each write one part of a quiz buzzer program, then join and test
5	Changing someone's program and saying so	Groups remix another group's hoop-toss program, add a credit note, test and explain

Each lesson is about 45 minutes: opening 5, main activity 30, discussion 5, closing check 5.

The cards

All program cards are written in capitals, like the term 1 cards. These words are made up for this unit; real programming tools use different words.

- `WHEN ...:` starts an **event script**. The steps under it run only when that event happens, and they run every time it happens.
- `SET score TO 0` puts a number in the box, replacing what was there.
- `CHANGE score BY 3` adds 3 to the number in the box.
- `SAY score` reads the number in the box aloud (or shows it).
- `NOTE: ...` is a note for people. The computer skips it.
- Action cards from term 1 are reused: `CLAP`, `TAP DESK`, `STAND UP`, and `REPEAT`, `IF ... THEN ... ELSE`.

Materials

Whole class unless noted.

- Event cards, large (A5 or bigger), each with a colour **and** a shape: green circle, red triangle, blue square (lesson 1).
- A small hand bell or chime, and a "bell" picture card shown at the same time (lesson 1; later lessons use a BELL event card).
- Program cards for each lesson (written on index cards or the board; the text is in each lesson).
- One "score" box per group of four (a shoebox, tray or large envelope with a label), plus two more boxes per group labelled "red" and "blue" for lesson 4.
- One set of number cards 0 to 20 per group (large print, with raised dots or a tactile mark if a child needs it), and a second set per group for lesson 4, because the "red" and "blue" boxes can hold the same number at the same time.
- Hoop-toss event cards per group: 6 "IN HOOP", 4 "GOLD", 6 "MISS", 1 "GAME STARTS", 1 "BELL" (lessons 3 and 5).
- Quiz event cards per group: 1 "QUIZ STARTS", 4 "RED BUTTON", 4 "BLUE BUTTON", 1 "BELL" (lesson 4).
- Paper and pencils for traces (all lessons); blank index cards for new event cards, program parts and notes (stretch in lessons 1 and 3; lessons 4 and 5).
- Name cards for each group (lesson 5).
- A class trace table drawn on the board (columns: event, step, score).

Access and inclusion

- Every event is shown in at least two ways (colour and shape; bell sound and bell picture), so children who cannot hear the bell or cannot tell the colours apart still get the event.
- Any action can be done the child's own way: a wave instead of a clap, raising a hand instead of standing up, tapping a switch or nodding. The own way counts.
- Number cards and event cards can have tactile marks; a partner can read cards aloud. A child can answer by pointing to a number card instead of saying the number.
- Use a quiet chime, not a loud bell, and allow ear defenders.

Assessment

One-to-one or in a small group, about 3 minutes per child, using cards. Record yes / with help / not yet. Covers all five outcomes.

1. Show the lesson 1 scripts. "I show the red triangle, then the green circle. What happens?" (Tap desk 2 times, then clap 1 time.)
2. "SET score TO 4, CHANGE score BY 3, SAY score. What is said?" (7)
3. "SET score TO 9, SET score TO 1, SAY score?" (1, because SET replaces.)
4. Show the hoop-toss program without the start script, after a game that ended on 5. "A new game: IN HOOP, then the bell. What is said, and what should it be?" (6; it should be 1. Add `SET score TO 0` when the game starts.)
5. Show the four quiz parts. "Which part would you look at if the blue score never changes?" (The blue button part.)
6. Show a program with a `NOTE:` credit line. "What does the computer do with this line? Why is it there?" (Skips it; it tells people whose program it was based on.)

Sources

Quoted exactly; the unit is not a full alignment.

- CSTA K-12 Computer Science Standards, Revised 2017, Level 1B (by the end of grade 5), from the progression chart (https://csteachers.org/wp-content/uploads/2025/06/2017-csta-k-12-standards-progression-chart.pdf):
- 1B-AP-09 "Create programs that use variables to store and modify data."
- 1B-AP-10 "Create programs that include sequences, events, loops, and conditionals."
- 1B-AP-11 "Decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process."
- 1B-AP-12 "Modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features."
- 1B-AP-14 "Observe intellectual property rights and give appropriate attribution when creating or remixing programs."
- 1B-AP-15 "Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended."
- 1B-AP-17 "Describe choices made during program development using code comments, presentations, and demonstrations."
- Wikipedia, "Event-driven programming" (lead): "the flow of the program is determined by external events."
- Wikipedia, "Variable (computer science)" (lead): "in simpler terms, a variable is a named container for a particular set of bits or type of data".

- Wikipedia, "Decomposition (computer science)" (lead): "the process of identifying and organising a complex system into smaller components".
- Wikipedia, "Attribution (copyright)" (lead): "acknowledgment as credit to the copyright holder or author of a work."
- Wikipedia, "Scratch (programming language)" (lead): "a high-level, block-based visual programming language and website aimed primarily at children".

Known gaps and cautions

- Three other agents text-checked this unit on 2026-11-12: Gemini 3.8 Flash (at bbbdbc6) and Gemini 4 Argon (at 9ea2f9c) reported no errors; Gemini 4 Carbon (at 9ea2f9c) reported three small errors (the computing progression link, paper missing from three lessons' materials, and no cap on new point values in lesson 5), all fixed in 0983c5f and fd1fce1 (diff re-checked by Gemini 4 Argon). Those are text checks by AI agents, not teacher reviews or classroom tests.
- The unit is unplugged. Children do not build programs on a device, so 1B-AP-09 and 1B-AP-10 ("Create programs") are met only on paper.
- The card words (`WHEN`, `SET`, `CHANGE ... BY`, `NOTE:`) are made up for this unit to sit next to the term 1 cards. Real tools use different words and blocks.
- `CHANGE ... BY` only adds. Taking away, negative numbers and variables holding words are left for later grades.
- 1B-AP-08 (comparing algorithms), 1B-AP-13 (planning with others' perspectives) and 1B-AP-16 (team roles) are not covered on purpose, apart from the roles children take while acting as the computer.
- Credit in lesson 5 is classroom credit between groups. It does not teach copyright law or licences.
- The Little Hill fair and its games are made up by the author.
- Scores are only for the pretend game, drawn from a card pile; no child's own throwing or quiz answers are scored or compared.

Lesson 1: When something happens

Unit overview - Next: Lesson 2

About 45 minutes.

Goal

Children learn that an **event** is something that happens, such as a card being shown or a bell ringing, and that an **event script** waits and runs its steps only when its event happens. They trace which script runs for a list of events.

Materials

- Event cards: green circle, red triangle, blue square (large, colour and shape).
- A small hand bell or quiet chime, and a "bell" picture card.
- Three program cards (or the board) with the scripts below.
- The term 1 program card from Argon's unit, or any short straight list of steps, for the opening.
- Paper and pencils for the closing check; blank index cards (stretch: new event cards).

Steps

✎ Opening (5 min)

1. Hold up a term 1 style program (a straight list of steps). Ask: "When does the robot do step 1? Step 2?" (Straight away, then one after the other, top to bottom.)
2. Ask: "Think of a light that comes on when someone walks past, or a lift that comes when you press its button. Does it do things straight away, one after another?" (No. It waits until something happens.)
3. Say: "Something that happens, which a program can notice, is called an **event**. Today the class is a program that waits for events."

✎ Main activity (30 min)

Part 1: three event scripts (10 min). Put up three scripts:

```
WHEN the green circle card is shown:
    CLAP 1 TIME

WHEN the red triangle card is shown:
    TAP DESK 2 TIMES

WHEN the bell rings:
    STAND UP
```

Read them together. Say: "Each script waits. Its steps run only when its event happens, and every time it happens." Practise: show the green circle (everyone claps once), the red

triangle (two taps), then ring the bell while holding up the bell picture (everyone stands; then sit down again).

Part 2: the teacher chooses the order (10 min). Run these event lists. Before each one, children predict on their fingers or in pairs; then run it.

- List A: green, green, red. (Clap, clap, tap tap. Nobody stands.)
- List B: bell, red, green. (Stand, tap tap, clap.)
- List C: blue square. (Nothing happens: no script waits for the blue square.)

Point out: the scripts did not change, but the actions came in a different order each time, because **the events chose the order**.

Part 3: a fourth script (10 min). Add, with the class:

```
WHEN the blue square card is shown:
    REPEAT 3 TIMES:
        TAP DESK
```

Run List C again (three taps). Then let volunteers be the "event giver" and show cards in an order they choose, while the class runs the scripts. The event giver must show one card at a time and wait until the actions finish.

✓ Discussion questions (with answers) (5 min)

- "What made the class clap?" (The green circle being shown: the event.)
- "In term 1, the program ran top to bottom. What is different today?" (The scripts waited; the events decided which script ran and when.)
- "Why did nothing happen for the blue square at first?" (No script was waiting for it.)
- "Name an everyday machine that waits for an event." (Examples: a door that opens when someone comes near, a toaster that pops, a game that moves when you press a button. Any sensible answer counts.)

✓ Closing check (with answers) (5 min)

With the four scripts still showing, each child writes or points to an answer.

1. "I show red, then green. What happens?" (Tap tap, then clap.)
2. "I ring the bell twice. How many times do you stand up?" (Twice: the script runs every time; sit down in between.)
3. "I show a yellow card. What happens?" (Nothing; no script for it.)

Vocabulary

event, event script, wait, run

Differentiation

- **Support:** Use only two scripts (green and bell) at first. Give the child a copy of the scripts to touch and point to.

- **Stretch:** Children write a new script for a new event card of their own design, using only term 1 actions, and run it with a partner.
- **Tactile:** Cut-out shapes (circle, triangle, square) glued on the event cards, so they can be felt.

⚠ Safety

- Clear space around desks before standing. Standing is optional: raising a hand counts.
- Use a quiet chime and allow ear defenders.

Teacher notes and misconceptions

- Some children think the scripts run in the order they are written. Run List B to show they do not.
- Some think a script runs only once. Ring the bell twice to show it runs every time.
- Keep the gaps between events long enough for everyone to finish.

Lesson 2: A box with a name

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 45 minutes.

Goal

Children learn that a **variable** is like a box with a name that holds one value at a time. They run and trace programs that use `SET`, `CHANGE ... BY` and `SAY`, and say the final value.

Materials

- One "score" box per group of four, with a label.
- One set of number cards 0 to 20 per group.
- Program cards A to D (below), on cards or the board.
- A class trace table on the board (columns: step, score).
- Paper and pencils for traces and for writing a program in Part 3.

Steps

✎ Opening (5 min)

1. Show the empty "score" box. Ask: "In a game, how does the game remember your score?" (Take ideas.)
2. Say: "Programs keep things to remember in a **variable**. Think of it as a box with a name on it. The box holds **one** number at a time."
3. Put the 0 card in the box. "The value of score is now 0."

✎ Main activity (30 min)

Part 1: three cards (8 min). Teach the three cards:

- `SET score TO 0`: take out whatever card is in the box and put in the 0 card.
- `CHANGE score BY 2`: look at the number in the box, add 2, swap the card for the new number.
- `SAY score`: read the number in the box aloud (or hold it up).

Model Program A with the class, filling in the trace table:

```
SET score TO 0
CHANGE score BY 1
CHANGE score BY 1
SAY score
```

Step	score
SET score TO 0	0
CHANGE score BY 1	1

Step	score
CHANGE score BY 1	2
SAY score	2 (said aloud)

Part 2: groups run programs (14 min). In groups of four, roles rotate for each program: one reads the cards, one is the box keeper (swaps number cards), one writes the trace, one checks. Each group runs:

- Program B: `SET score TO 5`, `CHANGE score BY 2`, `CHANGE score BY 3`, `SAY score`. (5, 7, 10; says 10.)
- Program C: `SET score TO 3`, `SET score TO 7`, `SAY score`. (3, then 7; says 7. SET replaces the old value; it does not add.)

Then Program D, with a term 1 loop:

```
SET score TO 0
REPEAT 4 TIMES:
    CHANGE score BY 2
SAY score
```

(0, 2, 4, 6, 8; says 8.)

Part 3: one box, one value (8 min). Ask groups: "After Program C, where did the 3 go?" (It was taken out; the box only holds the newest value.) Then each group writes its own three-line program using SET, CHANGE and SAY, with a final value no bigger than 20, and swaps it with another group to run. The writers check the answer.

✓ Discussion questions (with answers) (5 min)

- "How is SET different from CHANGE?" (SET puts in a new value and throws away the old one; CHANGE adds to the value already there.)
- "Why does the box have a name?" (So the program can say which box to use, especially when there is more than one.)
- "Can the box hold two numbers at once?" (No. One value at a time.)

✓ Closing check (with answers) (5 min)

Children write the number that is said.

1. `SET score TO 4`, `CHANGE score BY 3`, `SAY score`. (7)
2. `SET score TO 2`, `REPEAT 3 TIMES: CHANGE score BY 5`, `SAY score`. (17)
3. `SET score TO 9`, `SET score TO 1`, `CHANGE score BY 1`, `SAY score`. (2)

Vocabulary

variable, value, set, change, trace

Differentiation

- **Support:** Use the box and number cards for every step; keep values under 10. A partner reads the cards aloud.
- **Stretch:** Write a program whose final value is 20 using exactly one SET and one REPEAT.
- **Tactile:** Number cards with raised dots or tactile numerals; the child checks the box by touch.

⚠ Safety

- No special risks. Keep boxes and cards on desks.

Teacher notes and misconceptions

- The most common mistake is treating SET like CHANGE (answering 10 for Program C). Act it out: take the 3 card out of the box, put the 7 in.
- Some children write every value in the box at once, like a list. Keep only one card in the box.
- A variable in computing is not quite the same as a letter for an unknown number in maths; here it is simply a named place for a value that can change.

Lesson 3: Keeping score at the Little Hill fair

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 45 minutes.

Goal

Children run a game program that uses events **and** a score variable. They trace it for a list of events, and find and fix a bug: the score was never set back to 0 when a new game started.

Materials

- One "score" box and one set of number cards 0 to 20 per group of four.
- Hoop-toss event cards per group: 6 "IN HOOP", 4 "GOLD", 6 "MISS", 1 "GAME STARTS", 1 "BELL" (game ends).
- The hoop-toss program on the board or on cards (below), plus a copy with the first script covered or left out, for Part 3.
- A class trace table on the board (columns: event, step, score).
- Paper and pencils for traces; blank index cards (stretch: BULLSEYE).

Steps

✎ Opening (5 min)

1. Say: "The made-up town of Little Hill is having a school fair. One stall has a hoop-toss game. A beanbag can land **in the hoop** (1 point), in the **gold** circle in the middle (3 points), or **miss** (0 points). The stall wants a program to keep the score."
2. Say: "Nobody throws anything today. We draw event cards from a pile instead, so the game is the same for everyone."

✎ Main activity (30 min)

Part 1: the program (8 min). Put up:

```
WHEN GAME STARTS:
    SET score TO 0

WHEN IN HOOP:
    CHANGE score BY 1

WHEN GOLD:
    CHANGE score BY 3

WHEN BELL:
    SAY score
    IF score is greater than 4 THEN:
        CLAP 2 TIMES
```

```
    ELSE:
        CLAP 1 TIME
```

Ask: "Which event has no script?" (MISS. Nothing happens, so the score stays the same.) Trace List 1 together on the board:

Event	Step	score
GAME STARTS	SET score TO 0	0
IN HOOP	CHANGE score BY 1	1
MISS	(no script)	1
GOLD	CHANGE score BY 3	4
IN HOOP	CHANGE score BY 1	5
BELL	SAY score; 5 is greater than 4, so CLAP 2 TIMES	5

Part 2: groups run fixed lists, then a random game (12 min). Roles rotate: event giver, box keeper, tracer, checker. Groups run:

- List 2: GAME STARTS, GOLD, GOLD, MISS, IN HOOP, BELL. (0, 3, 6, 6, 7; says 7; clap 2 times.)
- List 3: GAME STARTS, MISS, IN HOOP, GOLD, BELL. (0, 0, 1, 4; says 4; 4 is not greater than 4, so clap 1 time.)

Then a random game: the event giver shows GAME STARTS, shuffles the IN HOOP, GOLD and MISS cards face down, turns over five of them one at a time, then shows BELL. The tracer writes each step. (The biggest possible score is 13: four GOLD and one IN HOOP. Any total is fine; the check is that the trace matches the cards.)

Part 3: a bug (10 min). Show the program again with the `WHEN GAME STARTS` script missing. Say: "The stall used this version. The first game was List 1 and ended on 5. Then a new child played: IN HOOP, then BELL." Groups run it with the box still holding 5. (5 + 1 = 6; it says 6.) Ask: "What should it have said?" (1.) "Which line is missing?" (`SET score TO 0`, under `WHEN GAME STARTS`.) Put the script back and run the new game again: GAME STARTS, IN HOOP, BELL. (0, 1; says 1; clap 1 time.)

Say: "We tested, found the step that went wrong, fixed it and tested again: just like term 1's bug hunts."

✓ Discussion questions (with answers) (5 min)

- "Why does MISS not need a script?" (A miss adds nothing, so the score should stay the same, and with no script nothing happens.)
- "Why does the game need `SET score TO 0` at the start?" (Otherwise the new game starts with the old game's score.)
- "Which script reads the box but does not change it?" (The BELL script.)

✓ Closing check (with answers) (5 min)

1. "GAME STARTS, GOLD, MISS, IN HOOP, IN HOOP, BELL. What is said, and how many claps?" (3, 3, 4, 5; says 5; clap 2 times.)

2. "With the start script missing, the box holds 5. Then GOLD, BELL. What is said, and what should it be?" (8; it should be 3.)
3. "Which line fixes it?" (`SET score TO 0` when the game starts.)

Vocabulary

event, variable, score, bug, test, reset (set back to 0)

Differentiation

- **Support:** Use only IN HOOP and MISS cards (1 point or nothing) and leave out the IF part of the BELL script.
- **Stretch:** Add a new card, "BULLSEYE", and write its script so it is worth 5. Run a list with it.
- **Tactile:** Event cards with a feelable mark (one dot for IN HOOP, three dots for GOLD, a cross for MISS).

⚠ Safety

- Nothing is thrown. If the school wants a real hoop toss later, use soft beanbags, keep everyone out of the throwing area, and do not score real children's throws against each other.

Teacher notes and misconceptions

- Some children add 1 for MISS. Point to the program: there is no MISS script, so nothing happens.
- Some children think "greater than 4" includes 4. Run List 3 to show that 4 gives one clap.
- The score belongs to the pretend game, not to any child.

Lesson 4: Splitting a big job into parts

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 45 minutes.

Goal

Children split a bigger program into smaller parts, each write one part, join the parts and test them with a list of events. They test one part at a time to find which part has a bug.

Materials

- Per group of four: two boxes labelled "red" and "blue", and **two** sets of number cards 0 to 20 (both boxes can hold the same number, such as 0, at the same time).
- Quiz event cards per group: 1 "QUIZ STARTS", 4 "RED BUTTON", 4 "BLUE BUTTON", 1 "BELL" (quiz ends).
- Blank index cards for the parts, and paper and pencils for the traces.
- The job description (below) on the board.
- A class trace table on the board (columns: event, step, red, blue).

Steps

✎ Opening (5 min)

1. Say: "The Little Hill library is having a pretend quiz with a red team and a blue team. Each team has a button. The library wants a program that keeps both scores."
2. Put up the job description:
3. At the start, both scores are 0.
4. When the red button is pressed, red gets 1 more.
5. When the blue button is pressed, blue gets 1 more.
6. At the end (the bell), both scores are said.
7. Say: "That is a big job. Programmers split a big job into smaller parts, so different people can build and test each part. This is called **decomposing** the problem."

✎ Main activity (30 min)

Part 1: name the parts (5 min). With the class, turn each line of the job description into a part: Start, Red button, Blue button, End. Each child in a group of four takes one part.

Part 2: write the parts (8 min). Each child writes their part on an index card, using the card words from lessons 1 to 3. One correct set:

```
Part 1 (Start)
WHEN QUIZ STARTS:
    SET red TO 0
    SET blue TO 0

Part 2 (Red button)
```

```
WHEN RED BUTTON:
    CHANGE red BY 1

Part 3 (Blue button)
WHEN BLUE BUTTON:
    CHANGE blue BY 1

Part 4 (End)
WHEN BELL:
    SAY red
    SAY blue
```

Other wordings that do the same job count.

Part 3: test each part, then join (9 min). First each child tests their own part with just its event (for example, show BLUE BUTTON once and check that only the blue box changed). Then the group lays the four cards side by side and runs the test list:

QUIZ STARTS, RED BUTTON, BLUE BUTTON, RED BUTTON, RED BUTTON, BELL.

Event	Step	red	blue
QUIZ STARTS	SET red TO 0, SET blue TO 0	0	0
RED BUTTON	CHANGE red BY 1	1	0
BLUE BUTTON	CHANGE blue BY 1	1	1
RED BUTTON	CHANGE red BY 1	2	1
RED BUTTON	CHANGE red BY 1	3	1
BELL	SAY red, SAY blue	3	1

(Says red 3, blue 1.)

Part 4: a bug in one part (8 min). Show this version of Part 3:

```
Part 3 (Blue button)
WHEN BLUE BUTTON:
    CHANGE red BY 1
```

Run the same test list. (Red 4, blue 0, instead of red 3, blue 1.) Ask: "Which part would you test first?" (The blue button part, because the blue score never changed.) Show BLUE BUTTON alone: the red box changes, so the bug is in Part 3. Fix it to `CHANGE blue BY 1` and run the list again. (Red 3, blue 1.)

Then groups shuffle the RED and BLUE cards face down and run a random quiz: QUIZ STARTS, five cards, BELL. The check is that the trace matches the cards.

✓ Discussion questions (with answers) (5 min)

- "Why split the program into parts?" (Each part is small enough to write and test; different people can work on different parts; a bug is easier to find.)
- "How did testing one part at a time help?" (It showed which part was wrong, so only that part needed fixing.)

- "Why does this program need two variables?" (It has to remember two different scores at the same time.)

✓ Closing check (with answers) (5 min)

1. "QUIZ STARTS, BLUE BUTTON, BLUE BUTTON, RED BUTTON, BELL. What is said?" (Red 1, blue 2.)
2. "Part 1 is missing. From an earlier quiz, the boxes hold red 3 and blue 1. Then RED BUTTON, BELL. What is said, and what should it be?" (Red 4, blue 1; it should be red 1, blue 0.)
3. "Name the four parts of the quiz program." (Start, Red button, Blue button, End.)

Vocabulary

decompose, part, test, join, two variables

Differentiation

- **Support:** The child writes the Red button part with the Blue button part as a model next to it. Pair a child with a partner for the trace.
- **Stretch:** Add a fifth part: "When the bell rings, IF red is greater than blue THEN CLAP 2 TIMES ELSE CLAP 1 TIME." Test it with a list where the scores are equal. (Equal scores give one clap, because red is not greater than blue.)
- **Tactile:** Boxes with different textures (for example, felt on the red box) as well as labels.

⚠ Safety

- No special risks.

Teacher notes and misconceptions

- Some children think each part needs its own copy of the start steps. Show that one Start part sets both scores.
- When joining parts, the order of the cards on the desk does not matter: each part waits for its own event.
- The quiz is pretend: no child answers questions, and no child's score is compared with another's.

Lesson 5: Changing someone's program and saying so

Unit overview - Previous: Lesson 4

About 45 minutes.

Goal

Children change one thing in another group's program (a **remix**), add a `NOTE:` line that credits the group whose program they used, test the new version, and say in one sentence what they changed and why.

Materials

- Per group of four: one "score" box, one set of number cards 0 to 20, and the hoop-toss event cards (6 "IN HOOP", 4 "GOLD", 6 "MISS", 1 "GAME STARTS", 1 "BELL").
- Per group: a copy of the lesson 3 hoop-toss program on cards, with a name card saying which group made it (each group makes or signs one copy at the start of the lesson, then copies are swapped).
- Paper and pencils for the traces; blank index cards for the NOTE lines and BULLSEYE.
- The example remix (below) on the board.

Steps

✎ Opening (5 min)

1. Each group writes its group name on a name card next to its copy of the hoop-toss program. Copies are passed to the next group.
2. Say: "Programmers often start from someone else's program and change it. That is called a **remix**. When we use someone's work, we say whose it was. That is called **giving credit**."
3. Teach the new card: `NOTE: ...` is a note for people. The computer skips it, like a sticky note on a recipe.

✎ Main activity (30 min)

Part 1: an example remix (7 min). Put up:

```
NOTE: Based on the hoop-toss program by Group B.
NOTE: We changed GOLD to 2 points so the scores are closer.

WHEN GAME STARTS:
    SET score TO 0

WHEN IN HOOP:
    CHANGE score BY 1
```

```
WHEN GOLD:
    CHANGE score BY 2

WHEN BELL:
    SAY score
    IF score is greater than 4 THEN:
        CLAP 2 TIMES
    ELSE:
        CLAP 1 TIME
```

Run lesson 3's List 1 with it: GAME STARTS, IN HOOP, MISS, GOLD, IN HOOP, BELL. (0, 1, 1, 3, 4; says 4; 4 is not greater than 4, so clap 1 time. The original said 5 with two claps.) Ask: "Did the NOTE lines change the score?" (No. The computer skips them.)

Part 2: groups remix (12 min). Each group changes **one** thing in the program it was given. Choices:

- change how many points GOLD or IN HOOP is worth (4 or fewer, so a five-card game can never go past 20, the biggest number card);
- add a new event card, BULLSEYE, written on a blank card, with a script that adds 5;
- change the number in the IF line (for example, greater than 6).

They add two `NOTE:` lines at the top: whose program it was based on, and what they changed.

Part 3: test (6 min). Each group runs lesson 3's List 1 with its remix and writes the trace, then runs one random game. (If they added BULLSEYE, they shuffle it in with the other cards.) If the remix does not do what they meant, they find and fix the step, then test again.

Part 4: show and say (5 min). Each group says one sentence: "We changed ... because ...", and hands the remix back to the group that made the original, so they can see it.

✓ Discussion questions (with answers) (5 min)

- "Why did we write whose program it was?" (It is fair: they did the work we started from. It also helps people find the original.)
- "Is a remix the same as taking someone's program away?" (No. The original group still has theirs; we made a new version and said so.)
- "Why write what you changed?" (So other people, and you later, know what is different and why.)

✓ Closing check (with answers) (5 min)

Show the example remix from Part 1.

1. "GAME STARTS, GOLD, GOLD, IN HOOP, BELL. What is said, and how many claps?" (2, 4, 5; says 5; clap 2 times.)
2. "What does the computer do with the NOTE lines?" (Skips them.)
3. "Whose program was this remix based on?" (Group B's.)

Vocabulary

remix, credit, note (comment), original

Differentiation

- **Support:** The group changes only the number in one CHANGE card. The teacher writes the NOTE lines with them.
- **Stretch:** Make two changes, write a NOTE for each, and work out a list of events where the remix and the original say different scores.
- **Tactile:** NOTE cards in a different texture or with a cut corner, so they can be told apart from cards the computer runs.

⚠ Safety

- Nothing is thrown. Only change programs on cards, not anyone's belongings.

Teacher notes and misconceptions

- Some children think a NOTE line is a step. Run the program with the NOTE lines covered: the result is the same.
- Credit here is between groups in the class. Real programs and pictures online also have rules about reuse (licences); that is for later grades.
- If the school has a block-based tool, groups can rebuild their remix on it, with the credit written in the tool's comment feature or project notes. Check the tool against your school's rules first.

Grade 3 Computing: Data and Networks (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 13 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check every activity against your school's rules.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on grade 3 computing term 2, Events and variables, and grade 3 computing term 1, Gemini 4 Argon's Inputs, Outputs, Loops, and Debugging.

This unit is "unplugged": children act as the network, using cards, and make charts on paper. No device is needed. All data in the unit is about the made-up town of Little Hill. Children never collect, share or chart facts about themselves or their families.

Big idea

A long message sent across a network is split into small numbered pieces called **packets**. The packets can travel different ways, through several devices, and arrive in a muddle or not at all; the numbers let the receiver put them back in order and ask again for any piece that is missing. **Data** is information we collect, such as counts. Sorting it into a table or a bar chart helps us see a pattern, back up a claim and make a prediction, but a pattern on its own does not prove what caused it. Some information, such as a password or where someone lives, should stay private.

Outcomes

By the end of the unit, most children can:

1. Act out sending a message as numbered packets through "router" children, and put packets that arrived out of order back in order (lesson 1).
2. Use the numbers on packets to say which packet is missing, ask for it again, and spot a packet that arrived twice (lesson 2).
3. Sort and tally made-up data, show it in a table and a bar chart, and make a claim backed by the chart (lesson 3).
4. Use a chart to make a prediction, and say whether something that goes with a pattern is likely to be the cause or not (lesson 4).
5. Sort made-up pieces of information into "fine to share", "keep private" and "ask a trusted adult", and say what to do if a message asks for a password (lesson 5).

Prior knowledge

From terms 1 and 2: following exact steps on cards, and finding a bug by testing one step at a time. From maths: counting and adding within 100, tally marks, and reading a scale on a bar chart going up in ones (grade 3 science weather data also uses bar charts).

Lessons

Lesson	Title	Main activity
1	A message in pieces	Four tables each send a four-card message as numbered packets through "router" children and put them back in order
2	Lost and doubled packets	A router "drops" a packet; the receiver works out which number is missing, sends a "Lost" card, and deals with a packet that arrives twice
3	What Little Hill library lends	Groups sort 30 made-up loan slips, tally them, make a table and a bar chart, and write a claim with evidence
4	Rain, visitors and a new sign	Groups sort ten made-up day cards, predict day 11, and decide whether rain or a new sign goes with more visitors
5	Keeping information private	Groups sort made-up information cards, discuss a trick message asking for a password, and talk about long passphrases

Each lesson is about 45 minutes: opening 5, main activity 30, discussion 5, closing check 5.

Materials

Whole class unless noted.

- Large index cards for packets (lessons 1 and 2): one demo message of 3 cards, and for each of the four tables one message of 4 cards **plus a copy set** of the same 4 cards (lesson 2), so 35 packet cards in all, plus six blank index cards for the lesson 2 stretch. The card text is in lesson 1. Each card has its number in large print with a raised dot pattern or braille if a child needs it.
- Four table signs, each with a shape and its name: circle, triangle, square, diamond. Each shape is also a raised foam sticker, and every packet card carries the raised sticker of the table it is going to (lessons 1 and 2).
- Four chairs for "routers", set out in the middle of the room with wide clear gaps, and floor tape stuck down flat to mark the lines between them (lessons 1 and 2).
- A small number line 1 to 4 for each of the four tables (lessons 1 and 2).
- A tray for packets the teacher "takes" (lesson 2).
- "Lost" cards and "Got 4 of 4" cards, 4 of each, with a blank for the number (lesson 2).
- Loan slips for lesson 3: one set of 30 per group of four (9 animals, 7 fun facts, 6 plants, 5 boats, 3 maps), each with a picture and a word, and a raised mark for each kind (for example, a raised dot pattern) if a child needs it.
- Day cards for lesson 4: one set of 10 per group of four, plus a day 11 card kept by the teacher. Rain cards have a raised mark; "no rain" cards are smooth.
- Information cards for lesson 5: one set of 10 per group of four (text in lesson 5), and three sorting mats per group: "fine to share", "keep private", "ask a trusted adult" (with a picture and a raised mark on each).
- A large printed copy of the trick message card for lesson 5, and about 12 word cards with pictures per group for pretend passphrases.
- Squared paper (1 cm or larger), rulers and pencils (lessons 3 and 4); paper and pencils for closing checks (all lessons).
- A class chart drawn on the board for lessons 3 and 4.
- For tactile access: a peg board where each peg is one count (lessons 3 and 4), and a lap tray for a child in a wheelchair (all lessons, if needed).

Access and inclusion

- Packet cards are passed hand to hand at table height. Routers sit, so a child in a wheelchair can be a router, a sender or a receiver in the same way. Nobody runs or throws cards.
- Every table, packet, slip, day and sorting mat is marked in at least two ways (word or number plus picture, shape or raised mark). A partner or adult reads any card aloud.
- Charts can be built with pegs or blocks instead of drawn. A child can answer by pointing, holding up a card or using the class communication method; the child's own way counts.
- Children who find a busy room hard can be the "checker" at a receiving table instead of moving around.
- Lesson 5 never asks children what their own passwords, addresses or birthdays are. Questions are only about made-up people.

Assessment

One-to-one or in a small group, about 3 minutes per child, using cards. Record yes / with help / not yet. Covers all five outcomes.

1. Give four packet cards out of order ("2 of 4", "4 of 4", "1 of 4", "3 of 4"). "Put the message back together." (1, 2, 3, 4 in order.)
2. Show packets "1 of 4", "2 of 4", "4 of 4", "2 of 4". "Is anything missing? Is anything there twice?" (3 is missing; 2 came twice.)
3. Show the lesson 3 bar chart. "Which kind of book was borrowed most? How do you know?" (Animals; its bar is the tallest, 9.)
4. Show the lesson 4 day cards sorted. "Day 12 will have rain. About how many people might come?" (A number from about 17 to 21; it is a prediction, so it might be wrong.)
5. "The new sign went up on day 6. Did more people come after it?" (No; rain days still had 17 to 21 and days with no rain still had 8 to 12, so the sign is probably not the cause.)
6. Show a made-up card: "Kit's password." "Fine to share, keep private, or ask a trusted adult?" (Keep private; tell only a trusted adult who looks after the account.)

Sources

Quoted exactly; the unit is not a full alignment.

- CSTA K-12 Computer Science Standards, Revised 2017, Level 1B (by the end of grade 5), from the progression chart (https://csteachers.org/wp-content/uploads/2025/06/2017-csta-k-12-standards-progression-chart.pdf):
- 1B-NI-04 "Model how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the Internet, and reassembled at the destination."
- 1B-NI-05 "Discuss real-world cybersecurity problems and how personal information can be protected."
- 1B-DA-06 "Organize and present collected data visually to highlight relationships and support a claim."
- 1B-DA-07 "Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea." (On the chart the line breaks after "cause-"; the word is "cause-and-effect".)
- Wikipedia, "Network packet" (lead): "a network packet is a formatted unit of data carried by a packet-switched network."

- Wikipedia, "Packet loss" (lead): "Packet loss occurs when one or more packets of data travelling across a computer network fail to reach their destination."
- Wikipedia, "Bar chart" (lead): "a chart or graph that presents categorical data with rectangular bars with heights or lengths proportional to the values that they represent."
- Wikipedia, "Password" (lead): "A memorized secret consisting of a sequence of words or other text separated by spaces is sometimes called a passphrase."

Known gaps and cautions

- Four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon, all at 436f646) text-checked this unit on 2026-11-13. The first three reported no errors; Gemini 4 Carbon reported a wording slip and two materials gaps, fixed in aa41f6c; Gemini 4 Argon and Gemini 4 Carbon re-checked the fix. Those are text checks by AI agents, not a teacher review, classroom test or physical safety assessment.
- The unit is unplugged. The network is modelled by children passing cards, which leaves out a great deal: addresses are shapes, not numbers; there are no protocols, no checking codes and no encryption. These come in later grades (for example CSTA 2-NI-04 on protocols).
- Real networks do not always resend lost packets; some kinds of data, such as live video, carry on without them. Lesson 2 shows only the "ask again" idea.
- 1B-DA-06 asks children to organise "collected data". Here the data is made up and handed out on cards, so children organise and chart it but do not collect it. This is on purpose, so that no child's own information is gathered.
- The library loans, visitor numbers, the new sign and Kit's hat are made up by the author; they are an example, not from a source.
- Lesson 4 treats "cause" carefully: the data can only suggest that rain goes with more visitors. It does not prove why.
- Lesson 5 is a first talk about privacy and trick messages. It does not replace the school's online-safety teaching or its rules for reporting worries, and it does not teach children to make or store real passwords.
- Card words for children to read use only letters and patterns taught by this point in the literacy units; some words (such as "visitors", "address" and "password") are read aloud by the teacher first.

Lesson 1: A message in pieces

Unit overview - Next: Lesson 2

About 45 minutes.

Goal

Children learn that a message sent across a network is split into small numbered pieces called **packets**, that the packets pass through several devices (here, "router" children) and may arrive in a different order, and that the receiver uses the numbers to put the message back together.

Materials

- Demo packet cards (3), each with the raised sticker of the square table: "1 of 3: Let us", "2 of 3: sit on", "3 of 3: the mat."
- Four table signs with shapes (circle, triangle, square, diamond), each shape also a raised foam sticker. The teacher reads the shape names aloud first.
- One message of 4 packet cards for each table (text below), each card with the raised sticker of the table it is going to.
- Four chairs for routers in the middle of the room, in a square, with wide clear gaps.
- Floor tape to mark the lines between router chairs (stuck down flat).
- A small number line 1 to 4 for each receiving table (support).
- A lap tray for a child in a wheelchair, if needed.
- Paper and pencils for the closing check.

Setting up the room

Put the four tables near the four corners and the four router chairs in a square in the middle. Each table has one router chair nearest to it:

```
circle table                    triangle table
       router A ------- router B
          |                |
       router D ------- router C
diamond table                   square table
```

Routers pass cards only along the lines: A to B, B to C, C to D, D to A, and each router to its own table. So a card from the circle table to the square table can go A, B, C or A, D, C.

The four messages

Each card shows its number, its words and the shape of the table it is going to. The words use only taught letters and patterns.

From	To	1 of 4	2 of 4	3 of 4	4 of 4
circle	square	Hen can	come to	the pond	at nine.
square	circle	Goat has	a red	boat at	the pond.
triangle	diamond	Pip has	a big	green kite	at home.

From	To	1 of 4	2 of 4	3 of 4	4 of 4
diamond	triangle	Meet at	the big	oak tree	at ten.

Steps

✎ Opening (5 min)

1. Ask: "If you send a long message to someone far away on a computer or a tablet, does it go in one big lump?" Take ideas.
2. Say: "It is split into small pieces called **packets**. Each packet has a number, and a note saying where it is going. The pieces pass through several machines on the way, called **routers**, and are put back together at the end."
3. Show the three demo cards and read them together.

✎ Main activity (30 min)

Part 1: the demo (5 min). The teacher is the sender at the circle table. Four children sit on the router chairs. The teacher gives "3 of 3" to router A first, then "1 of 3", then "2 of 3". Routers pass each card, one at a time, along a line towards the square table. The square table puts the cards in number order and reads: "Let us sit on the mat."

Ask: "The cards came in a muddle. How did you know the order?" (The numbers.)

Part 2: the router rules (5 min). Put up the rules and read them:

1. A router holds one card at a time.
2. Look at the shape on the card. Pass it along a line, one step nearer to that table.
3. If the next router's hands are full, wait, or pass it the other way round.
4. Pass cards hand to hand. Never throw them. Stay seated.

Senders give their router one card at a time, only when the router's hands are empty, in any order they like.

Part 3: four messages at once (12 min). Give each table its four cards, face down. All four tables send at the same time. Each receiving table has a "checker" who lays the cards in a line as they arrive, then puts them in number order and reads the message aloud.

Note on the board, for each table, the order the cards arrived in (for example "3, 1, 4, 2").

Part 4: swap and send again (8 min). New children become routers. The tables send the same messages again, so each table sees a new arrival order. Compare the two arrival orders for one table. Ask: "Was it the same order both times?" (Usually not; the cards took different ways and waited at different routers.)

✓ Discussion questions (5 min)

- Why does each packet have a number? (So the receiver can put the pieces back in order even if they arrive mixed up.)
- Why does each packet have a shape? (So each router knows where to send it.)

- Why might "2 of 4" arrive after "4 of 4"? (It took a longer way, or waited at a busy router.)
- How do you know the whole message has arrived? (You have all the numbers, 1 to 4, because each card says "of 4".)

✓ Closing check (5 min)

On paper, draw or write the order to put these in: "3 of 4", "1 of 4", "4 of 4", "2 of 4". (1, 2, 3, 4.) Then answer: "What do the routers do?" (Pass each packet one step nearer to where it is going.)

Vocabulary

packet, message, router, network, sender, receiver, order

Differentiation

- **Support:** the receiving table has a number line 1 to 4 to lay cards on. A child can read the numbers only, and an adult reads the words.
- **Stretch:** take one line away (for example A to B). Can every card still get through? (Yes: circle to triangle can go A, D, C, B.) Children say why having more than one way helps.
- **Tactile:** each card has its number in raised dots or braille and the raised shape sticker; the router chairs have the line partners marked by a tape strip on the floor between chairs that a cane or a foot can follow, stuck down flat.

⚠ Safety

Keep gaps between chairs wide enough for a wheelchair, and floor tape flat. Routers stay seated and pass cards by hand; nobody runs or throws.

Teacher notes and misconceptions

- Children may think a message travels like a letter in one envelope. The activity shows it is split up; that is the main idea of the lesson.
- "Router" here means a child who passes cards on. Real routers are machines, and real addresses are numbers, not shapes.
- Some children think the cards must arrive in order or the message is broken. Stress that the numbers fix the order at the end.

Lesson 2: Lost and doubled packets

Unit overview - Previous: Lesson 1 - Next: Lesson 3

About 45 minutes.

Goal

Children learn that packets can get lost on the way, that the numbers on packets show which one is missing, and that the receiver can ask the sender to send it again. They also deal with a packet that arrives twice.

Materials

- The four table signs, router chairs and floor tape from lesson 1.
- The demo packet cards "1 of 3" and "3 of 3" from lesson 1.
- For each table: its four packet cards from lesson 1 **and** a copy set of the same four cards.
- "Lost" cards (4) with a blank for the number: "Lost: ___. Send it."
- "Got 4 of 4" cards (4).
- A small number line 1 to 4 for each receiving table.
- A tray for packets the teacher takes.
- Six blank index cards to make a 6-packet message (stretch).
- A lap tray for a child in a wheelchair, if needed.
- Paper and pencils for the closing check.

Steps

✎ Opening (5 min)

1. Lay out the demo message from lesson 1 as "1 of 3" and "3 of 3" only. Ask: "What is wrong?" (Card 2 is missing.) "How do you know?" (The cards say "of 3", and there is no 2.)
2. Say: "On a real network, a packet sometimes does not arrive. This is called a **lost packet**. Today we find out what the receiver can do."

✎ Main activity (30 min)

Part 1: the copy and the Lost card (8 min). Explain the new sender rule: "Keep your copy set until the receiver says it has everything." Show the "Lost" card and the "Got 4 of 4" card. Read them together.

Run the circle table's message (to the square table) with the whole class watching. The teacher quietly takes one card out of the routers' hands as it passes (a router "dropped" it) and puts it in a tray. The square table lays out what arrived on its number line, sees the gap, writes the number on a "Lost" card and sends it back through the routers to the circle table. The circle table finds that number in its copy set and sends it. When the square table has all four, it sends back "Got 4 of 4", and only then does the circle table put its copy set away.

Part 2: all four tables (12 min). All four tables send at once. During the round, the teacher takes one card from two of the messages (choose which in secret). Receivers use the number line to find the gap, send a "Lost" card, and wait for the copy.

Part 3: a packet that comes twice (10 min). Run one more round. This time the teacher holds a taken card for a while, then quietly gives it back to a router after the receiver has already asked for it again. The receiver now has two cards with the same number. Ask: "What should you do?" (Keep one. The words are the same, so the message does not change.)

✓ Discussion questions (5 min)

- How did the receiver know which packet was lost? (The numbers 1 to 4 had a gap.)
- Why did the sender keep a copy? (So it could send a lost packet again.)
- When can the sender throw the copy away? (When the receiver sends "Got 4 of 4".)
- What would go wrong if packets had no numbers? (You could not tell the order, or which one was missing.)

✓ Closing check (5 min)

On paper: "These arrived: 1 of 4, 4 of 4, 2 of 4, 4 of 4. Which one is missing? Which one came twice?" (3 is missing; 4 came twice.) "What do you send back?" (A "Lost" card with 3 on it.)

Vocabulary

lost packet, copy, send again, missing, twice

Differentiation

- **Support:** a receiver lays each card on its number on the number line; an empty space shows the missing one.
- **Stretch:** a message of 6 packets where 2 are lost. Children say which two and write both numbers on one "Lost" card.
- **Tactile:** the number line has raised marks for 1 to 4, and the cards have raised or braille numbers, so a gap can be found by touch.

⚠ Safety

As in lesson 1: routers stay seated, cards are passed by hand, gaps between chairs stay wide, and floor tape is stuck down flat.

Teacher notes and misconceptions

- Children may think a lost packet means the whole message must be sent again. Only the missing piece is needed.
- The teacher taking cards is a game rule standing in for real problems (busy routers, poor signals). Make clear no child "lost" anything; it is part of the game.

- Real networks do not always resend lost pieces (live video often skips them). This lesson shows only one way of dealing with loss.

Lesson 3: What Little Hill library lends

Unit overview - Previous: Lesson 2 - Next: Lesson 4

About 45 minutes.

Goal

Children sort and tally made-up data, organise it in a table and a bar chart, and make a claim that the chart backs up.

Materials

- One set of 30 loan slips per group of four. Each slip shows a picture and one word for the kind of book lent: animals (9 slips), fun facts (7), plants (6), boats (5), maps (3). Each kind also has its own raised mark.
- Squared paper (1 cm or larger), rulers and pencils for each group.
- A class table and a blank bar chart drawn on the board.
- A peg board (each peg is one slip) for tactile charts.
- A lap tray for a child in a wheelchair, if needed.
- Paper and pencils for the closing check.

The story

Little Hill library (made up for this unit) lends books. Each time a book goes out, the librarian keeps a slip saying what kind of book it was. These are the slips from one week. The librarian wants to know which kind of book to buy more of.

Steps

✎ Opening (5 min)

1. Say: "Information we collect, like these slips, is called **data**. A pile of slips is hard to read. Today we organise it so we can see what it tells us."
2. Hold up a few slips and read the words together: animals, fun facts, plants, boats, maps (the teacher reads each word first).

✎ Main activity (30 min)

Part 1: sort and tally (8 min). Each group sorts its slips into piles by kind, then makes tally marks for each kind on paper. Groups check by counting the piles again.

Part 2: a table (5 min). Groups copy and fill a table:

Kind of book	Tally	Number
animals		
fun facts		

Kind of book	Tally	Number
plants		
boats		
maps		
total		

Answers: animals 9, fun facts 7, plants 6, boats 5, maps 3, total 30.

Part 3: a bar chart (10 min). On squared paper, draw a bar chart: the kinds along the bottom, the numbers 0 to 10 up the side (1 square for each slip), and a title, "Books lent in one week". Each group draws one bar for each kind. Compare with the class chart on the board.

Part 4: a claim with evidence (7 min). Explain: "A **claim** is something we say is true. **Evidence** is what shows it." Groups finish one sentence:

- "The library should buy more ___ books, because the chart shows ___."

(For example: "animals, because that bar is the tallest: 9 animal books were lent, more than any other kind.")

Then test a claim that the chart does not back up: "Children love maps more than any other book." (No: maps has the shortest bar, 3.)

✓ Discussion questions (5 min)

- Which kind was lent most? Fewest? (Animals, 9; maps, 3.)
- How many more animal books than map books? (9 - 3 = 6.)
- Was the bar chart or the pile of slips quicker to read? Why? (The chart: you can see the tallest bar straight away.)
- Can the chart tell us **why** animal books were lent most? (No. It shows how many, not why.)

✓ Closing check (5 min)

On paper: "Fun facts 7, boats 5. Draw these two bars." Then: "Which is taller, and by how many squares?" (Fun facts, by 2.)

Vocabulary

data, tally, table, bar chart, claim, evidence, total

Differentiation

- **Support:** give a chart with the axes and labels already drawn; the child shades squares with a pencil for each slip as it is counted.
- **Stretch:** "The library can buy 10 new books. How would you share them out, and how does the chart back up your plan?" (Any plan with reasons from the chart.)

- **Tactile:** build the chart on the peg board, one peg for each slip, in a row for each kind. The raised mark on each slip matches a raised label at the start of each row.

⚠ Safety

No special risks. Slips are card, not small items.

Teacher notes and misconceptions

- Children may leave gaps or use uneven squares; check that each square is one slip and every bar starts at 0.
- Some children read the tallest bar as "the best book". Stress that it shows the most lent that week, not the best.
- Keep the data made up. Do not collect children's own reading choices for this lesson.

Lesson 4: Rain, visitors and a new sign

Unit overview - Previous: Lesson 3 - Next: Lesson 5

About 45 minutes.

Goal

Children organise made-up data to see a pattern, use the pattern to make a prediction and check it, and talk about whether something that goes with a pattern is likely to be its cause.

Materials

- One set of 10 day cards per group of four (text below), and one day 11 card kept by the teacher. Rain cards have a raised mark; dry cards are smooth. Cards for days 6 to 10 also show a small picture of the new sign.
- Squared paper (1 cm or larger), rulers and pencils for each group.
- A class bar chart drawn on the board, with 0 to 22 up the side.
- A peg board for tactile charts.
- A lap tray for a child in a wheelchair, if needed.
- Paper and pencils for the closing check.

The data

Little Hill library (made up for this unit) counts how many people come in each day. Each day card shows the day, the weather and the count, for example "Day 3, rain, 21 came". The teacher reads "dry" and "sign" aloud first.

Day	Weather	People who came	Notes
1	rain	19	
2	dry	10	
3	rain	21	
4	dry	9	
5	rain	17	
6	dry	12	new sign put up today
7	rain	18	
8	dry	8	
9	rain	20	
10	dry	11	
11 (teacher keeps)	rain	19	

Steps

✎ Opening (5 min)

1. Recall lesson 3: "What is a claim? What is evidence?"

2. Say: "Today we use data to **predict**: to say what will probably happen next. Then we check."

✎ Main activity (30 min)

Part 1: sort the days (8 min). Groups lay the 10 cards in day order, then move them into two rows: rain days and dry days. Ask: "What do you notice?" (Every rain day had 17 to 21 people. Every dry day had 8 to 12. Rain days always had more.)

Part 2: a bar chart (10 min). Each group draws a bar chart of the 10 days: days along the bottom, 0 to 22 up the side, 1 square for each person. Write "R" above each rain bar. Ask: "Can you see the pattern in the chart?" (The R bars are all taller.)

Part 3: predict and check (5 min). "Tomorrow, day 11, it will rain. How many people do you predict will come?" Each group writes a number and a reason. (Any number from about 17 to 21, because rain days had 17 to 21.) Then reveal the day 11 card: rain, 19 came. Ask: "Was your prediction close?" Stress that a prediction can be a little wrong and still be good.

Part 4: cause or not? (7 min). Ask two questions.

1. "The library put up a new sign on day 6. Did the sign make more people come?" Compare: rain days before the sign (19, 21, 17) and after it (18, 20); dry days before (10, 9) and after (12, 8, 11). (No: rain days still had 17 to 21 and dry days still had 8 to 12. The sign did not change the pattern, so it is probably not the cause.)
2. "Kit, who works at the library, wears a green hat on every rain day. More people come on the days Kit wears the hat. Does the hat bring the people?" (Probably not. The hat and the people both go with rain. Rain is a more likely cause: people may come in to stay out of the rain.)

Say: "Data can show that two things **go together**. That is a clue to the cause, but it does not prove it."

✓ Discussion questions (5 min)

- What pattern did the data show? (More people came on rain days.)
- How did the pattern help you predict? (Day 11 was rain, so we expected 17 to 21.)
- Why is the sign probably not the cause? (Before and after the sign, rain days and dry days had about the same numbers.)
- Why is the hat probably not the cause? (It goes with rain; the rain is a more likely reason people came.)

✓ Closing check (5 min)

On paper: "Day 12 will be dry. Predict how many people will come, and say why." (A number from about 8 to 12, because dry days had 8 to 12.)

Vocabulary

predict, pattern, cause, go together, prediction, check

Differentiation

- **Support:** give a chart with axes and labels drawn; the child draws only the bars for days 1 to 5. Work with the two rows of cards rather than the chart.
- **Stretch:** "Plan how the library could test whether the sign brings more people." (For example, compare rain days with rain days and dry days with dry days before and after, over more days.)
- **Tactile:** build the chart on the peg board, one row of pegs for each day, with the raised rain mark at the start of each rain row.

⚠ Safety

No special risks. Talk about weather is about made-up Little Hill days, not about any real storm or flood.

Teacher notes and misconceptions

- "Goes together" and "causes" are often mixed up by adults too. At this age, aim for the idea that a pattern is a clue and that something else may be the real reason.
- The rain cause is also only likely, not proved. Children may say other reasons (for example, a story time on rain days); accept reasons they can check with more data.
- "Dry" ends in a pattern not yet taught in the literacy units, and "sign" has a silent letter, so the teacher reads both aloud first.

Lesson 5: Keeping information private

Unit overview - Previous: Lesson 4

About 45 minutes.

Goal

Children sort made-up pieces of information into "fine to share", "keep private" and "ask a trusted adult", learn what to do with a trick message that asks for a password, and hear why a long passphrase is harder to guess than a short password.

Materials

- One set of 10 information cards per group of four (text below), each with a picture. The teacher reads every card aloud first.
- Three sorting mats per group: "fine to share", "keep private", "ask a trusted adult", each with a picture and its own raised mark. The teacher reads the mat words aloud first.
- A large printed copy of the trick message card (text below).
- Word cards with pictures for pretend passphrases, about 12 per group (for example green, boat, oak, kite, red, pond, nine, tree, hat, sun, big, goat).
- A lap tray for a child in a wheelchair, if needed.
- Paper and pencils for the closing check.

The information cards

All the people are made up. These are the usual answers; schools and families may set their own rules, and children should follow those.

Card	Usual answer
1. Kit's password for a reading game	keep private
2. Meg's home address	keep private
3. The name of Little Hill library	fine to share
4. A photo of Ana outside her house, with the door number showing	keep private
5. Mo likes books about animals	fine to share
6. Sana's full name and birthday	keep private
7. A drawing of a made-up creature that Ted drew	fine to share, if Ted says yes
8. A message to Mo from someone Mo does not know, asking to meet	ask a trusted adult
9. The score in the Little Hill hoop-toss game	fine to share
10. The name of Ted's school and the time Ted walks home	keep private

The trick message

> Hi Mo! You have won a prize! Send me your password and I will send you the prize.

Steps

✎ Opening (5 min)

1. Recall lessons 1 and 2: "Messages travel through lots of routers on the way. Who might see a message?" (The receiver, and maybe others; once it is sent, you cannot always get it back.)
2. Say: "Some information is fine to share. Some is **private**: it could help a stranger find someone, or get into their account. Today we sort made-up information."

✎ Main activity (30 min)

Part 1: sort the cards (12 min). The teacher reads each card aloud, and groups place it on a mat. Go through the answers together, asking for a reason each time. Accept a different mat if the reason is sensible and safe (for example, putting card 6 on "ask a trusted adult").

Part 2: the trick message (8 min). Show the trick message card and read it aloud. Ask:

- "Should Mo send the password?" (No.)
- "What clues show it is a trick?" (A prize Mo did not try for; it asks for a password; Mo does not know who sent it.)
- "What should Mo do?" (Not reply, not click anything, and tell a trusted adult, such as a parent, carer or teacher.)

Say: "Tricking people into giving away passwords is a real problem on the Internet. Grown-ups get these messages too."

Part 3: strong passwords (10 min). Explain: "A password keeps an account locked. A short password, like a pet's name, is easy to guess. A long one made of several words that do not usually go together is much harder to guess. This is called a **passphrase**."

Show a made-up passphrase built from picture cards, for example "green boat oak kite". Say clearly: "This one is only an example. Never use an example from a lesson. Never tell anyone your real password except a trusted adult who looks after your account, and never write it on class work."

Groups make a pretend passphrase from four words on cards, say whether it would be easy or hard to guess, and then the cards are mixed up and put away.

✓ Discussion questions (5 min)

- Why is a home address private? (It could help a stranger find someone.)
- Why can Ted's drawing be fine to share? (It does not say who or where Ted is, as long as Ted agrees.)
- What should you do if a message worries you? (Stop, do not reply, and tell a trusted adult.)
- Is "Kit" a good password? (No; it is short and easy to guess.)

✓ Closing check (5 min)

On paper, children draw or write which mat each of these goes on: "the name of Little Hill library", "Meg's home address", "a message from someone you do not know asking for your password". (Fine to share; keep private; keep private and tell a trusted adult.)

The one-to-one assessment in the unit overview can be done during this lesson and the next few days.

Vocabulary

private, share, password, passphrase, trusted adult, trick message, account

Differentiation

- **Support:** sort only cards 1, 3, 5 and 2 first, with an adult; add more cards when the child is ready.
- **Stretch:** "Write a short note to Mo explaining how to spot a trick message." (Any note with at least two clues and "tell a trusted adult".)
- **Tactile:** the sorting mats have raised marks; the teacher reads every card aloud and the child points to or touches a mat.

⚠ Safety

- Never ask children for their own passwords, addresses, birthdays, school routes or photos, even as examples.
- Some children may have had a worrying message or experience online. Keep the talk about made-up people, let children step out of the discussion, and follow the school's safeguarding procedures if a child tells you about something that worries you.

Teacher notes and misconceptions

- Children may think private means "bad" or "secret from parents". Explain that private information is shared only with people who need it and who look after the child.
- Some children think only strangers' messages can be tricks. Messages can look as if they come from a friend or a game; the same rule applies.
- The usual answers above are a starting point. Follow the school's own online-safety rules where they differ.

Grade 3 Second Language: The Market (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check it against your school's rules before use. All money in this unit is made-up paper coins, and all shopping is done by story characters or in a class pretend shop. Children are never asked about their own or their family's money, shopping or food.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 3 year plan - Term 1. Builds on grade 2 term 3: A Short Scene, grade 1 term 1: Food Words and "I Like / I Don't Like", and kindergarten term 2: Numbers to Ten, Colours and Animals.

In grade 1 children learned ten food words; in kindergarten they counted to ten; in grade 2 they asked **[Where is ___?]** and acted a short scene. This unit adds four new food words, the numbers **[eleven]** to **[twenty]**, the tens **[ten]**, **[twenty]**, **[thirty]** ... **[one hundred]**, the word **[coins]**, the question **[How much is the ___?]**, the answer **[___ coins]**, and the polite request **[I would like the ___, please]** with **[Here you are]**. Children meet a short picture story, "Bear at the Market", then buy and sell picture-card food in a class pretend shop.

Which language?

This unit works with any language the school teaches. Before lesson 1, fill in the **word card** below. In the lessons, words in square brackets, like **[How much is the pear?]**, mean "say this in the language you are teaching".

English meaning	Your language	Gesture or picture to go with it
tomato, pear, fish, milk (new)		food picture cards
(review from grade 1) apple, banana, orange, grapes, carrot, bread, rice, egg, cheese, soup		food picture cards
eleven to twenty		the ten card plus a dot card (see Materials)
ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred		that many paper coins (one coin = ten), or the tens number card
coins		hold up a paper coin
How much is the ___?		point to the food, then rub thumb and fingers together (or hold up a coin) with eyebrows up
___ coins		the number card, then a coin
I would like the ___, please		hand on chest, then point to the food card
Here you are		both hands hold the card out
		as in earlier units

English meaning	Your language	Gesture or picture to go with it
(review) hello, goodbye, please, thank you, yes, no, Oh no!, The end, one to ten		

About the coins: every paper coin in this unit is worth **ten**. A price of **[thirty coins]** means "thirty", paid with three paper coins. This keeps all prices in tens, so children only need the tens words to shop. The word **[coins]** is the language's ordinary word for coins; do not use the name of a real currency.

Number warning: languages build numbers in very different ways. Some say "ten-one, ten-two" for eleven and twelve; some have special words for the teens; some say the ones before the tens; some count in twenties for some numbers (for example, a word like "four twenties" for eighty); and the word for "one hundred" may or may not include "one". Say every number the way the language really says it, and teach only that way. If the language's way is very different from the school language, spend an extra lesson on the numbers before lesson 3.

Grammar warning: the noun may change after a number (for example, the plural form, or a special form after some numbers), so **[thirty coins]** may not follow the pattern of **[two coins]**. "The", "a" and "some" work differently in different languages, or do not exist; say **[I would like the pear, please]** in the way a shopkeeper would really hear it. Polite requests also differ: in some languages the most natural form is "Please give me **" or just "**, please". Use the form a fluent speaker would use at a market stall. Children only need to **understand** the phrases and **show** their answers; saying them is invited, never required.

Gesture warning: if rubbing thumb and fingers together means something rude or unkind where you live, hold up a paper coin instead. If thumbs up or thumbs down is rude, use the tick and cross cards (or the school's usual signs) everywhere this unit says "yes or no".

The prices at Hen's stall

Lessons 3 and 4, the story and the check use the same **price board** for Hen's stall (made up by the author; free to change, but change it everywhere). Lesson 5 adds a second stall, Goat's, with different prices (see lesson 5):

Food	Price
apple	10 coins
carrot	20 coins
pear	30 coins
banana	40 coins
egg	50 coins
tomato	60 coins
bread	70 coins
milk	80 coins
cheese	90 coins
fish	100 coins

Each tens number appears once, so the board is also a tens chart. Orange, grapes, rice and soup are review words in lesson 1 only; they are not sold at the stall.

The story: "Bear at the Market"

Six picture cards (an original story by the author, CC0, free to change; draw them simply, any style is fine). Bear has **five coins** (fifty), drawn as five round coins in Bear's paw or on a small tray Bear carries.

1. Bear walks up to Hen's stall with five coins. **[Hello, Hen!]** Hen waves: **[Hello, Bear!]**
2. Bear points to the cheese. **[How much is the cheese?]** Hen: **[Ninety coins.]** Bear counts five coins and looks surprised: **[Oh no!]**
3. Bear points to the bread. **[How much is the bread?]** Hen: **[Seventy coins.]** Bear shakes their head: **[Oh no!]**
4. Bear points to the pear. **[How much is the pear?]** Hen: **[Thirty coins.]** Bear smiles: **[I would like the pear, please.]**
5. Hen gives Bear the pear: **[Here you are.]** Bear gives Hen three coins: **[Thank you!]** Hen: **[Thank you! Goodbye!]**
6. Bear sits under a tree, eating the pear, with two coins left and a big smile. **[The end.]**

Draw Bear's surprise and smile with clear face shapes (mouth and eyebrows), not by colour. Draw the coins large, with "10" on each, so children can count them on the card.

Big idea

At a market we can **name foods**, **ask how much something costs**, **understand prices in tens up to a hundred**, and **ask politely for what we would like**, using a few practised phrases with picture cards and pretend coins.

Outcomes

By the end of the unit, most children can:

1. Point to the right picture card when the teacher names one of the fourteen food words (ten review words and four new ones).
2. Show a number from **[eleven]** to **[twenty]** when it is said (with the ten card and a dot card, a number card, or by saying it).
3. Show a tens number from **[ten]** to **[one hundred]** when it is said, by counting out paper coins or pointing to the number card.
4. Answer **[How much is the ___?]** from the price board by pointing to the number card, showing the coins or saying **[___ coins]**.
5. Understand **[I would like the ___, please]** by handing over the right food card, and take part in the pretend shop in any role (stallholder, customer or coin counter); some children also ask **[How much is the ___?]** themselves.

Prior knowledge

- Food Words and "I Like / I Don't Like" (grade 1 term 1): **[apple]**, **[banana]**, **[orange]**, **[grapes]**, **[carrot]**, **[bread]**, **[rice]**, **[egg]**, **[cheese]**, **[soup]**; **[please]**, **[thank you]**.
- Numbers to Ten, Colours and Animals (kindergarten term 2): **[one]** to **[ten]**; the dot cards.
- A Short Scene (grade 2 term 3): asking questions in a pair game; acting a short story with props; Bear, Duck, Hen and Mouse.

- Grade 3 mathematics term 1, Equal Groups and Arrays, counts equal groups; counting coins in tens is the same idea, but it is **not** needed here: children count coins one at a time if they like.
- Children who missed earlier units can still take part; every word has a card, a coin or a gesture.

Lessons

Keep the 1-minute greeting chant at the start of each day.

Lesson	Title	Time	Core idea
1	Food at the market	30 min	Fourteen food words (four new) with picture cards and a "what's missing?" game
2	Eleven to twenty	30 min	The numbers eleven to twenty with the ten card and dot cards
3	Tens and prices	30 min	Counting coins in tens to one hundred; **[How much is the ___?]** with the price board
4	Bear at the Market	30 min	The picture story; **[I would like the ___, please]**; a pretend shop in groups
5	Our price list (pair game)	30 min	An information-gap pair game with price lists, and the one-to-one check

Timings: every lesson is 30 minutes (3 + 7 + 12 + 3 + 5; in lesson 5 the one-to-one check is spread over the week).

Materials

- The filled-in word card (above), kept where the teacher can see it.
- **Fourteen large food picture cards:** apple, banana, orange, grapes, carrot, bread, rice, egg, cheese, soup (from grade 1) and tomato, pear, fish, milk (new). Big enough to see from the back of the room.
- **The large price board** (above): the ten stall foods, each with its price written as a numeral and drawn as that many coins.
- **Large number cards:** 11 to 20, and the tens 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 (numerals only).
- **The ten card:** a large card with ten dots in two rows of five. Use it with the kindergarten **dot cards** 1 to 10 (for 13: the ten card and the 3 dot card side by side).
- **Paper coins:** round coins cut from thick card, about 5 cm across, each marked "10". Ten large coins for the teacher, plus **ten coins per pair** (lessons 3 and 5) or **per group** (lesson 4). They are pretend coins, not real or toy money of any country.
- **The six large story picture cards** (above).
- **A pretend shop per group of three or four** (lesson 4): the ten stall food cards (small), a small copy of the price board, ten paper coins, a tray or lidless box for the stall, and six **shopping cards** (each shows one stall food; see lesson 4).
- **Price-list sheets per pair** (lesson 5): sheet A and sheet B for Goat's stall (see lesson 5), a folder or book to stand up as a screen, and a pencil per child; plus a large copy of Goat's full price list for the closing check.
- **Small number cards per pair** (lessons 2 and 3): 11 to 20 and the ten tens, small enough to lay out on a desk.
- **A cloth or large sheet of paper** to cover cards in the "what's missing?" game (lesson 1).

- **Tick and cross cards:** one of each per child, as in earlier units.
- **Check things** (lesson 5): eight small food cards (apple, carrot, pear, banana, bread, fish, tomato, milk), small number cards 11 to 20 and the ten tens, ten paper coins, the ten card and dot cards, the small price board, and the record sheet (class list with five columns).
- Ear defenders and a quiet spot, as in every unit.
- Optional, for blind or low-vision children: **tactile coins** (thick card with a raised dot or a punched hole in the centre, so each can be felt and counted), **tactile food cards** (a simple raised outline of each food) or large toy food that is too big to swallow, a **tactile ten card** (ten raised dots), and large-print copies of the lesson 5 sheets.
- Optional: a fluent speaker's recording of the word card and the numbers.

⚠ Safety and access

Safety

- **No real food is used**, because of allergies. Food is always picture cards (or large toy food for blind children). Nobody tastes anything.
- **No real money is used.** Coins are card, large enough that they cannot be swallowed.
- Children walk, not run, between stalls; stalls are on desks, not on the floor.

Privacy and money

- **Never ask** what children or their families buy, eat, can afford, or how much money they have, and never compare real prices. All shopping is done by Bear or in the pretend shop with the same ten coins for everyone.
- In the story, Bear cannot buy the cheese or the bread. Present it lightly: Bear chooses something else and is happy. If a child talks about money worries at home, listen kindly, go back to the game, and follow the school's usual steps for passing on a concern.
- Everyone in the pretend shop has the same coins, and everyone can buy something: every shopping card costs 100 coins or less.

Taking part

- **Speaking and acting are optional.** Pointing, handing over cards, counting out coins, holding up number cards and signs all count. In the pretend shop, being the stallholder, the customer or the coin counter is a full role. Never make a child speak or act alone in front of others.
- **Movement:** every gesture has a seated version. Children can stay at one stall and be visited, rather than walking between stalls.
- **Children new to the school language:** keep gestures identical every time and accept answers in any language.
- **Noise:** quiet spot and ear defenders allowed; in whole-class games children answer with cards, not shouting.

Seeing, hearing and colour

- **Colour vision:** food cards are drawn with clear shapes (a pear shape, a fish shape), so no food is known only by colour. If a child mixes up only colours, do not record it as a language gap.
- **Blind children:** use the tactile coins, tactile food cards or large toy food, and the tactile ten card. Keep the check things in fixed places and tell the child where each one is before asking. Counting coins by touch is a full answer.

- **Low-vision children:** large, high-contrast cards; seat them near the price board, or give them their own small copy.
- **Deaf or hard-of-hearing children:** keep your face visible; do the gesture or show the card every time you say the word.
- **If the language is a sign language:** number signs may look like the amount, and the sign for "how much" may already include a money sign. That is the language, and it is fine. In the check, if a sign shows its answer, ask the child to **point to** the number card, food card or coins instead, so the sign itself does not give the answer away.

Assessment

Lesson 5 includes a five-part check, done one-to-one (about 3 minutes each child; spread over the week). Ask everything with no gesture and without pointing or looking at the answer. Record each part as **yes**, **with help** or **not yet**:

1. **Food words:** lay out the eight small food cards (apple, carrot, pear, banana, bread, fish, tomato, milk), shuffled. Say **[tomato]**, **[fish]**, **[bread]** and **[pear]**; the child points to each. Yes = four of four.
2. **Eleven to twenty:** lay out the small number cards 11 to 20, shuffled. Say **[twelve]**, **[fifteen]** and **[nineteen]**; the child points to the card, or shows the number with the ten card and a dot card. Yes = three of three.
3. **Tens:** lay out the small tens cards, shuffled. Say **[thirty]**, **[seventy]** and **[one hundred]**; the child points to the card, or counts out that many paper coins (three, seven, ten). Yes = three of three.
4. **How much is?:** put the small price board in front of the child. Ask **[How much is the milk?]** (80) and **[How much is the carrot?]** (20). The child may point to the number on the board or the number card, count out coins, or say it. Yes = both.
5. **I would like:** put the eight food cards back in front of the child, who is the stallholder. Say **[I would like the banana, please]**, then **[I would like the fish, please]**. The child hands over each card. Yes = both.

Doing it in their own way (pointing, signs, coins, the child's usual access) counts as **yes**. "Not yet" is normal for some children; the games can be played again any time. Playing a role in the pretend shop and asking **[How much is the ___?]** (part of outcome 5) are **not** recorded: notice them, but do not score them.

Sources

- NCSSFL-ACTFL Can-Do Statements, Novice: https://www.actfl.org/uploads/files/general/Resources-Publications/Can-Do-Novice.pdf (read 12 November 2026; the quoted lines were checked against the rendered PDF pages). These are performance indicators and examples, not a curriculum, and the unit is not a full alignment. Lines used for this unit, quoted exactly:
  - Interpersonal, "How can I meet my needs or address situations in conversations?", Novice Low (PDF page 21): function "I can express some basic needs", context "related to very familiar activities with the help of gestures, facial expressions, or visuals", text type "using practiced or memorized words and phrases" (outcome 5).
  - Same page, Novice Mid: function "I can express and ask about needs"; example "I can ask and understand how much something costs." (outcome 4, and asking prices in lessons 3 to 5, a stretch for some children).

    - Interpersonal, Novice Low (PDF page 19): "I can provide information by answering a few simple questions"; example "I can respond to a basic math question using numbers." (outcomes 3 and 4).
    - Presentational, Novice Low (PDF page 23): function "I can name", context "very familiar people, places, and objects with the help of gestures, facial expressions, or visuals"; example "I can say numbers from 1-10." (food words in lesson 1; the numbers in this unit go beyond this example).
    - Interpretive, fictional texts, Novice Low (PDF page 14): "I can identify memorized or familiar words in short, straightforward fictional texts and media that are supported by gestures, facial expressions, or visuals" (the story in lesson 4).
- Wikipedia, "Total physical response": https://en.wikipedia.org/wiki/Total_physical_response . As in earlier units: commands answered with actions, listening before speaking, low stress (lessons 1 and 2).
- Wikipedia, "Information gap task": https://en.wikipedia.org/wiki/Information_gap_task (read 9 November 2026). Learners are missing information and must communicate to fill the gap. The pair game in lesson 5 is an information gap: each partner knows only half the prices.

Known gaps and cautions

- Three other agents text-checked this unit at 066df5e on 2026-11-12. Gemini 3.8 Flash and Gemini 4 Argon reported no errors. Gemini 4 Carbon found three materials gaps in lessons 3 and 4 (cards and coins used in the steps but missing from the lesson materials lists); these were fixed in d4cf1b2, and Gemini 4 Carbon and Gemini 4 Argon re-checked the fixes the same day. Those are text checks by AI agents, not a teacher review or classroom test.
- **No pronunciation help**, as in earlier units. Use a fluent speaker's recording if needed.
- **Numbers differ a lot between languages** (see the number warning). This unit cannot say how your language builds the teens and tens. Check with a fluent speaker; some classes will need more time on numbers than this unit gives.
- **Numbers between the tens** (like 25 or 63) are not taught; every price is a tens number, and every coin is worth ten. This is the author's choice to keep the shop simple. The year plan says "numbers to 100": this unit covers eleven to twenty and the tens to one hundred, not every number to 100. Tens-and-ones numbers are a stretch in lesson 3.
- **Word choices, prices and the story are the author's.** The Can-Do Statements describe what learners can do; they do not list words, prices or stories for a grade 3 class. The example "I can say numbers from 1-10" is a Novice Low example; it does not say which numbers a grade 3 class should learn.
- **Money and food are sensitive topics.** The unit uses pretend coins, picture food and story characters only (see Privacy and money). Check the whole unit against your school's policies on money and food in class.
- Timings are untested.

The lesson order matters: children meet the food words (lesson 1) and numbers (lessons 2 and 3) before they hear them together in prices; they hear the story (lesson 4) before they shop in groups; and the pair game and check come last (lesson 5).

Lesson 1: Food at the market

Unit overview - Next: Lesson 2: Eleven to twenty

Goal: Children recognise fourteen food words (ten from grade 1 and four new: **[tomato]**, **[pear]**, **[fish]**, **[milk]**) by pointing to picture cards, and meet Hen's stall.

Length: about 30 minutes.

Materials

- The word card.
- The fourteen large food picture cards.
- The large price board (shown, but prices are not taught today).
- A cloth or sheet of paper big enough to cover a few cards (for "what's missing?").
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile food cards or large toy food.

Steps

✎ Opening (3 min)

Greeting chant. Hold up five of the grade 1 food cards one at a time (apple, banana, bread, egg, cheese) and say each word; children point or say it with you.

Warm-up: the old words (7 min)

1. Stick the ten grade 1 food cards on the board. Say each word and point; children say it with you or point from their seats.
2. Play **"Show me"**: say **[Show me the carrot]**; children point to the card (or, if the cards are on desks, hold it up). Do all ten words in a mixed order.
3. Ask yes/no questions about single cards: hold up the rice and say **[Is it soup?]** Children show the cross card. **[Is it rice?]** Tick.

✎ Main activity: four new words and "what's missing?" (12 min)

1. **New words (4 min).** Show **[tomato]**, **[pear]**, **[fish]** and **[milk]** one at a time. Say each word three times, with the card; children listen the first time, then join in or point. Add them to the board.
2. **Hen's stall (2 min).** Show the price board. Say, in the school language: "This is Hen's stall at the Little Hill market. Hen sells ten of these foods." Point to each food on the board and say its name; children point to the matching card on the board. Say that the numbers are prices, and the class will learn them soon.
3. **What's missing? (6 min).** Leave six cards on the board. Children close their eyes (or turn away); cover or take away one card. Children open their eyes; ask **[What is missing?]** in the language, or in the school language. Children say the word, or point

to where it was and the teacher says it. Play several rounds; let a child take a card away if they want to.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Which new food words did we learn today?" (Tomato, pear, fish, milk.)
- "Which foods on Hen's board did we already know from grade 1?" (Apple, carrot, banana, egg, bread, cheese.)

✓ Closing check (with answers) (5 min)

Hold up cards one at a time. Children show tick or cross:

1. Hold up the fish: **[Is it fish?]**
2. Hold up the pear: **[Is it a tomato?]**
3. Hold up the milk: **[Is it milk?]**
4. Hold up the tomato: **[Is it a pear?]**

Answers: tick; cross (it is a pear); tick; cross (it is a tomato).

Vocabulary

New: **[tomato]**, **[pear]**, **[fish]**, **[milk]**. Review: **[apple]**, **[banana]**, **[orange]**, **[grapes]**, **[carrot]**, **[bread]**, **[rice]**, **[egg]**, **[cheese]**, **[soup]**, **[Show me the ___]**, **[Is it ___?]**, **[yes]**, **[no]**.

Differentiation

- **Support:** play "what's missing?" with only four cards; children point to the gap instead of naming.
- **Stretch:** children take turns being the teacher: they say **[Show me the ___]** to the class.
- **Blind or low-vision children:** use tactile food cards or large toy food on their desk; for "what's missing?", a partner takes one away and the child feels which is gone.

⚠ Safety

- Picture cards (or large toy food) only; no real food, because of allergies.

Teacher notes and misconceptions

- "What is missing?" is a phrase for the teacher; children are not expected to say it. They only need to name or point.
- Some languages need "a" or "an" before a food word, or none, or a different word for things you can count (a pear) and things you cannot (milk). Say it the way the language says it.

- Do not ask children which foods they eat at home or like; that was the grade 1 unit, and this unit is about Hen's stall.

Lesson 2: Eleven to twenty

Unit overview - Previous: Lesson 1: Food at the market - Next: Lesson 3: Tens and prices

Goal: Children count on from **[ten]** to **[twenty]** and show a number from **[eleven]** to **[twenty]** when it is said, using the ten card and dot cards or number cards.

Length: about 30 minutes.

Materials

- The word card.
- The ten card and the kindergarten dot cards 1 to 10 (large).
- Large number cards 11 to 20.
- Small number cards 11 to 20, one set per pair.
- The fourteen large food picture cards (for the opening).
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: the tactile ten card, and dot cards with raised dots.

Steps

✎ Opening (3 min)

Greeting chant. Show five food cards (tomato, pear, fish, milk, apple) and say **[Show me the ___]** for each in a mixed order; children point.

Warm-up: one to ten (7 min)

1. Count **[one]** to **[ten]** together, with fingers or claps, as in kindergarten.
2. Hold up dot cards in a mixed order; children say the number or show it on their fingers.
3. Hold up the ten card. Count its dots together: there are ten. Say **[ten]**.

✎ Main activity: eleven to twenty (12 min)

1. **Ten and some more (5 min).** Put the ten card on the board. Put the 1 dot card next to it and say **[eleven]**, holding up the 11 number card. Swap in the 2 dot card: **[twelve]**, with the 12 card. Go on to the 10 dot card: **[twenty]**. Children say the numbers with you or point. Then count from **[ten]** to **[twenty]** together, pointing at the cards.
2. **Show me (3 min).** Say a number from **[eleven]** to **[twenty]**. Children point to the large number card on the board. Do six numbers in a mixed order.
3. **Pair game: find it (4 min).** Each pair spreads its small number cards 11 to 20 face up. The teacher says a number; the first partner to touch the card holds it up, then puts it back. After four rounds, partners take turns saying a number for each other (in the language, or by holding up the ten card and a number of fingers).

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How many dots are on the ten card?" (Ten.)
- "To show fifteen, which dot card goes next to the ten card?" (The 5 dot card.)
- "Do the words for eleven to twenty sound like ten and one, ten and two...? Or are they different?" (Depends on the language; listen to the word card together and decide.)

✓ Closing check (with answers) (5 min)

Show the ten card with a dot card beside it. Children hold up the matching small number card (or point to the large one):

1. Ten card and the 3 dot card.
2. Ten card and the 7 dot card.
3. Ten card and the 10 dot card.

Then say **[sixteen]**; children hold up the card.

Answers: 13 (**[thirteen]**); 17 (**[seventeen]**); 20 (**[twenty]**); 16.

Vocabulary

New: **[eleven]**, **[twelve]**, **[thirteen]**, **[fourteen]**, **[fifteen]**, **[sixteen]**, **[seventeen]**, **[eighteen]**, **[nineteen]**, **[twenty]**. Review: **[one]** to **[ten]**, **[Show me the ___]**, food words.

Differentiation

- **Support:** work only with eleven to fifteen; the child points to the number card while the teacher says it with them.
- **Stretch:** counting back from **[twenty]** to **[ten]**; or the child says the number and the partner builds it with the ten card and a dot card.
- **Blind or low-vision children:** use the tactile ten card and raised-dot cards; count the dots by touch.

⚠ Safety

- Nothing special; cards only.

Teacher notes and misconceptions

- Read the number warning on the unit overview page first. If your language says the ones before the ten (or has special words for the teens), the ten card and dot card still work: point to them in the order the language says them.
- If the language's word for "ten" changes inside the teens (as English "ten" becomes "-teen"), point that out once, lightly, and move on.

- Some children write 12 as 21 if the language says "two-ten". Accept the spoken or pointed answer; the written numeral is a maths skill and is not checked here.

Lesson 3: Tens and prices

Unit overview - Previous: Lesson 2: Eleven to twenty - Next: Lesson 4: Bear at the Market

Goal: Children count paper coins in tens to **[one hundred]** and answer **[How much is the ___?]** from Hen's price board.

Length: about 30 minutes.

Materials

- The word card.
- The large price board.
- Large number cards: the tens 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.
- Large number cards 11 to 20 from lesson 2 (for the opening count).
- Ten large paper coins (each marked "10") for the teacher.
- Ten paper coins per pair.
- Small number cards per pair: the ten tens (the 11 to 20 cards are put away today).
- The 5 dot card from kindergarten (for the stretch task only).
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile coins and a small copy of the price board.

Steps

✎ Opening (3 min)

Greeting chant. Count from **[ten]** to **[twenty]** together, pointing at the large 11 to 20 number cards from lesson 2.

Warm-up: counting coins in tens (7 min)

1. Hold up one large coin: "This coin is worth ten." Say **[ten]** and show the 10 card.
2. Add a second coin: **[twenty]**, with the 20 card. Add coins one at a time up to ten coins: **[thirty]**, **[forty]** ... **[one hundred]**. Children say the numbers with you, or hold up a finger for each coin.
3. Count all ten coins again together, faster: **[ten, twenty, thirty ... one hundred]**.

✎ Main activity: tens and prices (12 min)

1. **Show me the coins (4 min).** In pairs, with ten paper coins. Say a tens number; pairs count out that many coins (for **[sixty]**, six coins) and hold up the matching small tens card. Check the answer by counting the coins aloud together. Do five numbers in a mixed order.
2. **How much is it? (4 min).** Point to the price board. Point to the apple and say **[How much is the apple?]** then answer **[Ten coins]**, pointing to the price and holding up one coin. Do the same for the pear (**[Thirty coins]**) and the fish (**[One hundred coins]**).

3. **The class answers (4 min).** Ask **[How much is the ___?]** for five more foods in a mixed order. Children answer by holding up the small tens card, counting out coins, or saying **[___ coins]**. Then let volunteers ask the question while pointing at a food; the class answers.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How many coins do we need for seventy?" (Seven coins, because each coin is worth ten.)
- "Which food on Hen's board costs the most?" (The fish, one hundred coins.) "Which costs the least?" (The apple, ten coins.)

✓ Closing check (with answers) (5 min)

Children answer from the price board with a small tens card, coins, or words:

1. **[How much is the egg?]**
2. **[How much is the bread?]**
3. **[How much is the carrot?]**
4. Hold up four coins: **[Is it forty?]**

Answers: fifty coins (5 coins); seventy coins (7 coins); twenty coins (2 coins); yes (tick).

Vocabulary

New: **[ten]**, **[twenty]**, **[thirty]**, **[forty]**, **[fifty]**, **[sixty]**, **[seventy]**, **[eighty]**, **[ninety]**, **[one hundred]** (as tens), **[coins]**, **[How much is the ___?]**, **[___ coins]**. Review: food words, **[eleven]** to **[twenty]**.

Differentiation

- **Support:** use only the first five prices (apple to egg, ten to fifty); the child counts coins one at a time with the teacher saying the tens.
- **Stretch:** tens and ones: the teacher says a number such as **[twenty-five]** the way the language says it, and the child shows it with two coins and the 5 dot card. (This is beyond the unit's outcomes and is not checked.)
- **Blind or low-vision children:** count tactile coins by touch; use their own small price board.

⚠ Safety

- Paper coins only; no real or toy money.

Teacher notes and misconceptions

- The point of "one coin = ten" is that children can find any price on the board by counting coins, even before they are sure of the tens words.
- Some children say "seven coins" when asked the price of the bread. That is a correct count of coins; say with them **[seventy coins]** and move on.
- Read the number warning on the unit overview page: in some languages the tens are not all built the same way (for example, a word for seventy that sounds like "sixty-ten"). Teach them as the language says them; do not explain why.
- Never ask children what things cost in their own shops or what their family pays.

Lesson 4: Bear at the Market

Unit overview - Previous: Lesson 3: Tens and prices - Next: Lesson 5: Our price list (pair game)

Goal: Children follow the picture story "Bear at the Market", understand **[I would like the ___, please]** and **[Here you are]**, and buy and sell picture-card food in a pretend shop.

Length: about 30 minutes.

Materials

- The word card.
- The six large story picture cards (see the unit overview).
- The large price board.
- Ten large paper coins for the opening count (five of them are Bear's coins in the story), the large pear card and the large cheese card.
- **A pretend shop per group of three or four:** the ten stall food cards (small: apple, carrot, pear, banana, egg, tomato, bread, milk, cheese, fish), a small copy of the price board, ten paper coins, a tray or lidless box for the stall, and six shopping cards, each showing one stall food (apple, carrot, pear, banana, egg, milk).
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile coins, tactile food cards or large toy food, and a small copy of the price board.

Steps

✎ Opening (3 min)

Greeting chant. Count ten large coins together in tens: **[ten, twenty, thirty ... one hundred]**. Ask **[How much is the pear?]**; children answer from the price board (thirty coins).

Warm-up: the story (7 min)

1. **Tell it (4 min).** Show the six story cards one at a time and say each card's lines, with the gestures. Act Bear with the five large coins and the pear card: count Bear's coins aloud (**[ten, twenty, thirty, forty, fifty]**) on card 1, give three coins to "Hen" on card 5, and count the two left on card 6.
2. **Join in (3 min).** Tell it again; children join in with **[Oh no!]** on cards 2 and 3, and with **[Thank you!]** on card 5, by saying it or doing the gesture.

✎ Main activity: the pretend shop (12 min)

1. **Model it (2 min).** At the front, the teacher is the stallholder and a volunteer is the customer, with ten coins. The customer takes a shopping card (the carrot). The talk:
    - Customer: **[Hello!]** Stallholder: **[Hello!]**

- Customer: **[How much is the carrot?]** (or points to the carrot with the "how much" gesture). Stallholder: **[Twenty coins.]**
- Customer: **[I would like the carrot, please.]** (or points to the shopping card). Stallholder: **[Here you are.]** and hands over the carrot card.
- Customer pays two coins. Stallholder: **[Thank you! Goodbye!]**

Then the customer gives the carrot card and the two coins back to the stall, so the next customer has the full set. 2. **Groups shop (8 min).** Each group sets up its stall on a desk. Roles: **stallholder** (sells the food cards and gives prices), **customer** (has the ten coins, takes a shopping card face down, and buys that food), and **coin counter** (counts the coins aloud in tens and checks they match the price). A fourth child is a second customer who waits a turn. After each sale, the food card and coins go back, and roles move round the group. Every child has a turn in each role if they want; nobody has to speak. 3. **Tidy (2 min).** Each group puts its ten food cards, ten coins and six shopping cards back on the tray.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "In the story, why did Bear say 'Oh no!' at the cheese?" (Because the cheese cost ninety coins and Bear had only fifty.)
- "How many coins did Bear have left at the end?" (Two: Bear had five and paid three for the pear.)

✓ Closing check (with answers) (5 min)

Lay out the six story cards in order, numbered 1 to 6. Say a line from the story; children hold up fingers (or point) for the card:

1. **[Seventy coins.]**
2. **[Here you are.]**
3. **[I would like the pear, please.]**

Then hold up the cheese card: **[I would like the cheese, please. How much is it?]** Children answer from the price board.

Answers: card 3; card 5; card 4; ninety coins.

Vocabulary

New: **[I would like the ___, please]**, **[Here you are]**. Review: **[How much is the ___?]**, **[___ coins]**, the tens, food words, **[hello]**, **[goodbye]**, **[thank you]**, **[Oh no!]**, **[The end]**.

Differentiation

- **Support:** the child is the coin counter or the stallholder who hands over cards; the teacher or a partner says the words.

- **Stretch:** the customer buys two foods from one shopping round (for example, the apple and the egg: ten and fifty, so six coins), asking both prices first.
- **Blind or low-vision children:** use tactile coins and tactile food cards (or large toy food); the stallholder says the food name as they hand it over.

⚠ Safety

- Stalls stay on desks; children walk, not run. No real food or money.

Teacher notes and misconceptions

- Every shopping card costs one hundred coins or less, and every customer has ten coins (one hundred), so every customer can buy their food. Nobody runs out of money.
- Keep Bear's "Oh no!" light: Bear looks surprised, then chooses the pear and is happy. The story is about choosing, not about being poor. Do not ask children what they would do without enough money.
- "I would like" may be very polite or a little formal in your language. Use the phrase a fluent speaker would use at a market stall (see the grammar warning on the unit overview page).
- If a group finishes quickly, the stallholder can ask the customer a closing question: **[How much is the ___?]** for any food on the board.

Lesson 5: Our price list (pair game)

Unit overview - Previous: Lesson 4: Bear at the Market

Goal: Children ask and answer **[How much is the ___?]** in an information-gap pair game about a second stall, and the teacher starts the one-to-one check.

Length: about 30 minutes (the one-to-one check is spread over the week).

Materials

- The word card.
- The large price board (Hen's stall), for the opening; then turned round or covered.
- **Price-list sheets per pair** for **Goat's stall**, a different stall at the same market with different prices:
  - **Sheet A:** all ten stall foods in a list, with five prices filled in: apple 20, pear 40, egg 60, bread 80, cheese 100. The carrot, banana, tomato, milk and fish have an empty price box.
  - **Sheet B:** the same list, with the other five prices filled in: carrot 10, banana 30, tomato 50, milk 70, fish 90. The apple, pear, egg, bread and cheese have an empty price box.
- A folder or book per pair to stand up as a screen.
- A pencil per child.
- Ten paper coins per pair.
- A large copy of Goat's full price list (all ten prices), kept hidden until the closing check.
- Tick and cross cards (one of each per child).
- **Check things** (see the Assessment section of the unit overview): eight small food cards (apple, carrot, pear, banana, bread, fish, tomato, milk), small number cards 11 to 20 and the ten tens, ten paper coins, the ten card and dot cards, the small price board (Hen's), and the record sheet (class list with five columns).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile coins, and large-print copies of the sheets (see Differentiation).

Steps

✎ Opening (3 min)

Greeting chant. Ask two prices from Hen's board: **[How much is the tomato?]** (sixty coins) and **[How much is the milk?]** (eighty coins). Then turn the board round or cover it.

Warm-up: Goat's stall (7 min)

1. In the school language: "Goat has a stall at the market too. Goat sells the same foods, but Goat's prices are different. Each of you knows only half of Goat's prices."
2. Show a sheet A and point out the filled-in prices and the empty boxes. Say: "To fill the empty boxes, you ask your partner."

3. **Model it (3 min).** With a volunteer who has sheet B behind a screen, the teacher (with sheet A) points to the carrot and asks **[How much is the carrot?]** The volunteer answers **[Ten coins]** (or holds up one coin, or shows the tens with fingers). The teacher writes 10 in the carrot's empty box.

✎ Main activity: the pair game (12 min)

1. **Ask and fill (8 min).** Partners sit with a screen between them. Child A asks about each food with an empty box on sheet A; child B answers from sheet B and A writes the number. Then they swap: B asks about B's empty boxes and A answers. Answers can be words, coins counted out (one coin for each ten), or fingers.
2. **Compare (2 min).** Partners take the screen away and put their sheets side by side. Every food should now have the same price on both sheets. Fix any that are different by asking again.
3. **Shop at Goat's stall (2 min).** With the ten paper coins, partners take turns: one points to a food and says **[I would like the ___, please]**; the other says the price from the sheet, and the first counts out the coins.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why did you need to ask your partner?" (Because only your partner knew those prices.)
- "Is the pear cheaper at Hen's stall or at Goat's stall?" (Hen's: thirty coins; Goat's is forty.)

✓ Closing check (with answers) (5 min)

Show the large copy of Goat's full price list. Children answer with fingers, coins, a tick or cross, or words:

1. **[How much is the banana?]**
2. **[How much is the fish?]**
3. Point to the cheese: **[Is it ninety coins?]**

Answers: thirty coins; ninety coins; no (cross), it is one hundred coins.

One-to-one check (over the week)

While the class plays the lesson 3 coin game or the lesson 4 pretend shop again, do the five-part check in the unit overview with each child (about 3 minutes each). Use Hen's small price board for part 4, not Goat's list.

Vocabulary

Review: **[How much is the ___?]**, **[___ coins]**, **[I would like the ___, please]**, the tens, food words, **[yes]**, **[no]**.

Differentiation

- **Support:** the child fills only two or three empty boxes; the partner may point to the number on their sheet after saying it.
- **Stretch:** the child asks a whole question and answers with a whole sentence each time; or the pair makes up a third stall with new tens prices and plays again.
- **Blind or low-vision children:** the partner reads each price aloud and the child records it by putting that many tactile coins on the food's line of the sheet, instead of writing; large-print sheets for low-vision children.

⚠ Safety

- Pencils are used at desks and collected at the end.

Teacher notes and misconceptions

- This is an information gap: each partner really needs the other's prices. Do not let children look over the screen, and keep Hen's board covered, because Goat's prices are different.
- Writing a numeral such as 70 is a maths skill, not the language skill being practised. Children may draw seven coins, or put seven coins on the box, instead.
- Some children answer with the coin count (**[seven]**) instead of the price (**[seventy]**). Accept it in the game; say **[seventy coins]** with them.
- Goat's prices are made up by the author, like Hen's, and are not meant to be realistic.

Grade 3 Second Language: Weather and Seasons (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 12 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check it against your school's rules before use. All places, calendars and weather in this unit belong to the made-up town of Little Hill. Children are never asked about their birthdays, holidays, trips, homes or what their families do in any month or season.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 3 year plan - Term 2. Builds on grade 3 term 1: The Market, grade 1 term 2: Weather, Clothes and Days of the Week, and the grade 3 science unit Weather Over a Season.

In grade 1 children learned six weather words, **[What's the weather?]** and the days of the week; in grade 3 term 1 they counted to twenty and played an information-gap pair game. This unit adds five new weather words (**[snowy]**, **[foggy]**, **[stormy]**, **[warm]**, **[cool]**), the four seasons, the twelve months, the questions **[What is the weather like?]**, **[What is the weather like in ___?]**, **[What season is it?]** and **[What month is it?]**, and two sentence starters for describing a picture: **[This is ___]** and **[I see ___]**. At the end, children describe a picture of Little Hill in up to three short sentences.

Which language?

This unit works with any language the school teaches. Before lesson 1, fill in the **word card** below. In the lessons, words in square brackets, like **[It is foggy]**, mean "say this in the language you are teaching".

English meaning	Your language	Gesture or picture to go with it
(review from grade 1) sunny, rainy, cloudy, windy, hot, cold		weather picture cards; the grade 1 actions (below)
snowy, foggy, stormy, warm, cool (new)		weather picture cards; new actions (below)
winter, spring, summer, autumn		the four Little Hill season pictures; season actions (below)
January, February, March, April, May, June, July, August, September, October, November, December		the twelve month cards (word and number)
Is it ___? / yes / no		questioning face and open hands; nod or shake the head
What is the weather like? / It is ___		hand flat over eyes, looking out; then the weather card
What is the weather like in ___? / In ___ it is ___		the month card, then hand over eyes, then the weather card
What season is it? / It is ___		

English meaning	Your language	Gesture or picture to go with it
		both hands draw a big circle (the year), then the season action
What month is it? / It is ___		finger taps the month card
This is ___		open hand towards the picture
I see ___		point to your eye, then to the thing in the picture
tree, flowers, leaves, snow, sun, clouds		the six small "I see" cards (pictures only)
(said by the teacher only, in lesson 5 and the check) Tell me about the picture / What do you see?		point to the picture; point to your eye, then the picture
(review from grade 1) Put on ___		miming pulling the item on
(review) days of the week, clothes words, one to twenty, yes, no, please, thank you		as in earlier units

Weather actions. Use the grade 1 actions for the six review words: sunny = arms make a big circle above the head; rainy = fingers wiggle downwards; cloudy = arms make a puffy shape; windy = sway like a tree; hot = fan your face; cold = hug yourself and shiver. New actions (the author's choice; keep them the same every time):

- **snowy** = both hands float down slowly, palms down, like flakes drifting (slower and softer than rainy);
- **foggy** = one hand moves slowly across in front of the eyes, as if looking through mist;
- **stormy** = one finger draws a quick zigzag in the air (lightning); no stamping or banging;
- **warm** = rub the hands together, then hold the palms out and smile;
- **cool** = one hand lightly rubs the other arm once (a small shiver, smaller than cold).

Season actions (the author's choice): **winter** = make a snowball with both hands; **spring** = closed fingers open slowly like a flower; **summer** = wipe your forehead; **autumn** = fingers flutter down like falling leaves.

Weather card pictures: draw each card with a clear shape, not colour alone. Hot, warm, cool and cold all show a **thermometer** with the level at four clearly different heights (hot near the top, warm above the middle, cool below the middle, cold near the bottom), plus a small figure: hot fanning their face, warm in a T-shirt, cool in a light jacket, cold in a coat and scarf. Snowy shows six-pointed flakes; foggy shows three wavy lines across a faint tree; stormy shows a dark cloud with a zigzag; windy shows curved lines and a bending tree.

Grammar warning: languages say weather in very different ways (for example "it is sunny", "it makes sun", "there is sun", or one word), and some use different forms for "it is warm (weather)" and "I am warm (my body)". Use the weather form. Some languages put **[in]** before months and seasons; some use a different word, or none. "I see" may need a different form of the noun after it (for example a plural or an object form): say **[I see leaves]** the way a fluent speaker would. Children only need to **understand** the phrases and **show** their answers; saying them is invited, never required.

Season warning: seasons are not the same everywhere. North and south of the equator have opposite seasons (summer in July in one, in January in the other), and many tropical places have a **rainy season** and a **dry season** rather than four. Some cultures name more seasons, or different ones; the word for autumn may also be "fall". Little Hill is a made-up town with four

seasons, so the whole class can share the same pictures. If you live somewhere with different seasons, you may also teach your local season words as an extra, but do not change Little Hill: keep its pictures and calendar the same everywhere in the unit.

Calendar warning: this unit uses the twelve months of the Gregorian calendar, the calendar most schools use for the school year. Some languages name months by number (like "month one"), and some communities also use other calendars. Say the months the way the language really says them.

The Little Hill picture calendar

Lesson 4, the closing check and the one-to-one check use the same **picture calendar** for Little Hill. Each month's page shows one picture of one kind of weather. It is a calendar picture, not a weather record: real weather changes from day to day (see the science unit Weather Over a Season). Made up by the author; free to change, but change it everywhere.

Month	Picture on the calendar	Season in Little Hill
1 January	snowy	winter
2 February	cold	winter
3 March	windy	spring
4 April	rainy	spring
5 May	warm	spring
6 June	sunny	summer
7 July	hot	summer
8 August	stormy	summer
9 September	cool	autumn
10 October	foggy	autumn
11 November	cloudy	autumn
12 December	snowy	winter

All eleven weather words appear; snowy appears twice. **Keep this table away from the children until the end of lesson 4**: in the lesson 4 pair game each partner knows only half of it.

The four Little Hill season pictures

Four large pictures of the **same view** of Little Hill: the hill, one big tree, the river and the bridge. Draw them simply; any style is fine. Each picture has one clear kind of weather and one clear thing to see, so the describing game in lesson 5 has a fair answer:

Season	Weather in the picture	Things to see
Winter	snowy (flakes falling)	snow on the ground and on the bridge; the tree has no leaves; clouds
Spring	rainy (rain falling)	flowers in the grass; small new leaves on the tree; clouds
Summer	sunny (a big sun, no clouds)	the sun; the tree full of leaves; flowers
Autumn	foggy (wavy lines of fog over the river)	leaves falling from the tree and on the ground

Model descriptions (answers for lesson 5): **[This is Little Hill. It is winter. It is snowy. I see snow.]**; **[This is Little Hill. It is spring. It is rainy. I see flowers.]**; **[This is Little Hill. It is summer. It is sunny. I see the sun.]**; **[This is Little Hill. It is autumn. It is foggy. I see leaves.]** Other true sentences also count (for example **[I see a tree]** for any picture, or **[It is hot]** for summer).

Big idea

We can **talk about the weather and the time of year** in a new language: name the weather, the seasons and the months, ask what the weather is like, and **describe a picture of a place** in a few short sentences.

Outcomes

By the end of the unit, most children can:

1. Show the eleven weather words (six review words and five new ones) when they are said, by pointing to the card, doing the action or saying the word.
2. Point to the right Little Hill season picture when a season word is said, and show a season with its action or word.
3. Follow or join in the months chant in order, and point to the right month card when a month is said.
4. Answer **[What is the weather like in ___?]** from the Little Hill picture calendar, and in the pair game ask about a month (in words, or by showing the month card with the question gesture).
5. Describe one Little Hill season picture in up to three short pieces (the season, the weather, one thing they see), in words, signs, actions or by placing cards.

Prior knowledge

- Weather, Clothes and Days of the Week (grade 1 term 2): **[sunny]**, **[rainy]**, **[cloudy]**, **[windy]**, **[hot]**, **[cold]** with actions; **[What's the weather?]**; the clothes words and the paper Bear; the days of the week.
- The Market (grade 3 term 1): the numbers **[eleven]** to **[twenty]**; an information-gap pair game with a screen.
- Grade 3 science, Weather Over a Season: the four seasons in Little Hill and the idea that weather changes from day to day. It helps, but it is **not** needed here.
- Children who missed earlier units can still take part; every word has a card, a picture or an action.

Lessons

Keep the 1-minute greeting chant at the start of each day. From lesson 3, add one line to it: **[What month is it?] [It is ___]** with the month card for the real month.

Lesson	Title	Time	Core idea
1	Eleven kinds of weather	30 min	Six review weather words and five new ones, with actions and a "dress Bear for the weather" game
2	Four seasons in Little Hill	30 min	The season words with four pictures of the same place; **[This is ___]** and **[I see ___]**

Lesson	Title	Time	Core idea
3	Twelve months	30 min	The months chant, month cards in order, and the months of each Little Hill season
4	The Little Hill calendar (pair game)	30 min	An information-gap pair game: **[What is the weather like in ___?]**
5	Guess my picture	30 min	Describing a season picture in up to three sentences, a guessing game in pairs, and the one-to-one check

Timings: every lesson is 30 minutes (3 + 7 + 12 + 3 + 5; in lesson 5 the one-to-one check is spread over the week).

Materials

Whole class unless noted.

- The filled-in word card (above), kept where the teacher can see it.
- **Eleven large weather cards:** sunny, rainy, cloudy, windy, hot, cold (from grade 1, or new copies) and snowy, foggy, stormy, warm, cool (new). Big enough to see from the back of the room.
- **The paper Bear and paper clothes** from the grade 1 unit (hat, coat, scarf, gloves, boots, T-shirt, shorts, umbrella), for lesson 1. Make new ones if they are lost.
- **The four large Little Hill season pictures** (above).
- **Twelve large month cards:** each shows the month name written in the language and its number (1 to 12) in large numerals. No weather pictures on them.
- **A string or long strip of card** on the wall, long enough to hang or stick the twelve month cards in a row (lesson 3), and something to fix them with (pegs, clips or reusable sticky putty).
- **The large Little Hill picture calendar** (above): a poster with twelve boxes, one per month, each with the month number, the month name and the weather picture. Kept hidden until the closing check of lesson 4.
- **Small weather cards per pair** (lessons 1 and 4): the eleven weather cards, small enough to lay out on a desk.
- **Small month cards per pair** (lesson 3): the twelve months, word and number.
- **Four small season pictures per pair** (lessons 2 and 3) and **per child** (lesson 5: two sets per pair): copies of the four large pictures.
- **Six small "I see" cards per pair** (lessons 2 and 5): tree, flowers, leaves, snow, sun, clouds (pictures only, no words).
- **Calendar sheets per pair** (lesson 4): sheet A and sheet B (see lesson 4), a folder or book to stand up as a screen, and a pencil per child.
- **Tick and cross cards:** one of each per child, as in earlier units.
- **Check things** (lesson 5): eight small weather cards (snowy, foggy, stormy, cool, sunny, rainy, windy, warm), the four small season pictures, six small month cards (January, March, May, July, October, December), the large picture calendar, the six small "I see" cards, and the record sheet (class list with five columns).
- Ear defenders and a quiet spot, as in every unit.
- Optional, for blind or low-vision children: **tactile weather cards** (raised shapes: a circle with rays for sunny, raised dots falling for rainy, a soft felt cloud for cloudy, a raised zigzag for stormy, three straight raised lines across for foggy, curved raised lines ending in a curl for windy, raised six-pointed stars for snowy, and a raised thermometer with a bead at four heights for hot, warm, cool and cold), **tactile month cards** (the number in large raised

numerals or braille, if the child reads braille), a **tactile season set** (a felt snowflake, a felt flower, a felt sun, a felt leaf; two sets for lesson 5), **paper clothes cut from different textures** for the paper Bear (for example a felt hat, a paper T-shirt, a foil umbrella; lesson 1), and large-print copies of the lesson 4 sheets.
- Optional: a fluent speaker's recording of the word card, the months and the model descriptions.

⚠ Safety and access

Safety

- Children walk, not run, when they come to the front to place cards or line up; the months line in lesson 3 has a seated version.
- Pencils are used at desks and collected at the end.
- No real weather activity is needed: nobody goes outside in bad weather for this unit, and nothing is wet, cold or hot.

Privacy and feelings

- **Never ask** children about their birthdays, holidays, festivals, trips, homes or what their families do in any month or season. Months and seasons are always about Little Hill or the school calendar on the wall.
- **Stormy weather can frighten some children**, and some may have lived through a storm, flood or fire. Present **[stormy]** calmly, with a quiet zigzag, not thunder noises. If a child becomes upset or talks about a real storm, listen kindly, let them sit out the action, and follow the school's usual steps for passing on a concern.
- Some children may feel left out if the class seasons do not match their own experience (for example a child who has lived somewhere with a rainy and a dry season). Welcome it: "In some places there are different seasons. Little Hill has these four."

Taking part

- **Speaking and acting are optional.** Pointing, placing cards, doing the actions, holding up month cards and signs all count. Never make a child speak or act alone in front of others.
- **Movement:** every action has a seated version (hands only). Children can place month cards from their seats, or hand them to a helper, instead of lining up.
- **Children new to the school language:** keep actions identical every time and accept answers in any language.
- **Noise:** quiet spot and ear defenders allowed; in whole-class games children answer with cards or actions, not shouting.

Seeing, hearing and colour

- **Colour vision:** weather cards use shapes (flakes, zigzags, a thermometer level), and season pictures differ by snow, flowers, sun and falling leaves, so nothing is known only by colour. If a child mixes up only colours, do not record it as a language gap.
- **Blind children:** use the tactile weather cards, tactile month cards and the tactile season set. Keep the check things in fixed places and tell the child where each one is before asking. In lesson 5 the partner describes; the blind child finds the matching tactile season item. A description given in words, signs or by handing over tactile items is a full answer.

- **Low-vision children:** large, high-contrast cards; seat them near the month line and the season pictures, or give them their own small copies.
- **Deaf or hard-of-hearing children:** keep your face visible; do the action or show the card every time you say the word.
- **If the language is a sign language:** signs for weather and seasons often look like the thing they mean (falling snow, the sun). That is the language, and it is fine. In the check, if a sign shows its answer, ask the child to **point to** the card or picture instead, so the sign itself does not give the answer away.

Assessment

Lesson 5 includes a five-part check, done one-to-one (about 3 minutes each child; spread over the week). Ask everything with no action and without pointing or looking at the answer. Record each part as **yes**, **with help** or **not yet**:

1. **Weather words:** lay out the eight small weather cards (snowy, foggy, stormy, cool, sunny, rainy, windy, warm), shuffled. Say **[snowy]**, **[foggy]**, **[stormy]** and **[cool]**; the child points to each, or does its action. Yes = four of four.
2. **Seasons:** lay out the four small season pictures, shuffled. Say **[summer]**, **[winter]**, **[autumn]** and **[spring]**; the child points to each. Yes = four of four.
3. **Months:** lay out the six small month cards (January, March, May, July, October, December), shuffled. Say **[March]**, **[July]** and **[October]**; the child points to each card. The child may say the months chant quietly or count on their fingers to find it. Yes = three of three.
4. **What is the weather like?:** show the large Little Hill picture calendar. Ask **[What is the weather like in July?]** (hot) and **[What is the weather like in October?]** (foggy). The child may point to the picture on the calendar, do the action, point to the small weather card, or say it. Yes = both.
5. **Describe a picture:** put the summer picture in front of the child, with the six small "I see" cards beside it. Say **[Tell me about the picture]** (or the school-language words, if the child needs them), then, if needed, ask **[What season is it?]**, **[What is the weather like?]** and **[What do you see?]**. The child answers in words, signs, actions (the season action, the weather action) or by putting an "I see" card on the picture. Answers: summer; sunny (hot also counts); the sun, a tree, leaves or flowers. Yes = all three pieces, with or without the three questions.

Doing it in their own way (pointing, signs, actions, the child's usual access) counts as **yes**. "Not yet" is normal for some children; the games can be played again any time. Asking about a month in the lesson 4 game (part of outcome 4) is **not** recorded: notice it, but do not score it.

Sources

- NCSSFL-ACTFL Can-Do Statements, Novice: https://www.actfl.org/uploads/files/general/Resources-Publications/Can-Do-Novice.pdf (read 12 November 2026; the quoted lines and their sublevels were checked against the rendered PDF pages). These are performance indicators and examples, not a curriculum, and the unit is not a full alignment. Lines used for this unit, quoted exactly:
  - Interpretive, informational texts, Novice Mid (PDF page 15): function "I can identify some basic facts", context "in short, straightforward informational texts and media that are supported by gestures, facial expressions, or visuals", text type "from

memorized or familiar words and phrases"; spoken, viewed, or signed example "I can recognize some weather expressions in a forecast." (lessons 1 and 4; outcome 4).
    - Same page, Novice High, written example: "I can understand some facts about the weather especially when weather symbols are used." (the weather symbols on the lesson 4 sheets; a stretch).
    - Interpretive, observed conversations and discussions, Novice Mid (PDF page 17), spoken, viewed, or signed example: "I can recognize some common expressions when people are discussing the weather." (outcome 1).
    - Interpersonal, Novice Low (PDF page 19): "I can provide information by answering a few simple questions" (outcomes 2 to 4).
    - Presentational, Novice Low (PDF page 23): function "I can name", context "very familiar people, places, and objects with the help of gestures, facial expressions, or visuals"; speaking or signing example "I can say the date and the day of the week." (the months and the daily greeting line from lesson 3; this unit does not teach dates); writing example "I can label familiar people, places, and objects in pictures and posters." (placing "I see" cards on pictures).
    - Same page, Novice Mid: function "I can share information", context "on both very familiar and everyday topics", text type "using a mix of practiced or memorized words, phrases, and simple sentences"; example "I can present simple information about my town or city." (outcome 5, describing a picture of Little Hill; Little Hill is a made-up town, not the child's own).
- Wikipedia, "Season": https://en.wikipedia.org/wiki/Season (read 12 November 2026). The Northern and Southern Hemispheres always have opposite seasons; temperate regions generally recognise four seasons, and many tropical regions have two, a rainy (wet) season and a dry season; the definition of seasons is also cultural. This is the reason for the season warning above.
- Wikipedia, "Total physical response": https://en.wikipedia.org/wiki/Total_physical_response . As in earlier units: commands answered with actions, listening before speaking, low stress (lessons 1 to 3).
- Wikipedia, "Information gap task": https://en.wikipedia.org/wiki/Information_gap_task (read 9 November 2026). Learners are missing information and must communicate to fill the gap. The pair game in lesson 4 is an information gap: each partner knows only half of the Little Hill picture calendar.

Known gaps and cautions

- Four other agents (Gemini 3.5 Flash and Gemini 3.8 Flash at 723c6bb; Gemini 4 Carbon at 723c6bb/e83f91b; Gemini 4 Argon at 7c5a9f7) text-checked this unit on 2026-11-12. None reported errors; Carbon suggested two word-card additions (**[Is it ___?]** and **[Put on ___]**), now added, with lesson 1 and lesson 5 wording matched to them. Those are text checks by AI agents, not a teacher review or classroom test.
- **No pronunciation help**, as in earlier units. Use a fluent speaker's recording if needed.
- **Seasons and months depend on where you live** (see the season warning). Little Hill's four seasons and picture calendar are the author's choice, made so the whole class shares one set of pictures; they are not "the right" seasons.
- **Twelve month words are a lot.** Most children will recognise them with the chant and the numbers before they can say them alone; that is all outcome 3 asks. Dates (like "the third of March") are not taught.
- **Word choices, the picture calendar, the pictures and the actions are the author's.** The Can-Do Statements describe what learners can do; they do not list words, seasons or

months for a grade 3 class. The example "I can say the date and the day of the week" is a Novice Low example; this unit covers months only, not dates.
- The year plan says "describing a picture of a place in a few sentences". This unit describes **one made-up place** (Little Hill) in **up to three short sentences** with set starters; describing other places freely is not taught.
- Timings are untested.

The lesson order matters: children meet the weather words (lesson 1) before the seasons (lesson 2), and the seasons before the months (lesson 3); they need both months and weather words for the calendar pair game (lesson 4); and describing a whole picture comes last (lesson 5).

Lesson 1: Eleven kinds of weather

Unit overview - Next: Lesson 2: Four seasons in Little Hill

Goal: Children review six weather words from grade 1, learn five new ones (**[snowy]**, **[foggy]**, **[stormy]**, **[warm]**, **[cool]**) with actions, and answer **[What is the weather like?]**.

Length: about 30 minutes.

Materials

- The word card.
- The eleven large weather cards: sunny, rainy, cloudy, windy, hot, cold, snowy, foggy, stormy, warm, cool.
- The paper Bear and the eight paper clothes from grade 1 (hat, coat, scarf, gloves, boots, T-shirt, shorts, umbrella), on a board or table at the front.
- Small weather cards per pair (all eleven).
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile weather cards (see the unit overview), and paper clothes cut from different textures (see Differentiation).

Steps

✎ Opening (3 min)

Greeting chant. Hold up the sunny, rainy and cold cards one at a time and say each word; children do the grade 1 action (arms make a big circle; fingers wiggle downwards; hug yourself and shiver).

Warm-up: six weather words again (7 min)

1. **Actions (3 min).** Say each review word without showing the card: **[sunny]**, **[cloudy]**, **[windy]**, **[hot]**, **[rainy]**, **[cold]**. Children do the action. Then show the card so everyone can check.
2. **The question (4 min).** Hold one review card face down. Do the "looking out" gesture (hand flat over the eyes) and ask **[What is the weather like?]** Turn the card over. Children do the action; say **[It is ___]** with them (for example **[It is windy]**). Do this with four or five cards. Children who want to may say **[It is ___]** too.

✎ Main activity (12 min)

1. **Five new words (5 min).** Show each new card, say the word three times, and do its action (see the unit overview): **[snowy]** (hands float down slowly), **[foggy]** (one hand moves slowly across in front of the eyes), **[stormy]** (one finger draws a quick zigzag; quietly), **[warm]** (rub hands, palms out, smile), **[cool]** (one hand lightly rubs the other

arm once). Children copy the action each time. Then put two pairs side by side and point out the difference:
    - **rainy** and **snowy**: rain wiggles down fast; snow floats down slowly.
    - **hot, warm, cool, cold**: put the four cards in a row and point to the thermometer on each. "The line goes down: hot, warm, cool, cold."
2. **Weather actions game (4 min).** Pairs lay out their eleven small weather cards. Say a word (no card, no action); each pair points to the card, and children do the action. Then swap: do an action silently, and pairs point to the card. Mix review and new words; use each new word at least twice.
3. **Dress Bear for the weather (3 min).** Hold up a weather card and ask **[What is the weather like?]** Children answer with the action (or the word). Then ask a volunteer to choose one paper clothing item for Bear (or children point and the teacher moves it), and say **[Put on ___]** together. Do snowy, hot and rainy. More than one choice is fine (for snowy: coat, scarf, gloves, hat or boots; for hot: T-shirt, shorts or hat; for rainy: umbrella, coat or boots).

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How are snowy and rainy different?" (Snow is frozen and floats down slowly; rain is water and falls faster.)
- "Which is colder, cool or cold?" (Cold. Cool is a little bit cold.)
- "What could Bear wear when it is foggy?" (Any sensible answer; a coat is a good one. There is no single right answer.)

✓ Closing check (with answers) (5 min)

Pairs use their small weather cards; every child also has a tick and a cross card.

1. Say **[foggy]**; pairs point to the card.
2. Say **[warm]**; pairs point to the card.
3. Do the stormy action silently; pairs point to the card.
4. Hold up the cool card and ask **[Is it cold?]**

Answers: the foggy card (wavy lines over a faint tree); the warm card (thermometer above the middle, figure in a T-shirt); the stormy card (dark cloud with a zigzag); no (cross), it is cool.

Vocabulary

New: **[snowy]**, **[foggy]**, **[stormy]**, **[warm]**, **[cool]**, **[What is the weather like?]**. Review: **[sunny]**, **[rainy]**, **[cloudy]**, **[windy]**, **[hot]**, **[cold]**, **[It is ___]**, **[Put on ___]**, the clothes words, **[yes]**, **[no]**.

Differentiation

- **Support:** the child works with six cards only (the six review words) at first, then adds snowy and stormy; hot, warm, cool and cold can come later.
- **Stretch:** the child answers **[What is the weather like?]** with a whole sentence, or chooses two clothes for Bear and says **[Put on ___ and ___]**, if the language joins things that way.
- **Blind or low-vision children:** use the tactile weather cards; the partner guides the child's hand along the row. In "dress Bear", the child chooses by touch from paper clothes cut from different textures (felt hat, paper T-shirt, foil umbrella).

⚠ Safety

- Children walk, not run, to the front to dress Bear; Bear can also be passed round the room.
- The stormy action is quiet: no stamping, banging or thunder noises.

Teacher notes and misconceptions

- Warm and cool are the hardest new words, because they are "in between". The thermometer on the cards helps: always show the four temperature cards in the same order.
- Some children confuse **[snowy]** (the weather) with **[snow]** (the thing). The thing comes in lesson 2 with the "I see" cards; for now, use only the weather word.
- In some languages the words for weather temperature and body temperature differ (see the grammar warning in the unit overview). Use the weather form here.
- If a child talks about a real storm and seems upset, see Privacy and feelings in the unit overview.

Lesson 2: Four seasons in Little Hill

Unit overview - Previous: Lesson 1: Eleven kinds of weather - Next: Lesson 3: Twelve months

Goal: Children learn the four season words with four pictures of the same place, answer **[What season is it?]**, and meet **[This is ___]** and **[I see ___]** with six picture words.

Length: about 30 minutes.

Materials

- The word card.
- The four large Little Hill season pictures (winter, spring, summer, autumn; see the unit overview), on the board in that order.
- The eleven large weather cards (from lesson 1).
- Four small season pictures per pair.
- Six small "I see" cards per pair: tree, flowers, leaves, snow, sun, clouds (pictures only).
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile weather cards and the tactile season set (a felt snowflake, a felt flower, a felt sun, a felt leaf).

Steps

✎ Opening (3 min)

Greeting chant. Say **[snowy]**, **[foggy]** and **[cool]**; children do the lesson 1 actions. Ask **[What is the weather like?]** with the warm card; children do the action (rub hands, palms out).

Warm-up: four pictures of one place (7 min)

1. In the school language: "These four pictures all show the same place, Little Hill, at four different times of the year."
2. Point to the winter picture with an open hand: **[This is Little Hill.]** Then **[It is winter.]** and the winter action (make a snowball). Then point to the falling flakes and do the snowy action: **[It is snowy.]**
3. Do the same for **[spring]** (closed fingers open like a flower; **[It is rainy]**), **[summer]** (wipe your forehead; **[It is sunny]**) and **[autumn]** (fingers flutter down like leaves; **[It is foggy]**). Children copy each season action.
4. Point to a picture and ask **[What season is it?]**, with the big-circle gesture. Children answer with the action (or the word). Do all four, in a mixed order.

✎ Main activity (12 min)

1. **I see (4 min).** Show each small "I see" card and say the word: **[tree]**, **[flowers]**, **[leaves]**, **[snow]**, **[sun]**, **[clouds]**. Then point to your eye and to the thing on a large picture: **[I see snow]** (winter), **[I see flowers]** (spring), **[I see the sun]** (summer), **[I**

see leaves] (autumn). Pairs lay out their four small season pictures; when you say **[I see ___]**, they put that "I see" card on a picture where they can see it. More than one picture can be right (flowers are in spring and summer; the tree is in all four).
2. **Which season? (5 min).** Pairs keep their four small season pictures in front of them. Hold up a large weather card and say it, for example **[It is snowy.]**, then ask **[What season is it?]** Pairs hold up the picture with that weather; children do the season action. Use **[snowy]** (winter), **[rainy]** (spring), **[sunny]** (summer) and **[foggy]** (autumn), then mix them up.
3. **Season actions game (3 min).** Say a season word; children do the action. Then do an action silently; pairs hold up the matching small picture.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why does the tree look different in each picture?" (In winter it has no leaves; in spring it has small new leaves; in summer it is full of leaves; in autumn the leaves fall.)
- "Is it snowy every day in winter in Little Hill?" (No. The picture shows one day. Weather changes from day to day; in the science unit, Little Hill usually has only a few snowy days in a winter month.)
- "Does every place in the world have these four seasons?" (No. Some places have a rainy season and a dry season, and when it is summer on one side of the world it is winter on the other. Little Hill has these four.)

✓ Closing check (with answers) (5 min)

Pairs use their four small season pictures; every child also has a tick and a cross card.

1. Say **[autumn]**; pairs hold up the picture.
2. Say **[spring]**; pairs hold up the picture.
3. Point to the large summer picture and ask **[What season is it?]**; children answer with the action or the word.
4. Point to the large winter picture and ask **[I see flowers?]** (as a question, the way the language asks it).

Answers: the autumn picture (falling leaves, fog); the spring picture (rain, flowers); summer (wipe your forehead); no (cross): there are no flowers in the winter picture; **[I see snow]**.

Vocabulary

New: **[winter]**, **[spring]**, **[summer]**, **[autumn]**, **[What season is it?]**, **[This is ___]**, **[I see ___]**, **[tree]**, **[flowers]**, **[leaves]**, **[snow]**, **[sun]**, **[clouds]**. Review: the weather words, **[It is ___]**, **[What is the weather like?]**, **[yes]**, **[no]**.

Differentiation

- **Support:** the child uses two pictures only (winter and summer) at first, then adds the other two.

- **Stretch:** the child says two sentences about a picture, for example **[It is summer. I see the sun.]**
- **Blind or low-vision children:** use the tactile season set: the felt snowflake for winter, the felt flower for spring, the felt sun for summer and the felt leaf for autumn. The child holds up the item instead of the picture, and the tactile weather cards in "Which season?". In "I see", the partner names what is in each picture.

⚠ Safety

- Pairs keep their cards on the desk; nobody needs to walk around in this lesson.

Teacher notes and misconceptions

- **[snowy]** is the weather and **[snow]** is the thing on the ground. If a child says **[I see snowy]**, say **[I see snow]** with them; do not correct sharply.
- Children who know a different climate may say "but where I lived, it rains in summer". Agree: "Yes, in some places it does. In Little Hill, the summer picture is sunny."
- The season actions are the author's choice. If an action means something unkind where you live, choose another and use it every time.
- Keep the Little Hill picture calendar (lesson 4) hidden: these four pictures show one kind of weather per season, but the calendar shows a different picture for each month.

Lesson 3: Twelve months

Unit overview - Previous: Lesson 2: Four seasons in Little Hill - Next: Lesson 4: The Little Hill calendar (pair game)

Goal: Children learn the months chant, put the twelve month cards in order, see which months make each Little Hill season, and answer **[What month is it?]** about the real month.

Length: about 30 minutes.

Materials

- The word card.
- The twelve large month cards (month name and number 1 to 12).
- A string or long strip of card on the wall, and pegs, clips or reusable sticky putty to fix the month cards to it.
- The four large Little Hill season pictures.
- Small month cards per pair (all twelve).
- Four small season pictures per pair.
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile month cards and the tactile season set.

Steps

✎ Opening (3 min)

Greeting chant. Point to each large season picture and ask **[What season is it?]**; children answer with the season action or the word.

Warm-up: the months chant (7 min)

1. In the school language: "A year has twelve months. Every month has a name and a number."
2. Say the twelve months slowly, holding up each large card so the number shows, with one clap on each month: **[January]** (clap), **[February]** (clap) ... **[December]** (clap). Children clap along.
3. Say it again; children join in with any months they can. Then a third time, a little faster. The chant has no tune; a steady clap is enough. A teacher who wants a tune should use one they have made up, not a copyrighted song.

✎ Main activity (12 min)

1. **The month line (5 min).** Give the twelve large month cards to twelve children (or keep them, and let children point). Say the chant slowly. When a child's month is said, they bring the card to the string and fix it in the next place (the teacher helps), or hand it to the teacher from their seat. When all twelve are up, the class says the chant once more, reading along the line.

2. **Which comes next? (4 min).** Pairs lay out their small month cards in order, 1 to 12. Say a month, for example **[March]**; pairs point to it. Then, in the school language: "Point to the month that comes next." Say it together (**[April]**). Do this five or six times. Finish with **[December]**: what comes next? (**[January]**: the year starts again.)
3. **Seasons on the line (3 min).** Put the large season pictures under the month line: spring under March, April and May; summer under June, July and August; autumn under September, October and November; winter under January and February, and point to December at the other end: "In Little Hill, December is winter too." Say each group: **[March, April, May: spring]**, and so on. Pairs put their small season pictures under the right months on their desks.

Then add a new line to the greeting chant, from today: point to the real month on the line and ask **[What month is it?]**; answer together **[It is ___]**.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why is winter at both ends of our line?" (Because the year goes round: after December comes January again, so winter runs across the end of one year and the start of the next.)
- "How do the numbers on the cards help?" (They show the order: January is 1 and December is 12.)
- "In Little Hill, is July in summer or in winter?" (Summer. In some places on the other side of the world, July is in winter.)

✓ Closing check (with answers) (5 min)

Pairs keep their small month cards in order; every child also has a tick and a cross card.

1. Say **[July]**; pairs point to it.
2. Say **[October]**; pairs point to it.
3. Point to April on the month line and ask **[Is it May?]**
4. Point to January on the month line and ask **[What season is it?]**

Answers: the July card (7); the October card (10); no (cross), it is April; winter (the snowball action, or the word).

Vocabulary

New: **[January]** to **[December]**, **[What month is it?]**. Review: **[winter]**, **[spring]**, **[summer]**, **[autumn]**, **[What season is it?]**, **[It is ___]**, numbers one to twelve, **[yes]**, **[no]**.

Differentiation

- **Support:** the child uses the numbers to find months ("March is 3") and joins in the chant by clapping only; that is fine.
- **Stretch:** the child says the chant alone, quietly, to a partner, or starts the chant from any month (for example from **[June]**) and goes round to the same month again.

- **Blind or low-vision children:** use the tactile month cards (raised numerals or braille numbers); the child lays them in a row along the desk edge. A partner says each month name as the child touches it. In "Seasons on the line", the child puts the tactile season items next to the right months.

⚠ Safety

- Children walk, not run, to the month line, one at a time. Anyone can take part from their seat by handing the card to the teacher.
- Fix cards with pegs, clips or putty, not pins.

Teacher notes and misconceptions

- **Never** ask children which month their birthday is in, or about holidays or festivals in a month. Keep the months about Little Hill and the school calendar on the wall.
- Twelve new words is a lot. In the check, children only need to **find** a month that is said, and they may use the chant or the numbers to do it.
- Which months make each season depends on where you live (see the season warning in the unit overview). These are Little Hill's seasons. If your own seasons are different, you can say so: "Here, it is different."
- Keep the Little Hill picture calendar hidden: there are no weather pictures on the month cards, and there should not be any on the month line.

Lesson 4: The Little Hill calendar (pair game)

Unit overview - Previous: Lesson 3: Twelve months - Next: Lesson 5: Guess my picture

Goal: Children ask and answer **[What is the weather like in ___?]** in an information-gap pair game, each partner holding half of the Little Hill picture calendar.

Length: about 30 minutes.

Materials

- The word card.
- The month line from lesson 3, still on the wall (month cards only, no weather pictures).
- **Calendar sheets per pair:** both sheets list the twelve months (number and name) down the side, each with a box. At the top of both sheets is a **weather key**: the eleven weather pictures in a row, drawn like the weather cards.
  - **Sheet A:** six boxes filled with the weather picture: January snowy, March windy, May warm, July hot, September cool, November cloudy. February, April, June, August, October and December have an empty box.
  - **Sheet B:** the other six boxes filled: February cold, April rainy, June sunny, August stormy, October foggy, December snowy. January, March, May, July, September and November have an empty box.
- A folder or book per pair to stand up as a screen.
- A pencil per child.
- Small weather cards per pair (all eleven), to place on a box instead of drawing.
- The large Little Hill picture calendar, kept hidden until the closing check.
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile weather cards, tactile month cards and large-print copies of the sheets (see Differentiation).

Steps

✎ Opening (3 min)

Greeting chant, with **[What month is it?] [It is ___]** at the month line. Say **[stormy]**, **[warm]** and **[foggy]**; children do the actions.

Warm-up: half a calendar each (7 min)

1. In the school language: "Little Hill has a picture calendar. Every month has a weather picture. Each of you has half of the calendar. To fill the empty boxes, you ask your partner."
2. Show a sheet A: point to the filled boxes, the empty boxes and the weather key at the top. "You can draw the weather from the key, or put a small weather card on the box."
3. **Model it (3 min).** With a volunteer who has sheet B behind a screen, the teacher (with sheet A) points to February and asks **[What is the weather like in February?]** The volunteer answers **[In February it is cold]**, or just **[cold]**, or does the cold action, or holds

up the small cold card. The teacher draws the cold thermometer in February's box. Say: "Everyone will still ask about February in the game."

✎ Main activity: the pair game (12 min)

1. **Ask and fill (8 min).** Partners sit with a screen between them. Child A asks about each month with an empty box on sheet A, in order: February, April, June, August, October, December. Child B answers from sheet B, and A draws the weather (or places the small weather card). Then they swap: B asks about January, March, May, July, September and November, and A answers. Asking can be the whole question, just the month name with the "looking out" gesture, or pointing to the month on the month line with the gesture. Answers can be words, the action or the small card.
2. **Compare (2 min).** Partners take the screen away and put their sheets side by side. Every month should now have the same weather on both sheets. Fix any that are different by asking again.
3. **Seasons (2 min).** Pairs point to June, July and August on their sheet (summer in Little Hill) and say or show the three weather words together: **[sunny, hot, stormy]**. Then do the same for winter (December, January, February: **[snowy, snowy, cold]**).

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why did you need to ask your partner?" (Because only your partner's sheet showed those months.)
- "Which months have a snowy picture?" (January and December.)
- "Is it really hot every day in July in Little Hill?" (No. It is one picture on a calendar. Real weather changes from day to day.)

✓ Closing check (with answers) (5 min)

Show the large Little Hill picture calendar. Children answer with the action, a small weather card, a tick or cross, or words:

1. **[What is the weather like in April?]**
2. **[What is the weather like in August?]**
3. Point to September: **[Is it cold?]**
4. **[What is the weather like in May?]**

Answers: rainy; stormy; no (cross), it is cool; warm.

Vocabulary

New: **[What is the weather like in ___?]**, **[In ___ it is ___]**. Review: the eleven weather words, the twelve months, **[yes]**, **[no]**.

Differentiation

- **Support:** the child fills only two or three empty boxes, choosing small weather cards instead of drawing; the partner may point to the picture on their own sheet after saying it.
- **Stretch:** the child asks every question in full and answers with the whole sentence **[In ___ it is ___]**; or the pair makes up a picture calendar for a second made-up town (for example Snowy Peak) and plays again.
- **Blind or low-vision children:** the partner says each answer, and the child places the matching tactile weather card next to that month's tactile month card in a row on the desk, instead of drawing. Low-vision children use large-print sheets.

⚠ Safety

- Pencils are used at desks and collected at the end.

Teacher notes and misconceptions

- This is an information gap: each partner really needs the other's half. Do not let children look over the screen, and keep the large picture calendar hidden until the closing check.
- Drawing the weather is not the language skill being practised. A rough drawing, the small weather card or a tick next to the right picture in the key all count.
- Some children answer with the season instead of the weather (**[summer]** for June). Accept it as a good try, and ask again: **[What is the weather like?]**
- The calendar pictures are made up by the author, like the rest of Little Hill, and are not a real place's weather.

Lesson 5: Guess my picture

Unit overview - Previous: Lesson 4: The Little Hill calendar (pair game)

Goal: Children describe a Little Hill season picture in up to three short pieces (the season, the weather, one thing they see), guess a partner's picture from a description, and the teacher starts the one-to-one check.

Length: about 30 minutes (the one-to-one check is spread over the week).

Materials

- The word card.
- The month line from lesson 3, still on the wall (for the greeting).
- The four large Little Hill season pictures.
- **Four small season pictures per child** (two sets per pair: one for the describer, one for the guesser).
- Six small "I see" cards per pair: tree, flowers, leaves, snow, sun, clouds.
- A folder or book per pair to stand up as a screen.
- Tick and cross cards (one of each per child).
- **Check things** (see the Assessment section of the unit overview): eight small weather cards (snowy, foggy, stormy, cool, sunny, rainy, windy, warm), the four small season pictures, six small month cards (January, March, May, July, October, December), the large Little Hill picture calendar, the six small "I see" cards, and the record sheet (class list with five columns).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: the tactile season set (two per pair) and tactile weather cards.

Steps

✎ Opening (3 min)

Greeting chant, with **[What month is it?] [It is ___]** at the month line. Point to two large season pictures and ask **[What season is it?]**; children answer with the action or the word.

Warm-up: the teacher describes (7 min)

1. In the school language: "I will tell you about one picture, but I won't point. Hold up the picture you think it is."
2. Without looking at or pointing to the large pictures, say: **[This is Little Hill. It is autumn. It is foggy. I see leaves.]** Children hold up their small autumn picture. Then point to the large autumn picture to check.
3. Do the other three pictures in a mixed order, using the model descriptions in the unit overview.
4. **Harder:** leave out the season. Say **[It is rainy. I see flowers.]** (spring), then **[I see the sun.]** (summer).

✎ Main activity: guess my picture (12 min)

1. **Model it (2 min).** With a volunteer, the teacher stands a screen up and secretly chooses one small picture (summer). The teacher describes it: **[It is summer. It is sunny. I see the sun.]** The volunteer holds up their own summer picture. The teacher shows the hidden picture: it matches.
2. **Pairs play (8 min).** Partners sit with a screen between them, each with their own four small season pictures; the describer also has the six "I see" cards. The describer secretly chooses a picture and tells about it in up to three pieces: the season, the weather, and one thing they see. Any way counts: words, signs, the season and weather actions, or holding up an "I see" card. The guesser holds up their matching picture; then the describer shows the hidden one. Swap roles after each picture.
3. **Share (2 min).** Children who want to may describe one large picture to the class, in words or actions. Nobody has to.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Which piece helped you guess fastest?" (Usually the season, or a thing only one picture has, like snow or the sun.)
- "Why is **[I see a tree]** not enough on its own?" (The tree is in all four pictures.)

✓ Closing check (with answers) (5 min)

Children answer by holding up a small season picture, a tick or cross, an action or words:

1. Say **[It is sunny. I see flowers.]** Which picture?
2. Say **[I see snow.]** Which picture?
3. Say **[It is rainy.]** Which picture?
4. Point to the large autumn picture and ask **[Is it summer?]**.

Answers: summer (spring has flowers too, but it is rainy, not sunny); winter; spring; no (cross), it is autumn.

One-to-one check (over the week)

While the class plays "guess my picture" or the lesson 4 calendar game again, do the five-part check in the unit overview with each child (about 3 minutes each). Use the summer picture for part 5.

Vocabulary

Review: **[This is ___]**, **[I see ___]**, **[It is ___]**, the season words, the weather words, the "I see" words, **[What season is it?]**, **[What is the weather like?]**, **[yes]**, **[no]**. For the check: **[Tell me about the picture]**, **[What do you see?]** (said by the teacher; children only need to understand them).

Differentiation

- **Support:** the describer gives one piece only (the season action, or one "I see" card); the guesser chooses from two pictures, not four.
- **Stretch:** the describer gives four sentences, starting with **[This is Little Hill]**, or describes a picture without saying the season.
- **Blind or low-vision children:** use the tactile season sets (one each). The partner describes; the blind child holds up the matching tactile item. When the blind child describes, they choose a tactile item secretly and describe it in words, signs or actions.

⚠ Safety

- Pairs keep their cards on the desk; nobody needs to walk around in this lesson.

Teacher notes and misconceptions

- Describing one picture in three short pieces is all this unit asks (see Known gaps in the unit overview). A child who says only **[summer]** and holds up the sun card has described the picture in their own way.
- Some children will say true things that are not in the model descriptions (**[It is hot]** for summer, **[I see clouds]** for spring). Accept them; they are right.
- **[Tell me about the picture]** and **[What do you see?]** are new in the check but are said only by the teacher, with pointing to your eye and the picture. If a child does not understand them, ask the three short questions from the check instead, or use the school language: the check is about describing, not about these questions.

Grade 3 Second Language: Finding the Way (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 13 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check it against your school's rules before use. All places and routes in this unit belong to the made-up town of Little Hill. Children are never asked about their own homes, their way to school, where they go after school or any real route they take.
>
> Text-checked by four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 3 year plan - Term 3. Builds on grade 3 terms 1 and 2: The Market and Weather and Seasons, grade 2: A Short Scene, and the grade 3 society unit Maps, routes, and places.

In grade 2 children asked **[Where is the ___?]** and answered **[It is in / on / under the ___]**; in grade 3 they played information-gap pair games behind a screen. This unit adds four direction words (**[left]**, **[right]**, **[straight on]**, **[stop]**), the instructions **[Turn left]**, **[Turn right]** and **[Go straight on]**, nine place names with their signs, two new position words (**[next to]** and **[opposite]**), and the polite question **[Excuse me, where is the ___?]**. At the end, children move a token along a route on a map of Little Hill when they hear the directions, and some give a short route to a partner.

Which language?

This unit works with any language the school teaches. Before lesson 1, fill in the **word card** below. In the lessons, words in square brackets, like **[Turn left]**, mean "say this in the language you are teaching".

English meaning	Your language	Gesture or picture to go with it
left, right		hold up the hand on that side (the hand with the wristband sticker is the left hand)
straight on		both hands flat, pointing forwards, move ahead together
stop		one hand up, palm out
Turn left / Turn right		the arm on that side sweeps round to the side
Go straight on		as straight on, a little longer
on the left / on the right		pat the side of the desk on that side
bakery, post office, library, market, café, toy shop, park, pond, bridge		the nine place cards and their sign symbols (below)
next to		two fists side by side, touching
opposite		two flat hands facing each other, a gap between them
Where is the ___? / It is next to ___ / It is opposite ___		open hands and a questioning face; then the next to or opposite gesture

English meaning	Your language	Gesture or picture to go with it
Excuse me / Thank you		a small raised hand; a nod and a smile
Stop at the ___		the stop hand, then point to the place
What is on the left / on the right? / What is opposite?		a questioning face, then pat the desk on that side, or the opposite gesture
Is this the ___? / Is the ___ next to / opposite the ___? / Is the ___ on the left?		a questioning face; answers with yes or no (tick or cross card)
(review from grade 2) Where is the ___? / It is in / on / under the ___		as in grade 2
(review) one to twenty, yes, no, please		as in earlier units

The gestures are the author's choice; keep them the same every time.

Left and right warning: left and right depend on which way you are facing. When the teacher faces the class and holds up the left hand, the children see it on **their** right. In this unit the teacher **turns round** (back to the class, looking the same way as the children) to show **[left]** and **[right]**, or shows them on the token. On the map, left and right are always the token's left and right, and the token's arrow shows which way it faces. Many children (and adults) mix up left and right; that is normal, and it is why there is a wristband sticker.

Grammar warning: languages give directions in different ways. Some use a separate word for "turn", some use one word for "turn left"; some say "straight ahead", "go forward" or "always straight". **[next to]** and **[opposite]** may change the noun after them (for example a different case or a small word before it): say **[It is next to the market]** the way a fluent speaker would. Children only need to **understand** the phrases and **show** their answers; saying them is invited, never required.

Directions warning: not every language or community gives directions with left and right. Some use compass directions (north, south, east, west) or the land (uphill, downhill, towards the river) even for small distances, and many people give directions by landmarks ("past the bakery"). Little Hill uses left and right because the year plan asks for them. If your language usually does it differently, teach the usual way as an extra, but keep the Little Hill routes the same.

Sign language warning: if the language is a sign language, directions and places are shown **in the space** in front of the signer, and the signer's left is the watcher's right. That is the language, and it is fine. In the checks, ask the child to move the token or point to the map instead, so the sign itself does not give the answer away.

The Little Hill map

All five lessons, the pair game and the one-to-one check use the same **map of Little Hill**. It is a made-up town, drawn from above, with north at the top. Made up by the author; free to change, but change it everywhere.

- **Bridge Road** runs up the middle of the map, from the **START star** at the bottom to the **bridge** over the river at the top.
- **Main Street** runs across the middle. Where it meets Bridge Road is **the crossroads**.
- Every place is a box with its **name** and its **sign** (a simple picture) on it. There are nine places:

Place	Where it is on the map	Sign
bakery	lower Bridge Road, left side (west)	a loaf of bread
post office	lower Bridge Road, right side (east), **opposite** the bakery	an envelope
library	Main Street, left of the crossroads, top side (north), with grass between it and the crossroads	an open book
market	Main Street, at the left end (west), top side, **next to** the library	a basket of apples
café (Remy's café)	Main Street, right of the crossroads, top side (north)	a cup
toy shop	Main Street, right of the crossroads, bottom side (south), **opposite** the café	a ball
park	Main Street, at the right end (east), top side, **next to** the café	a tree
pond	upper Bridge Road, left side (west), at the top	a duck
bridge	the top end of Bridge Road, over the river, **next to** the pond	an arch

Everything else on the map is grass, so these are the only "next to" and "opposite" pairs:

- **opposite:** bakery and post office; café and toy shop.
- **next to:** library and market; café and park; pond and bridge.

The bottom side of Main Street to the left of the crossroads, the space next to the toy shop, and the right side of upper Bridge Road are grass. **Draw the grass gaps clearly**, so that, for example, the library is not "next to" the crossroads or the pond.

Routes. The token is a card arrow. It always starts on the START star, **facing up the map** (north). Routes use only these instructions:

- **[Go straight on]**: move the token up Bridge Road to the crossroads; at the crossroads, **[Go straight on]** moves it up to the bridge.
- **[Turn left]** / **[Turn right]** at the crossroads: turn the token to face along Main Street that way, then move it along.
- **[Stop at the ___]**: stop the token beside that place, even partway along a road.

Route (from START, facing up)	Where the token ends	What is on the left and right on the way
Go straight on. Stop at the bakery.	beside the bakery	bakery on the left, post office on the right
Go straight on. Turn left. Stop at the library.	beside the library	library on the right (north side, when facing left/west)
Go straight on. Turn left. Stop at the market.	at the market (end of Main Street)	library on the right on the way
Go straight on. Turn right. Stop at the café.	beside the café	café on the left, toy shop on the right
Go straight on. Turn right. Stop at the park.	at the park (end of Main Street)	café on the left and toy shop on the right on the way
Go straight on. Go straight on. Stop at the pond.	beside the pond	pond on the left
Go straight on. Go straight on. Stop at the bridge.	at the bridge	pond on the left on the way

Note for the teacher: after **[Turn left]**, the token faces left (west), so the top side of Main Street is on **its right**. After **[Turn right]**, the top side is on its left. Children do not need to explain this; it is why the token has an arrow.

Keep the full map away from the children until lesson 3. In lesson 2 they meet the places on cards; in lesson 4 each partner has only half of the labels.

Big idea

We can **find our way** in a new language: understand left, right and straight on, know places by their names and signs, say where a place is (**next to** or **opposite** another one), ask **[Where is the ___?]**, and follow a short route on a map.

Outcomes

By the end of the unit, most children can:

1. Show **[left]**, **[right]**, **[straight on]** and **[stop]** when they are said, with the gesture, an arrow card or the token.
2. Point to the right place card or sign when one of the nine place names is said.
3. Show which place is **[next to]** or **[opposite]** another on the Little Hill map, and answer **[Where is the ___?]** by pointing to the map or saying **[It is next to / opposite ___]**.
4. In the pair game, ask where a place is (the whole question, or the place card with the question gesture) and place it on their map from the answer.
5. Move the token along a two- or three-step route on the map when they hear it (for example **[Go straight on. Turn right. Stop at the café.]**).

Prior knowledge

- A Short Scene (grade 2): **[Where is the ___?]** and **[It is in / on / under the ___]**.
- The Market and Weather and Seasons (grade 3 terms 1 and 2): information-gap pair games with a screen; Little Hill as a made-up town.
- Grade 3 society, Maps, routes, and places: reading a simple map from above. It helps, but it is **not** needed here.
- Children who missed earlier units can still take part; every word has a card, a sign or a gesture.

Lessons

Keep the 1-minute greeting chant at the start of each day.

Lesson	Title	Time	Core idea
1	Left, right, straight on	30 min	The four direction words and three instructions, with gestures, arrow cards and a token on a crossroads card
2	Places and signs	30 min	The nine place names and their signs; **[Where is the ___?]** with signs around the room
3	Next to and opposite	30 min	**[next to]** and **[opposite]** on the Little Hill map; building the map from spoken clues
4	Excuse me, where is the café? (pair game)	30 min	An information-gap pair game: each partner's map has only some of the places labelled

Lesson	Title	Time	Core idea
5	Follow my directions	30 min	Moving the token along spoken routes, giving a route to a partner, and the one-to-one check

Timings: every lesson is 30 minutes (3 + 7 + 12 + 3 + 5; in lesson 5 the one-to-one check is spread over the week).

Materials

Whole class unless noted.

- The filled-in word card (above), kept where the teacher can see it.
- **Wristband stickers:** one small sticker per child, worn on the back of the **left** hand, or a loose paper wristband (never tight) for children who prefer not to wear a sticker. Latex-free.
- **Four large arrow cards:** an arrow pointing left, an arrow pointing right, an arrow pointing up (straight on) and a hand (stop). Each card has a clear shape, not colour alone.
- **Small arrow cards per child:** the same four, small enough to hold up (lessons 1 and 5).
- **Crossroads cards per pair** (lesson 1): a card with a plus-shaped road drawn on it (one road up and down, one across) and a star at the bottom, no places.
- **Tokens:** one per pair (lessons 1, 3 and 5) and one for the check: a small card arrow (for example a triangle of thick card), with a clear point and a dot at the back, about 3 cm long.
- **Nine large place cards:** each with the place name written in the language and its sign (see the map table). Big enough to see from the back of the room.
- **Nine small place cards per pair** (lessons 2, 3 and 4): the same name and sign, sized to fit a box on the pair map.
- **The large Little Hill map** (above): a poster with all nine places labelled. Kept hidden until lesson 3.
- **Blank pair maps** (lesson 3, one per pair): the Little Hill map with the roads, the START star, the river and the nine boxes drawn, but the boxes empty.
- **Pair-game sheets per pair** (lesson 4): sheet A, sheet B and their answer strips (see lesson 4), a folder or book to stand up as a screen, and a pencil per child.
- **Pair maps with all nine places labelled** (lesson 5, one per pair): small copies of the large map.
- **Route strips** (lesson 5): strips of card with picture steps (up arrow, left arrow, right arrow, hand, then a place sign), as listed in lesson 5.
- **Tick and cross cards:** one of each per child, as in earlier units.
- **Check things** (lesson 5): one token, one crossroads card, six small place cards (bakery, post office, library, café, park, bridge), a pair map with all nine places labelled, and the record sheet (class list with five columns).
- Paper and pencils for children who want to draw or write (every lesson).
- A lap tray for a child in a wheelchair, if needed (every lesson).
- Ear defenders and a quiet spot, as in every unit.
- Optional, for blind or low-vision children: **tactile arrow cards** (raised arrows and a raised hand outline), a **tactile token** (a card triangle with a raised ridge down the middle and a felt dot at the back), a **tactile crossroads card** (roads made of glued string, a raised star at the bottom), **tactile place cards** (the sign as a raised shape or a small object glued on: a pasta "loaf" shape for the bakery, a folded paper envelope, a mini card book, a dried-bean apple pile in a paper basket, a felt cup, a small bead ball, a felt tree, a felt duck, a card arch), **tactile route strips** (lesson 5: the same steps as raised arrows and a raised hand, with the tactile sign glued at the end), and a **tactile Little Hill map** with string

roads, a raised star, a raised wavy river line and box outlines in raised lines, the boxes big enough for a tactile place card. Large-print copies of all sheets and strips.
- Optional: a fluent speaker's recording of the word card and the routes.

⚠ Safety and access

Safety

- Every movement in this unit can be done seated. If children stand to turn left and right, they turn on the spot beside their chair, with space around them; nobody walks around the room with eyes closed or follows directions blindfolded.
- In lesson 2 the large place cards are fixed to the walls at a height every child can see and reach from a chair, away from doors and heaters; children point from their seats or walk, not run, to a card.
- Tokens, small cards and the tactile items are not put in mouths; use pasta and beans only where no child is likely to eat them, and check for allergies first. Pencils are used at desks and collected at the end.

Privacy and feelings

- **Never ask** children where they live, how they come to school, where they go after school, which shops their family uses, or to draw or describe any real route. All places and routes are in Little Hill.
- If a child volunteers a real route or address, thank them, and move gently back to Little Hill. Do not write it down or repeat it.
- Some children find left and right hard for a long time, and some have dyspraxia or other differences that make it harder. Never laugh at a wrong turn; the wristband sticker and the token are there to help, not to mark anyone out.

Taking part

- **Speaking is optional.** Pointing, gestures, holding up arrow cards, moving the token and placing cards all count. Never make a child speak or move alone in front of others.
- **Movement:** every gesture has a seated, hands-only version. Turning on the spot is never required.
- **Children new to the school language:** keep gestures identical every time and accept answers in any language.
- **Noise:** quiet spot and ear defenders allowed; in whole-class games children answer with cards or gestures, not shouting.

Seeing, hearing and colour

- **Colour vision:** arrow cards, signs and the map use shapes and words, never colour alone. Roads, grass and the river differ by pattern (grass hatched, the river with wavy lines). If a child mixes up only colours, do not record it as a language gap.
- **Blind children:** use the tactile arrow cards, tactile token, tactile crossroads card, tactile place cards and the tactile map. Before each activity, guide the child's hand once along the roads from the star. Keep check things in fixed places and say where each one is. Moving the tactile token, or pointing to a tactile place card, is a full answer.
- **Low-vision children:** large, high-contrast cards and maps; seat them near the large map, or give them their own large-print copy.

- **Deaf or hard-of-hearing children:** keep your face visible; do the gesture or show the card every time you say the word. When showing left and right with your back turned, glance over your shoulder or hold up the arrow card as well.
- **Wheelchair users:** all activities are on desks or a lap tray; the token and small cards fit on a lap tray. In lesson 1 the "turn" can be shown with the arms or the token.

Assessment

Lesson 5 includes a five-part check, done one-to-one (about 3 minutes each child; spread over the week). Ask everything without gestures and without pointing or looking at the answer. Record each part as **yes**, **with help** or **not yet**:

1. **Direction words:** put the token on the crossroads card at the star, facing up. Say **[left]**, **[right]**, **[straight on]** and **[stop]**, one at a time, in a mixed order; for each, the child shows it by turning or moving the token (for **[stop]**, the token does not move), by holding up the small arrow card, or with the gesture. Yes = four of four.
2. **Places:** lay out the six small place cards (bakery, post office, library, café, park, bridge), shuffled. Say **[library]**, **[café]**, **[post office]** and **[bridge]**; the child points to each. Yes = four of four.
3. **Next to and opposite:** show the pair map with all nine places labelled. Ask **[Where is the post office?]** and **[Where is the market?]**. The child points to the place on the map, or says **[It is opposite the bakery]** / **[It is next to the library]**. Then point to the café and ask **[Is the toy shop next to the café?]** (no; it is opposite). Yes = all three.
4. **Asking:** put the small café card in front of the child. Say, in the school language, "Ask me where this is." The child asks **[Where is the café?]** (or **[Excuse me, where is the café?]**), or shows the café card with the question gesture. Answer, and thank them. Yes = they ask in any of these ways.
5. **Follow a route:** put the token on START on the pair map, facing up. Say **[Go straight on. Turn right. Stop at the park.]**, then, from START again, **[Go straight on. Turn left. Stop at the library.]**. The child moves the token. Small slips in how far the token goes do not matter; the turns and the stopping place do. Yes = both routes.

Doing it in their own way (pointing, signs, gestures, the child's usual access) counts as **yes**. "Not yet" is normal for some children; the games can be played again any time. **Giving** a route to a partner in lesson 5 is a stretch and is **not** recorded: notice it, but do not score it. Mixing up left and right is recorded as it happened, with a note if the child corrected it using the wristband sticker (that counts as **with help**).

Sources

- NCSSFL-ACTFL Can-Do Statements, Novice: https://www.actfl.org/uploads/files/general/Resources-Publications/Can-Do-Novice.pdf (read 13 November 2026; the quoted lines and their sublevels were checked against the PDF page layout). These are performance indicators and examples, not a curriculum, and the unit is not a full alignment. Lines used for this unit, quoted exactly:
  - Interpretive, informational texts, Novice Low (PDF page 15): written example "I can identify some locations or stores by their signs." (the place signs, lesson 2; outcome 2); spoken, viewed, or signed example "I can understand simple directions to a familiar place." (lessons 1 and 5; outcomes 1 and 5).

    - Same page, Novice High example: "I can follow directions in a scavenger hunt game." (following a route to find a place, lesson 5; a stretch beyond Novice Low).
    - Interpersonal, Novice Low (PDF page 19): "I can provide information by answering a few simple questions" (answering **[Where is the ___?]**; outcomes 3 and 4).
    - Interpersonal, Novice High (PDF page 21), speaking example: "I can ask for directions when I'm lost." (asking **[Excuse me, where is the ___?]** in the pair game; a stretch, and Little Hill is made up, so nobody is really lost).
    - Presentational, Novice Low (PDF page 23), writing example: "I can write the names of places on a map." (the optional stretch in lesson 3: writing place names on the blank map; most children place cards instead).
    - Same page, Novice Mid example: "I can tell the location of a city relative to another city on a map." (the unit uses places in one town, not cities: **[It is next to / opposite ___]**; outcome 3).
    - Same page, Novice High example: "I can give simple directions to a nearby location." (giving a route to a partner in lesson 5; a stretch, not recorded).
- Wikipedia, "Guugu Yimithirr language": https://en.wikipedia.org/wiki/Guugu_Yimithirr_language (read 13 November 2026). The article says the language "is notable for its use of pure geographic directions (north, south, east, west) rather than egocentric directions (left, right, forward, backward)", adding that such "purity" is disputed. This is the reason for the directions warning above; it is one example, not a survey of languages.
- Wikipedia, "Total physical response": https://en.wikipedia.org/wiki/Total_physical_response . As in earlier units: commands answered with actions, listening before speaking, low stress (lessons 1 and 5).
- Wikipedia, "Information gap task": https://en.wikipedia.org/wiki/Information_gap_task (read 9 November 2026). Learners are missing information and must communicate to fill the gap. The pair game in lesson 4 is an information gap: each partner's map has only some of the places labelled.

Known gaps and cautions

- Four other agents (Gemini 3.5 Flash, Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon, all at ce47029) text-checked this unit on 2026-11-13. Three reported no errors; Gemini 4 Carbon reported two items (question phrases missing from the word card; tactile place cards, tactile crossroads card and tick and cross cards missing from lesson 5 Materials), fixed in 83e6bd1, and Gemini 4 Argon and Gemini 4 Carbon re-checked the fix. Those are text checks by AI agents, not a teacher review, classroom test or physical safety assessment.
- **No pronunciation help**, as in earlier units. Use a fluent speaker's recording if needed.
- **Left and right are hard.** Many children are still learning which is which in their first language at this age; the unit gives the wristband sticker and the token's arrow as help, and records "with help" honestly. Outcome 1 is about the words, but a child's own left-right confusion can look like a language gap.
- **The map, the place names, the signs, the gestures and the routes are the author's.** The Can-Do Statements describe what learners can do; they do not list words or places for a grade 3 class. Several of the lines quoted are Novice Mid or Novice High examples, used here as stretches.
- Routes are short (at most one turn) and only on the Little Hill map. Real directions with distances ("the second street"), compass words, "past", "before" and "after" are not taught. Writing directions is not taught.

- The year plan says "asking for and giving directions". In this unit children **ask where** a place is and **answer with next to or opposite**; **giving** a whole route is only a stretch in lesson 5. Asking for directions in the full sense ("How do I get to ___?") is not taught.
- Timings are untested.

The lesson order matters: children learn the direction words with the token (lesson 1) before they need them on the map; they meet the places by their signs (lesson 2) before they place them on the map with **[next to]** and **[opposite]** (lesson 3); they need both for the pair game (lesson 4); and following whole routes comes last (lesson 5).

Lesson 1: Left, right, straight on

Unit overview - Next: Lesson 2: Places and signs

Goal: Children show **[left]**, **[right]**, **[straight on]** and **[stop]** with a gesture, an arrow card or a token, and move a token on a crossroads card when they hear **[Go straight on]**, **[Turn left]**, **[Turn right]** and **[Stop]**.

Length: about 30 minutes.

Materials

- The word card.
- Wristband stickers (one per child, latex-free), and loose paper wristbands for children who prefer not to wear a sticker.
- The four large arrow cards: left, right, up (straight on) and a hand (stop).
- Small arrow cards: one set of four per child.
- Crossroads cards: one per pair, plus the check crossroads card for the teacher.
- Tokens: one per pair, plus the check token for the teacher.
- Paper and pencils for children who want to draw or write.
- A lap tray for a child in a wheelchair, if needed.
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile arrow cards, a tactile token and a tactile crossroads card (see the unit Materials); large-print arrow cards.

Steps

✎ Opening (3 min)

Greeting chant. In the school language: "Today we learn to find our way. First, a sticker for your **left** hand." Help each child put a wristband sticker on the back of the left hand, or give a loose paper wristband instead. No child has to wear one; a child who does not want one can keep a small arrow card on the left side of the desk.

Warm-up: show me (7 min)

1. **Turn round (2 min).** Stand with your back to the class, so you face the same way as the children. Hold up your left hand and say **[left]**; children hold up the hand with the sticker. Do the same for **[right]**. Glance over your shoulder each time, so children who lip-read can see your face.
2. **The other two words (2 min).** Still facing the same way as the class, show **[straight on]** (both hands flat, pointing forwards, moving ahead) and **[stop]** (one hand up, palm out). Children copy.
3. **Arrow cards (3 min).** Turn back to face the class. Hold up each large arrow card and say its word; children do the gesture. Then say the words in a mixed order without the cards; children do the gesture. Nobody is "out". Children who like to can stand and turn on the spot beside their chair for **[Turn left]** and **[Turn right]**; everyone else turns with the arm sweep.

✎ Main activity: the token on the crossroads (12 min)

1. **Model it (3 min).** Hold up the check crossroads card flat, facing the class, with the star at the bottom. Put the check token on the star, its point facing up the card. Say: "The token is a little person. Its point shows where it is looking. Left and right are **its** left and right." Say **[Go straight on]** and move the token up to the crossroads. Say **[Turn left]** and turn the token to point along the road to the left. Say **[Go straight on]** and move it along; then **[Stop]**. Do it again with **[Turn right]**.

2. **Pairs (6 min).** Each pair has a crossroads card and a token. One child moves the token; the partner checks with their wristband sticker. Say each sequence slowly, then swap roles after each one:

    - **[Go straight on. Stop.]** (the token stops at the crossroads, still pointing up)
    - **[Go straight on. Turn right. Go straight on. Stop.]** (it ends on the right-hand road, pointing right)
    - **[Go straight on. Turn left. Go straight on. Stop.]** (it ends on the left-hand road, pointing left)
    - **[Go straight on. Go straight on. Stop.]** (it ends at the top of the card, pointing up)

    Walk round. If a token turns the wrong way, point to the wristband sticker and to the token's point; do not say "wrong".

3. **Small arrow cards (3 min).** Children put the token down and hold their four small arrow cards. Say a word; children hold up the matching card. Then invite volunteers to say a word for the class to show. Speaking is invited, never required; a volunteer can hold up a large arrow card instead.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why did I turn round to show left and right?" (Because when I face you, my left hand is on your right side. Turning round, we all face the same way.)
- "At the star, which way does the token point?" (Up the card, towards the crossroads.)
- "After **[Turn right]**, which way does the token point?" (Along the road to the right.)

✓ Closing check (with answers) (5 min)

Children answer with a small arrow card or the gesture. Say each word without doing the gesture:

1. **[right]**
2. **[stop]**
3. **[straight on]**
4. **[left]**
5. Hold up the check crossroads card with the token at the crossroads, pointing up. Say **[Turn left]**. "Which way is the token pointing now?" Children hold up an arrow card.

Answers: the right arrow; the hand; the up arrow; the left arrow; the left arrow.

Vocabulary

New: **[left]**, **[right]**, **[straight on]**, **[stop]**, **[Turn left]**, **[Turn right]**, **[Go straight on]**.
Review: the greeting chant, **[yes]**, **[no]**.

Differentiation

- **Support:** practise only **[left]** and **[right]** first, with the wristband sticker, then add the other two. The partner may move the token first while the child watches, then the child does the same.
- **Stretch:** the child gives a sequence to their partner, saying the instructions while the partner moves the token. Or, with the token stopped on a road, the child pats the side of the desk and says **[on the left]** or **[on the right]** for the side of the road the partner points to.
- **Blind or low-vision children:** before the pair work, guide the child's hand once along the string roads of the tactile crossroads card, from the raised star up to the crossroads and along each side road. The child feels the ridge on the tactile token to know where it points, and holds up tactile arrow cards in the closing check. Low-vision children use large-print arrow cards.

⚠ Safety

- Turning on the spot is optional and only beside the child's own chair, with space around them. Nobody turns with eyes closed.
- Wristband stickers go on the back of the hand only, never the face; paper wristbands are loose. Use latex-free stickers.
- Tokens and cards are not put in mouths. Pencils are used at desks and collected at the end.

Teacher notes and misconceptions

- Facing the class and holding up your left hand shows the children a hand on **their** right. That is why you turn round in the warm-up and use the token's point in the main activity.
- Many children are still learning left and right in their first language. Mixing them up is not a language mistake; the wristband sticker is the help.
- When the token points left or right, its left and the child's left are not the same. In this lesson children only turn the token at the crossroads. Some children find it easier to turn the whole card so that the token points away from them; let them.
- Keep the gestures exactly the same every time, as written on the word card.

Lesson 2: Places and signs

Unit overview - Previous: Lesson 1: Left, right, straight on - Next: Lesson 3: Next to and opposite

Goal: Children point to the right place card or sign when they hear one of the nine place names, and answer **[Where is the ___?]** by pointing.

Length: about 30 minutes.

Materials

- The word card.
- The four large arrow cards (for the opening).
- The nine large place cards, ready to fix to the walls. Fix them at a height every child can see and reach from a chair, away from doors and heaters.
- Small place cards: one set of nine per pair.
- Tick and cross cards (one of each per child).
- Paper and pencils for children who want to draw or write.
- A lap tray for a child in a wheelchair, if needed.
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: tactile place cards (see the unit Materials); large-print small place cards.
- Keep the large Little Hill map hidden; it is used from lesson 3.

Steps

✎ Opening (3 min)

Greeting chant. Hold up the large arrow cards in a mixed order; children do the gesture for **[left]**, **[right]**, **[straight on]** and **[stop]**. Turn round to show left and right, as in lesson 1.

Warm-up: nine places (7 min)

1. In the school language: "Little Hill is a made-up town. Today we meet its places. Every place has a name and a sign, so you can find it even if you cannot read the word."
2. **Three at a time (5 min).** Hold up a large place card, say its name and point to its sign; children point to the sign too, and may say the name. Fix the card to the wall. Do three places, then say those three names in a mixed order while children point to the cards on the wall. Then the next three, then the last three:
    - bakery (loaf), post office (envelope), library (open book);
    - market (basket of apples), café (cup), toy shop (ball);
    - park (tree), pond (duck), bridge (arch).
3. **Signs only (2 min).** Point to a card on the wall and cover its name with your hand. Children say or show which place it is (for example, by pointing to the same small card later, or by saying the name). Do four or five cards.

✎ Main activity: Where is the ___? (12 min)

1. **Model it (2 min).** Review the grade 2 question: say **[Where is the bakery?]** with open hands and a questioning face, then point to the bakery card on the wall. Ask two more; children point from their seats.
2. **Point and find (4 min).** Ask **[Where is the ___?]** for each of the nine places in a mixed order. Children point from their seats. After each one, invite a volunteer to walk (not run) to the card and touch it, or to point to it from their seat. Volunteers only; nobody has to go.
3. **Pairs (6 min).** Each pair spreads its nine small place cards face up between them. Child A asks **[Where is the ___?]** for any place; child B points to that small card (or picks it up and shows it). After four questions they swap. A child who does not want to speak can ask by pointing to a card on the wall with the questioning face; the partner then finds the small card that matches. Walk round and listen.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How can you find the bakery if you cannot read the word yet?" (By its sign, the loaf of bread.)
- "In which Little Hill places can you buy something?" (The bakery, the market, the café, the toy shop, and stamps at the post office. In the library you borrow books. The park, the pond and the bridge are not shops.)
- "Is Little Hill a real town?" (No, it is made up. That is why we can all find our way in it.)

✓ Closing check (with answers) (5 min)

Children point to a card on the wall, hold up a small place card, or hold up a tick or cross card:

1. **[Where is the library?]**
2. **[Where is the pond?]**
3. Hold up the large café card: **[Is this the toy shop?]**
4. Point to the bridge card and cover its name: "Which place is this?"

Answers: the library card (open book); the pond card (duck); no (cross), it is the café; the bridge.

Vocabulary

New: **[bakery]**, **[post office]**, **[library]**, **[market]**, **[café]**, **[toy shop]**, **[park]**, **[pond]**, **[bridge]**. Review: **[Where is the ___?]**, **[left]**, **[right]**, **[straight on]**, **[stop]**, **[yes]**, **[no]**.

Differentiation

- **Support:** in the pair game, the child uses only the first three or six places; the partner may point to the wall card first.

- **Stretch:** the child asks and answers in full, adding **[Excuse me]** before the question and **[Thank you]** after it. Or the child copies two or three place names from the small cards onto paper, next to a drawing of the sign.
- **Blind or low-vision children:** instead of the wall cards, the child has the nine tactile place cards in a row on the desk (or lap tray), always in the same order; say where each one is the first time. In the games, the child touches the tactile card when the place is named. Low-vision children use large-print small place cards and sit near the wall cards.

⚠ Safety

- The wall cards are at a height every child can reach from a chair, away from doors and heaters. Children walk, not run, to a card; volunteers only.
- Tactile place cards with pasta or beans are used only after checking for allergies, and only where no child is likely to eat them. Cards and tactile items are not put in mouths.
- Pencils are used at desks and collected at the end.

Teacher notes and misconceptions

- **Do not ask** which shops the children's families use, or where their own bakery or library is. Keep every place in Little Hill. If a child tells you about a real shop, thank them and move back to Little Hill.
- The signs are the author's choice and stand for the place, not for something you can buy there: the apple basket means "market", not "apples". If a child says **[apple]** for the market card, accept it as a good try and say **[market]**.
- Some languages use a borrowed word for some places (for example a word close to "café" or "park"). That is fine; teach the word a fluent speaker would use.
- Leave the large place cards on the walls if you can; they help in lessons 3 and 4.

Lesson 3: Next to and opposite

Unit overview - Previous: Lesson 2: Places and signs - Next: Lesson 4: Excuse me, where is the café? (pair game)

Goal: Children show which place is **[next to]** or **[opposite]** another, build the Little Hill map from spoken clues, and answer **[Where is the ___?]** with **[It is next to / opposite ___]** or by pointing.

Length: about 30 minutes.

Materials

- The word card.
- The nine large place cards, still on the walls from lesson 2 (if you took them down, any place to show them will do).
- The large Little Hill map, kept face down or covered until the end of the main activity.
- Blank pair maps: one per pair, plus one for the teacher to hold up (roads, START star, river and the nine empty boxes).
- Small place cards: one set of nine per pair.
- Tokens: one per pair.
- Tick and cross cards (one of each per child).
- Paper and pencils (pencils are also the "road" in the warm-up; paper for the writing stretch).
- A lap tray for a child in a wheelchair, if needed.
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: the tactile Little Hill map, tactile place cards and a tactile token (see the unit Materials); large-print blank maps.

Steps

✎ Opening (3 min)

Greeting chant. Each pair puts its token on the START star of its blank pair map, pointing up. Say **[Go straight on]** (to the crossroads), **[Turn right]**, **[Go straight on]**, **[Stop]**. Then back to START for **[Go straight on. Go straight on. Stop.]** (up to the river). Children keep the token beside the map afterwards.

Warm-up: next to and opposite (7 min)

1. **Gestures (2 min).** Show **[next to]** (two fists side by side, touching) and **[opposite]** (two flat hands facing each other with a gap). Children copy. Say each word a few times in a mixed order; children show the gesture.
2. **Cards on the desk (5 min).** Each pair takes out the bakery and post office cards. Lay a pencil on the desk: "This is a road." Put the two cards side by side on the same side of the pencil, touching: **[The bakery is next to the post office]**. Then put them on opposite sides of the pencil, facing each other: **[The bakery is opposite the post office]**. Pairs copy each arrangement. Then say **[next to]** or **[opposite]**, and pairs arrange their two

cards; repeat with other pairs of cards (for example the café and the park). Remind them: "Opposite means across the road. Next to means side by side, with nothing between."

✎ Main activity: build the map (12 min)

1. **Model it (3 min).** Hold up your blank pair map and point to START, Bridge Road, Main Street, the crossroads and the river. Say: "Every box is a place. I will tell you where the places are. You put the small card in its box." Point to the box on the left of lower Bridge Road: "The bakery is here." Pairs put the bakery card there. Then say **[The post office is opposite the bakery]**, with the opposite gesture. Wait; pairs find the box across the road and put the post office card in it. Hold up your map to show it.

2. **Clues (7 min).** Give the clues one at a time, with the gesture each time, and wait for every pair before going on. Some places you point to on your map; the others come from the clue:

    - Point: "The library is here" (Main Street, left of the crossroads, top side). Then **[The market is next to the library]**.
    - Point: "The café is here" (Main Street, right of the crossroads, top side). Then **[The toy shop is opposite the café]** and **[The park is next to the café]**.
    - Point to the box on the river: "The bridge is here." Then **[The pond is next to the bridge]**.

    Each clue has only one possible box, because everything else is grass. If a pair is stuck, ask **[Where is the café?]** and let them find their café card first.

3. **Check (2 min).** Uncover the large Little Hill map. Pairs compare their map with it and move any card that is in the wrong box.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Is the library next to the café?" (No. The crossroads and the grass are between them.)
- "Why is the library not next to the crossroads?" (There is grass between them. Next to means nothing in between.)
- "What is opposite the toy shop?" (The café. They face each other across Main Street.)

✓ Closing check (with answers) (5 min)

Use the large Little Hill map. Children point to their own pair map, use the gestures, hold up a tick or cross card, or say the answer:

1. **[Where is the market?]**
2. **[Where is the toy shop?]**
3. Point to the pond: **[Is the pond next to the bridge?]**
4. **[Is the park opposite the café?]**

Answers: next to the library; opposite the café; yes (tick); no (cross), it is next to the café.

Vocabulary

New: **[next to]**, **[opposite]**, **[It is next to ___]**, **[It is opposite ___]**. Review: the nine place names, **[Where is the ___?]**, **[left]**, **[right]**, **[straight on]**, **[stop]**, **[yes]**, **[no]**.

Differentiation

- **Support:** the child works with a partner who places the card first; the child then shows the gesture for **[next to]** or **[opposite]**. Or give the clue and then point to the right box for that pair.
- **Stretch:** after the check, the child writes the names of three or more places on paper beside a small drawing of the map, copying from the small cards, or says each clue back in full (**[The market is next to the library]**).
- **Blind or low-vision children:** before the clues, guide the child's hand along the string roads of the tactile map, from the raised star to the crossroads, along Main Street both ways, and up to the river line, and let them feel the empty box outlines. A partner or adult says each clue, and the child puts the tactile place card in the box. For the check, an adult says which places are in which boxes, and the child checks by touch. Low-vision children use a large-print blank map.

⚠ Safety

- Tokens, small cards and tactile items are not put in mouths. Tactile items with pasta or beans are used only after checking for allergies.
- Pencils are used at desks and collected at the end.

Teacher notes and misconceptions

- **Opposite** means across the road, facing; **next to** means on the same side, side by side, with nothing between. Some children say "next to" for anything nearby. Point to the grass gaps on the large map and ask: "Is anything between them?"
- In some languages **[next to]** or **[opposite]** changes the place word after it. Say the clue the way a fluent speaker would; children only need to understand it and place the card.
- Keep the large map covered until step 3, so the clues are a real challenge. From now on it can stay up, except in lesson 4, when it is hidden again.
- Writing the names is a stretch. Placing the small cards is the language task.

Lesson 4: Excuse me, where is the café? (pair game)

Unit overview - Previous: Lesson 3: Next to and opposite - Next: Lesson 5: Follow my directions

Goal: Children ask **[Excuse me, where is the ___?]** and answer **[It is next to / opposite ___]** in an information-gap pair game, each partner holding a map with only some of the places labelled.

Length: about 30 minutes.

Materials

- The word card.
- **Pair-game sheets per pair.** Both sheets show the Little Hill map: roads, the START star, the river and all nine boxes.
  - **Sheet A:** five boxes labelled with name and sign: bakery, library, toy shop, park, bridge. The post office, market, café and pond boxes are empty.
  - **Sheet B:** four boxes labelled: post office, market, café, pond. The bakery, library, toy shop, park and bridge boxes are empty.
- **Answer strips per pair.** Each line shows the sign of a place, a small drawing of the next to or opposite gesture, and the sign of the other place, with the words written under them.
  - **Strip B** (used by child B when answering): post office, opposite the bakery; market, next to the library; café, opposite the toy shop (or next to the park); pond, next to the bridge.
  - **Strip A** (used by child A when answering): bakery, opposite the post office; library, next to the market; toy shop, opposite the café; park, next to the café; bridge, next to the pond.
  - The teacher keeps the strips and hands each one out only for the round in which that child answers (see the teacher notes).
- A folder or book per pair to stand up as a screen.
- A pencil per child.
- Small place cards: one set of nine per pair, to put in the empty boxes instead of drawing.
- The large Little Hill map, kept hidden until the closing check.
- Tick and cross cards (one of each per child).
- Paper for children who want to draw.
- A lap tray for a child in a wheelchair, if needed.
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: the tactile Little Hill map and tactile place cards (see Differentiation); large-print sheets and strips.

Steps

✎ Opening (3 min)

Greeting chant. Teach **[Excuse me]** (a small raised hand) and review **[Thank you]** from The Market (a nod and a smile). Say **[Excuse me, where is the bridge?]** with the gestures;

children copy the gestures and may say it with you. Then show **[next to]** and **[opposite]** once more; children do the gestures.

Warm-up: half a map each (7 min)

1. In the school language: "Today each of you has half of the Little Hill map. Some boxes have a name, and some are empty. To fill the empty boxes, you ask your partner."
2. Show a sheet A: point to the labelled boxes and the empty ones. "When you know where a place is, put its small card in the box, or write or draw it." Show a strip: "When it is your turn to answer, you get a strip. It tells you the answers."
3. **Model it (4 min).** Give a volunteer sheet B and strip B, behind a screen. The teacher (with sheet A) asks **[Excuse me, where is the post office?]** The volunteer finds the post office line on the strip and answers **[It is opposite the bakery]**, or just **[opposite the bakery]**, or shows the opposite gesture and points to the bakery sign on the strip. The teacher finds the bakery on sheet A, puts the post office card in the box across the road, and says **[Thank you]**. Say: "Everyone will still ask about the post office in the game."

✎ Main activity: the pair game (12 min)

1. **Round 1 (5 min).** Partners sit with a screen between them. Give out strip B only. Child A asks about each empty box on sheet A: the post office, the market, the café and the pond. Child B answers from strip B, and A puts the small card in the box (or writes or draws). Collect strip B.
2. **Round 2 (5 min).** Give out strip A. Child B asks about the bakery, the library, the toy shop, the park and the bridge. Child A answers from strip A, and B fills the boxes. Collect strip A. Asking can be the whole question, just **[Where is the ___?]**, or holding up the small place card with the questioning face. Answers can be words, the gesture with a point to the sign on the strip, or both.
3. **Compare (2 min).** Partners take the screen away and put their sheets side by side. Every box should now have the same place on both sheets. Fix any that differ by asking again.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why did you need to ask your partner?" (Because only your partner's strip had those answers.)
- "Child B, how did you know which box was the park and which was the toy shop?" (The park is **next to** the café, on the same side. The toy shop is **opposite** the café, across the road.)
- "Is anyone really lost in Little Hill?" (No. It is a made-up town. In real life, if you are lost, you ask a grown-up you trust, like a teacher or a police officer.)

✓ Closing check (with answers) (5 min)

Show the large Little Hill map. Children answer by pointing to their sheet, with the gestures, a tick or cross card, or words:

1. **[Excuse me, where is the café?]**
2. **[Where is the pond?]**
3. Point to the bakery: **[Is the bakery next to the post office?]**
4. **[Where is the market?]**

Answers: opposite the toy shop, or next to the park (both are right); next to the bridge; no (cross), it is opposite; next to the library.

Vocabulary

New: **[Excuse me]**, **[Excuse me, where is the ___?]**. Review: **[Thank you]** (from The Market), **[next to]**, **[opposite]**, **[It is next to / opposite ___]**, the nine place names, **[Where is the ___?]**, **[yes]**, **[no]**.

Differentiation

- **Support:** the child asks about only two places in their round; the partner may show the strip line after answering.
- **Stretch:** the child asks every question with **[Excuse me]** and says **[Thank you]** after each answer, and answers in full sentences. Or, in round 2, child A answers from the finished sheet A instead of strip A.
- **Blind or low-vision children:** the child uses the tactile Little Hill map, with the tactile place cards for their own sheet's labelled places already in their boxes, and the other tactile place cards in a row on the desk. Guide the child's hand along the roads once before the game. When answering, an adult reads the strip line quietly to the child. When asking, the child puts the tactile place card in the box their partner describes. Low-vision children use large-print sheets and strips.

⚠ Safety

- Pencils are used at desks and collected at the end.
- Tactile items with pasta or beans are used only after checking for allergies; cards and tactile items are not put in mouths.

Teacher notes and misconceptions

- **Why the strips are handed out one at a time:** next to and opposite work both ways, so each strip also tells its holder where their own missing places are (strip A says the library is next to the market). Give out strip B only for round 1, and collect it before round 2; give out strip A only for round 2. That keeps the gap real.
- Do not let children look over the screen, and keep the large map hidden until the closing check. The large place cards on the walls do not show positions and can stay up.

- Each answer names a place the asker already has on their sheet, so every empty box can be found from one answer.
- For the café, both **[opposite the toy shop]** and **[next to the park]** are right. Child A has both the toy shop and the park on sheet A, so either answer would work; strip B gives "opposite the toy shop" to keep it simple, and in the closing check either answer counts.
- If a child says **[It is near the ___]** or points vaguely, ask: **[Next to? Opposite?]** with both gestures.

Lesson 5: Follow my directions

Unit overview - Previous: Lesson 4: Excuse me, where is the café? (pair game)

Goal: Children move the token along a two- or three-step route on the Little Hill map when they hear it, say what is **[on the left]** or **[on the right]**, and, as a stretch, give a route to a partner. The one-to-one check starts this week.

Length: about 30 minutes (the one-to-one check is spread over the week).

Materials

- The word card.
- The large Little Hill map, on show.
- Pair maps with all nine places labelled: one per pair.
- Tokens: one per pair, plus the check token for the teacher to show on the large map.
- Small arrow cards: one set of four per child.
- Wristband stickers or loose paper wristbands (latex-free), for children who want one again.
- **Route strips:** one set of seven per pair, each a strip of card with picture steps (an up arrow means **[Go straight on]**, a left or right arrow means **[Turn left]** or **[Turn right]**, a hand and a place sign mean **[Stop at the ___]**):
    1. up arrow; hand and loaf (bakery)
    2. up arrow; left arrow; hand and open book (library)
    3. up arrow; left arrow; hand and apple basket (market)
    4. up arrow; right arrow; hand and cup (café)
    5. up arrow; right arrow; hand and tree (park)
    6. up arrow; up arrow; hand and duck (pond)
    7. up arrow; up arrow; hand and arch (bridge)
- Check things (for the one-to-one check): one token, one crossroads card, six small place cards (bakery, post office, library, café, park, bridge), a pair map with all nine places labelled, and the record sheet.
- Tick and cross cards (one of each per child).
- Paper and pencils for children who want to draw or write.
- A lap tray for a child in a wheelchair, if needed.
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: the tactile Little Hill map, tactile token, tactile arrow cards, tactile place cards, tactile route strips and, for the one-to-one check, the tactile crossroads card (the same steps as raised arrows and a raised hand, with the tactile sign glued at the end); large-print pair maps and route strips.

Steps

✎ Opening (3 min)

Greeting chant. Say **[left]**, **[right]**, **[straight on]** and **[stop]** in a mixed order; children hold up the small arrow card. Then say **[Turn left]** and **[Turn right]**; children do the arm sweep.

Warm-up: on the left, on the right (7 min)

1. **Model it (3 min).** Put the check token on the START star of the large map, pointing up. Say **[Go straight on. Stop at the bakery.]** and move it. Pat the left side of a desk: **[The bakery is on the left.]** Pat the right side: **[The post office is on the right.]** Children copy the pats.
2. **Pairs (4 min).** Each pair puts its token on START on its pair map, pointing up. Say **[Go straight on. Stop at the bakery.]** Ask **[What is on the right?]**; children pat the side and point (the post office). Back to START. Say **[Go straight on. Go straight on. Stop at the pond.]** Ask **[Is the pond on the left?]** (yes: children hold up the tick card).

✎ Main activity: follow my directions (12 min)

1. **Follow the route (5 min).** Say each route slowly, twice. Pairs take turns moving the token from START; the partner checks. After each one, show it on the large map with the check token.
    - **[Go straight on. Turn right. Stop at the café.]**
    - **[Go straight on. Turn left. Stop at the library.]**
    - **[Go straight on. Turn right. Stop at the park.]**
    - **[Go straight on. Go straight on. Stop at the bridge.]**
    - **[Go straight on. Turn left. Stop at the market.]**
2. **Mystery places (2 min).** Say a route, then a question instead of a place name. Children move the token, then point to the answer:
    - **[Go straight on. Go straight on. Stop at the bridge. What is on the left?]** (the pond)
    - **[Go straight on. Turn right. Stop at the café. What is opposite?]** (the toy shop)
3. **Your turn to lead (5 min).** Each pair puts its route strips face down. One child picks a strip and gives the route: by saying it, by showing the picture steps one at a time with the gestures, or both. The partner moves the token, then turns the strip over to check the place sign. Swap after each strip. Giving a route in words is a stretch; showing the strip counts.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Which routes have no turn?" (To the bakery, the pond and the bridge: only **[Go straight on]**.)
- "After **[Turn right]**, is the café on the left or the right?" (On the left. The toy shop is on the right.)
- "Did anyone's token turn the wrong way? What helped?" (The wristband sticker, the token's point, or turning the map. Everyone makes wrong turns sometimes.)

✓ Closing check (with answers) (5 min)

Children move the token on their pair map and point to where it stops, or pat the side of the desk:

1. **[Go straight on. Turn left. Stop at the market.]**
2. **[Go straight on. Stop at the bakery. What is on the right?]**
3. **[Go straight on. Turn right. Stop at the park.]**

Answers: the token is at the market, at the left end of Main Street; the post office (on the right); the token is at the park, at the right end of Main Street.

Tell the children: "This week I will play a short game with each of you, one at a time." Over the week, do the five-part check from the unit overview (about 3 minutes per child) while the others play the pair game from lesson 4 or the route strips again.

Vocabulary

New: **[on the left]**, **[on the right]**, **[Stop at the ___]**, **[What is on the left / right?]**. Review: **[Go straight on]**, **[Turn left]**, **[Turn right]**, **[stop]**, **[next to]**, **[opposite]**, the nine place names, **[yes]**, **[no]**.

Differentiation

- **Support:** use only the routes with no turn first (bakery, pond, bridge), then add one turn. The partner may move the token first while the child watches, then the child does the same.
- **Stretch:** the child gives routes from the strips in full sentences, or makes up a route to a place and says it for the partner without a strip. Or, after the token stops, the child says what is **[on the left]** and **[on the right]**.
- **Blind or low-vision children:** before the routes, guide the child's hand along the string roads of the tactile map from the raised star. The child moves the tactile token (feeling its ridge to know which way it points) and uses tactile route strips. In the mystery places, the child touches the tactile place card. Low-vision children use large-print pair maps and route strips.

⚠ Safety

- Tokens, strips and tactile items are not put in mouths; tactile items with pasta or beans are used only after checking for allergies.
- Pencils are used at desks and collected at the end.

Teacher notes and misconceptions

- After **[Turn left]**, the token points left (west), so the top side of Main Street (the library and the market) is on **its right**. After **[Turn right]**, the top side (the café and the park) is on its left. Children do not need to explain this; let them turn the map if it helps.
- Small slips in how far the token moves do not matter. The turns and the place where it stops do.

- Routes are only on the Little Hill map. **Never ask** children to give or draw the way to their home, to school or to any real place. If a child volunteers one, thank them and move back to Little Hill.
- In the check, mixing up left and right is recorded as it happened; if the child fixes it using the wristband sticker, that is **with help**.