Grade 2, all subjects

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

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Grade 2 Language and Literacy: More Vowel Teams (ay, igh, ow, oo)

Subject: English language and literacy | Grade: 2 | Lessons: 5 | Time: about 30 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.
>
> Text-checked by one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 1. Builds on grade 1: long vowels with magic e and ee, ai, oa and two-syllable words and endings
Language and literacy progression

Big idea

Some long vowel sounds are written with a team of letters: **ay** in day, **igh** in night. Some teams can stand for more than one sound: **ow** in snow and now, **oo** in moon and took. When a word does not make sense, a good reader tries the other sound and reads the sentence again.

Outcomes

By the end of the unit, most children can:

1. Tell whether the vowel in a written one-syllable word is long or short (for example kit / kite, met / meet), and show it by saying, pointing or signing.
2. Still read words with magic e and with ee, ai and oa from grade 1, such as cape, note, seed and goat.
3. Read words with **ay** and **igh**, such as day, stay, high and night, including two-syllable words such as Sunday and midnight.
4. Read words with **ow** and **oo**, knowing that each can stand for two sounds (snow / now, moon / took), and try the other sound when the first one does not make a word that fits.
5. Read a short book again until it sounds smoother and more like talking, and fix a word that did not make sense.

Prior knowledge

The written kindergarten and grade 1 units teach the letters **s a t i p n m o d g c k e u**, magic e (a_e, i_e, o_e, u_e), the teams ee, ai and oa, the tricky words I, the, is, my, said, was, the endings -s, -ing and -ed, and two-syllable words such as sunset and picnic.

The new teams need three more letters, **y**, **h** and **w**. Lesson 1 checks or teaches these three letters before they are used. Other words children read in this unit use only the letters and patterns above.

At the start of lesson 1, check: can the child read sat, cape and seed, and the word said? If a child cannot yet blend a short word, keep working on that first.

Lessons

1. Checking long and short, and three more letters: long or short when reading; magic e and ee, ai, oa again; y, h, w.
2. ay and igh: day, stay, Sunday; high, night, midnight.
3. ow: two sounds: snow and now; try the other sound.
4. oo: two sounds: moon and took; reading sentences.
5. Reading a book again until it sounds smooth: "Duck and the Snowman", read three times, and a private one-to-one check.

Materials (whole class unless noted)

- Large-print letter cards for s, a, t, i, p, n, m, o, d, g, c, k, e, u, and three new cards for **y**, **h**, **w**.
- Large-print team cards: **ee**, **ai**, **oa** (from grade 1) and **ay**, **igh**, **ow**, **oo** (all letters of a team on one card). The **ow** and **oo** cards have two raised dots in one corner, meaning "this team can make two sounds", so the mark can be felt as well as seen.
- Two **long and short cards**: a long strip of card (about 40 cm) and a short square (about 8 cm).
- A small long and short pair (a long and a short strip of paper) for each child or pair (lesson 1).
- Four **key word cards** for sorting, snow, now (lesson 3), moon, took (lesson 4).
- Large-print word cards for each lesson (listed in each lesson).
- Mini whiteboards and pens, or paper and pencils (one per child), or the child's usual typing or letter-selection tool.
- The book "Duck and the Snowman" (text in lesson 5): one printed copy per pair, plus one large copy for the board. Copies are made by the teacher from the text; there is no publisher.
- Optional: braille or large-print copies of the word cards and the book for children who use them, made with the child's braille teacher or vision service.
- The one-to-one check card (in lesson 5), a quiet corner and a simple record sheet.

⚠ Safety and access

- Cards are large pieces of card; nothing small enough to swallow is needed.
- **Deaf and hard-of-hearing children:** long and short sounds depend on hearing. Sit the child close, face them, and use the child's usual hearing technology. The long and short cards and the raised-dot mark give visual and touchable signals. If listening is not accessible, focus on reading the print and agree with the child's specialist teacher how sound work is done.
- **Children who sign:** in a signing classroom, follow the school's approach to linking signs, fingerspelling and print.
- **Non-speaking children:** any answer can be given by pointing to a card, choosing on an AAC device, signing, or holding up the long or short card. Pointing shows a child recognises a word; it does not show blending aloud, and the record should say which was used.

- **Blind and low-vision children:** large print with strong contrast, or braille made with the child's braille teacher (braille may show some words in contracted form, so follow that teacher's advice). The two-sounds mark is raised.
- **Colour** is never the only clue on any card.
- **Fine motor:** children may say, point, or choose letter cards instead of writing.
- **Reading aloud is never forced in front of the class.** No timing of reading in public, no reading-speed charts, no rankings. Reading alone to an adult happens privately, in lesson 5.
- **Accents differ.** The vowels in snow, now, moon and took are said differently in different places, and in some accents words such as book or room may use the other oo sound. Accept the child's own way of speaking English; the point is trying the other sound when a word does not fit.

Assessment

- **Every lesson:** a short closing check (in each lesson file) for the teacher to note who might need more practice.
- **Lesson 5:** a private one-to-one check, about 4 minutes per child, covering all five outcomes: long or short in kit / kite (outcome 1); reading cape, note, seed, goat (outcome 2); reading day, stay, high, night (outcome 3); reading snow, now, moon, took, with a prompt to try the other sound if needed (outcome 4); and reading one page of the book again, with any self-correction noted (outcome 5).
- Record what each child did and what helped, with no score or pass mark. Use the record to plan who needs more practice with which team.
- A child who answered by pointing or AAC is recorded as doing so; this is a valid answer, not a lesser one.

Sources

- Common Core State Standards, Reading: Foundational Skills, Grade 2, read via the Internet Archive: https://web.archive.org/web/2025/https://www.thecorestandards.org/ELA-Literacy/RF/2/
  - RF.2.3.a: "Distinguish long and short vowels when reading regularly spelled one-syllable words."
  - RF.2.3.b: "Know spelling-sound correspondences for additional common vowel teams."
  - RF.2.3.c: "Decode regularly spelled two-syllable words with long vowels."
  - RF.2.3.e: "Identify words with inconsistent but common spelling-sound correspondences."
  - RF.2.4.b: "Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings."
  - RF.2.4.c: "Use context to confirm or self-correct word recognition and understanding, rereading as necessary."
- Wikipedia, "Phonics": https://en.wikipedia.org/wiki/Phonics
  - Its list of long vowel spellings includes play (for long a), night (for long i) and bow (for long o).
  - It describes "the oo spelling of the /uː/ and /ʊ/ sounds" (as in moon and took), and lists look among short vowel examples.
  - It names "/aʊ/ as in cow" as a common diphthong (the sound of ow in now).

    - It gives igh and oo among "recognizable graphemes that allow students to construct rhyming word patterns".
- IES What Works Clearinghouse, Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (practice guide landing page only): https://ies.ed.gov/ncee/wwc/PracticeGuide/21 . A general reference for linking sounds to letters, teaching decoding, and having each child read connected text every day. It does not validate this exact unit.
- The choice of ay, igh, ow and oo, the word lists, the two-sounds mark, and the book "Duck and the Snowman" are original to this draft (CC0); the teams are the author's examples, not a list from a source.

Known gaps

- Written 10 November 2026. Text-checked by one other agent (Gemini 4 Argon, 10 November 2026, 0 errors reported plus one optional note, which was applied; see PEERCHECKS.md); not yet reviewed by a teacher. A text check is not classroom testing.
- **Letters this unit assumes.** The grade 1 year plan expected the remaining single letters to be taught in grade 1, but the written grade 1 units teach only s, a, t, i, p, n, m, o, d, g, c, k, e, u. This unit adds y, h and w in lesson 1 because the new teams need them. Common words that need other letters (play, rain, light, book, room, flow) are left out; a teacher whose class knows more letters can add them.
- Other vowel teams (ea, ie, oi, oy, ou, ew, ue and others) are not covered here.
- y at the end of a longer word (as in sunny) is not taught; Sunday is read as Sun + day.
- Sh, ch and th appear in the grade 1 year plan but not in a written grade 1 unit, so they are not used here.
- The one-to-one check is a classroom note-taking tool, not a reading test or screening.
- Little Hill characters (Goat, Duck, Hen) and the book are made up.

Lesson 1: Checking Long and Short, and Three More Letters

Unit overview - Next: Lesson 2

Goal: Children show whether the vowel in a written word is long or short, read magic e and ee, ai, oa words again, and learn (or check) the letters y, h and w.

Length: 30 minutes

Materials

- Letter cards s, a, t, i, p, n, m, o, d, g, c, k, e, u, and the new cards **y**, **h**, **w**.
- Team cards **ee**, **ai**, **oa**.
- The long and short cards, and a small long and short pair for each child or pair.
- Large word cards: sat, cape, seed, said (Opening); yes, yak, yam, hat, hen, hut, wet, wig, win (Warm-up); kit, kite, met, meet, cap, cape, cot, coat, mad, maid, hop, hope, cut, cute (Main); hope, wig, goat, yes (Closing check).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- Optional: braille or large-print word cards.

Steps

✎ Opening (3 min)

Read sat, cape, seed and said together. Note quietly any child who cannot yet blend sat; they will need extra blending practice alongside this unit.

Warm-up: y, h, w (6 min)

Show **y**: "This letter says /y/ as in yes." Read yes, yak, yam. Then **h** (hat, hen, hut) and **w** (wet, wig, win). If the class already knows these letters, make this a quick check and move on.

✎ Main activity (14 min)

1. **Long or short?** (6 min): show kit, then kite. Read both. "Which has the long sound, the one that says the letter's name?" Children hold up the long or short strip. Repeat with met / meet, cap / cape, cot / coat.
2. **Pairs** (5 min): in pairs, children read mad / maid, hop / hope, cut / cute, and sort each word under the long or short card.
3. **Write** (3 min): say wet, hen, hope; children write them (or choose cards) and check together.

✓ Discussion questions (with answers) (3 min)

- "What makes the a in cape long?" The e at the end (magic e).

- "How many sounds do the two letters ee make in meet?" One, the long e.
- "Is the vowel in wig long or short?" Short.

✓ Closing check (with answers) (4 min)

Show hope, wig, goat, yes. Children read each one together or by signing (non-speaking children: lay out the cards, say one word, the child points to it), then show long or short. Answers: long, short, long, short.

Vocabulary

long sound, short sound, vowel, vowel team

Differentiation

- **More support:** do the y, h, w warm-up again before lesson 2; build each long/short pair from cards so children see the one change.
- **Stretch:** read wade, wipe, hide, heed.
- **Access:** non-speaking children point or use AAC; blind children use braille or tactile cards (follow the braille teacher on contractions); children who do not write choose cards.

⚠ Safety

Large flat cards only.

Lesson 2: ay and igh

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

Goal: Children read words with **ay** (long a) and **igh** (long i), including two-syllable words.

Length: 30 minutes

Materials

- Team cards **ay** and **igh**, plus **ai** (from grade 1).
- Letter cards s, t, d, m, p, w, h, n, g.
- Large word cards: cape, maid (Opening); day, say, may, pay, way, hay, stay (Warm-up and Main); high, sigh, night, might, sight, tight (Main); Sunday, daytime, midnight, highway (Main); stay, night, might, Sunday (Closing check).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- The long and short cards.
- Optional: braille or large-print word cards.

Steps

✎ Opening (3 min)

Read cape and maid. "Both have the long a sound. Today we meet another way to write long a, and a way to write long i."

Warm-up: ay (5 min)

Show the **ay** card: "These two letters together make one sound, long a." Build d + ay → day. Read say, may, pay, way, hay, stay together. Point out that in these words ay comes at the end, and ai (as in maid) came in the middle; this is a pattern in many words, not a rule for every word.

✎ Main activity (15 min)

1. **igh** (5 min): show the **igh** card: "Three letters, one sound: long i." Build h + igh → high, then n + igh + t → night. Read sigh, might, sight, tight.
2. **Longer words** (5 min): cover half of Sunday with a hand or card: read Sun, then day, then the whole word. Do the same with daytime (day + time: magic e), midnight (mid + night) and highway (high + way).
3. **Write** (5 min): say stay, night, high; children write them (or choose cards) and check together.

✓ Discussion questions (with answers) (3 min)

- "How many letters are in the team igh? How many sounds?" Three letters, one sound.
- "Which team is in pay?" ay.

- "What two small words make midnight?" mid and night.

✓ Closing check (with answers) (4 min)

Show stay, night, might, Sunday. Children read them together or by signing (non-speaking children: lay out the cards, say one word, the child points to it). Then: "Which word has long a?" stay (and Sunday, in its second part). "Which have long i?" night, might.

Vocabulary

vowel team, long a, long i, syllable

Differentiation

- **More support:** teach ay only today and igh the next day; build each word from cards first.
- **Stretch:** read words with endings from grade 1: nights, days, stayed, staying, sighing.
- **Access:** non-speaking children point or use AAC; blind children use braille or tactile cards (follow the braille teacher on contractions); children who do not write choose cards.

⚠ Safety

Large flat cards only.

Lesson 3: ow, Two Sounds

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

Goal: Children read words with **ow**, know it can make the long o sound (snow) or the sound in now, and try the other sound when the first does not make a word that fits.

Length: 30 minutes

Materials

- Team card **ow** (with the raised two-sounds mark), plus **oa** (from grade 1).
- Key word cards snow and now.
- Letter cards s, n, t, m, h, c, d, g.
- Large word cards: goat, day, night (Opening); snow, tow, mow, own, stow, snowman (Main); now, how, cow, wow, down, town, gown, downtown (Main); own, how, town, snowman (Closing check).
- Large sentence cards: "The cow is in the snow." and "Now I can mow." (Main); "Goat is in the town now." (Closing check).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- Optional: braille or large-print word and sentence cards.

Steps

✎ Opening (3 min)

Read goat, day, night together as a quick review of oa, ay and igh.

Warm-up: one team, two sounds (5 min)

Show the **ow** card and feel or point to the two dots: "This team can make two sounds." Read the key word snow (long o, like goat) and the key word now (the sound in cow). Put the two key word cards side by side.

✎ Main activity (15 min)

1. **Long o words** (4 min): read tow, mow, own, stow, then snowman (snow + man).
2. **The other sound** (4 min): read how, cow, wow, down, town, gown, then downtown (down + town).
3. **Sort** (3 min): in pairs, mix the word cards and sort them under snow or now.
4. **Try the other sound** (4 min): read "The cow is in the snow." together. Then read "Now I can mow." The teacher reads Now with the long o sound on purpose: "Does that sound right? No, so I'll try the other sound." Read the sentence again. Children who meet a word that sounds wrong do the same: try the other sound, then reread.

✓ Discussion questions (with answers) (3 min)

- "What two sounds can ow make?" The long o in snow and the sound in now.
- "How do you know which sound to use?" Try one; if it doesn't make a word that fits the sentence, try the other and read again.
- "Which two words make snowman?" snow and man.

✓ Closing check (with answers) (4 min)

Show own, how, town, snowman. Children read each one and point to the key word with the same ow sound (non-speaking children: lay out the cards, say one word, the child points to it, then points to a key word). Answers: snow, now, now, snow. Then read "Goat is in the town now." together.

Vocabulary

vowel team, two sounds, key word, reread

Differentiation

- **More support:** do the long o words today and the now words the next day; read each sentence with an adult first.
- **Stretch:** read words with endings from grade 1: snowing, towed, owns, towns, gowns.
- **Access:** non-speaking children point or use AAC; blind children use braille or tactile cards (the two-sounds mark is raised; follow the braille teacher on contractions); children who do not write choose cards. Accept the child's own accent for both sounds.

⚠ Safety

Large flat cards only.

Lesson 4: oo, Two Sounds

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

Goal: Children read words with **oo**, know it can make the sound in moon or the sound in took, and read short sentences, trying the other sound when a word does not fit.

Length: 30 minutes

Materials

- Team card **oo** (with the raised two-sounds mark).
- Key word cards moon and took, plus snow and now from lesson 3 (Opening).
- Letter cards m, n, s, p, t, c, k, g, d, w, h.
- Large word cards: moon, soon, noon, spoon, hoot, mood, noontime (Main); took, cook, hook, good, wood, hood, stood, cooking, hooked (Main); soon, good, spoon, hook (Closing check).
- Large sentence cards: "The moon is high at midnight.", "Duck took a spoon.", "Hen is cooking at noon.", "Goat stood in the wood." (Main).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- Optional: braille or large-print word and sentence cards.

Steps

✎ Opening (3 min)

Show the key words snow and now. "What do we do if ow makes a word that doesn't fit?" Try the other sound and read again. "Today's team can make two sounds as well."

Warm-up (5 min)

Show the **oo** card and feel or point to the two dots. Read the key word moon and the key word took. Put them side by side.

✎ Main activity (15 min)

1. **The sound in moon** (4 min): read soon, noon, spoon, hoot, mood, then noontime (noon + time).
2. **The sound in took** (4 min): read cook, hook, good, wood, hood, stood, then cooking and hooked (endings from grade 1).
3. **Sentences** (7 min): read the four sentence cards together, then in pairs. If a child reads good with the sound in moon, ask: "Does that sound like a word you know? Try the other sound." Then reread the whole sentence.

✓ Discussion questions (with answers) (3 min)

- "What two sounds can oo make?" The sound in moon and the sound in took.

- "Which team is in night?" igh.
- "What did Duck take in the sentence?" A spoon.

✓ Closing check (with answers) (4 min)

Show soon, good, spoon, hook. Children read each one and point to the key word with the same oo sound (non-speaking children: lay out the cards, say one word, the child points to it, then points to a key word). Answers: moon, took, moon, took. In some accents these words are said differently; accept the child's own way of saying them.

Vocabulary

vowel team, two sounds, key word, sentence

Differentiation

- **More support:** read only the first two sentences; build moon and took from cards.
- **Stretch:** read spoons, hoots, cooks, woods, and make up a sentence with soon.
- **Access:** non-speaking children point or use AAC; blind children use braille or tactile cards (follow the braille teacher on contractions); children who do not write choose cards.

⚠ Safety

Large flat cards only. No real spoons, hooks or cooking are needed; the words are just words.

Lesson 5: Reading a Book Again Until It Sounds Smooth

Unit overview - Previous: Lesson 4

Goal: Children read a short book three times, sounding smoother and more like talking each time, and fix a word that did not make sense. The teacher holds a private one-to-one check.

Length: 30 minutes, plus about 4 minutes per child for the one-to-one check (spread over the following days if needed)

Materials

- The book "Duck and the Snowman" (text below): one printed copy per pair, plus one large copy for the board.
- Key word cards snow, now, moon, took.
- The one-to-one check card (below), a quiet corner and a simple record sheet.
- Optional: braille or large-print copies of the book and check card.

The book: "Duck and the Snowman"

Original to this draft (CC0). Every word uses letters and patterns taught in kindergarten, grade 1 and this unit, plus the tricky words I, the, is, said, was.

1. It is Sunday. It is a snow day.
2. Goat and Duck made a snowman.
3. "It needs a hat," said Goat.
4. Hen had a hat. Now the snowman had a hat.
5. At midnight, the moon was high. The wind came.
6. The wind took the hat. The hat was in the pond!
7. Hen was sad. Duck said, "I can swim."
8. Duck swam and got the hat.
9. Duck set the hat on the snowman. "Now it is on tight," said Duck. The end.

Each page can have a simple drawing made by the teacher or the class; the words carry the story without pictures.

Steps

✎ Opening (3 min)

Show the four key words. "In this book you will meet ay, igh, ow and oo. If a word doesn't fit, try the other sound."

First reading: teacher and class together (7 min)

Read the large copy together, pointing under each word. Stop at Now on page 4: "Which ow sound? Let's try both." Stop at took on page 6 in the same way.

Second reading: in pairs (8 min)

Pairs take turns reading a page each. The listener follows with a finger. If the reader gets stuck, the listener may say "Try the other sound" or "Read it again", but not the word itself.

Third reading: like talking (7 min)

Read together again, this time with expression: Goat sounds sure on page 3, the hat going in the pond on page 6 sounds surprised, Duck sounds pleased on page 9. "Did it sound smoother this time?"

✓ Discussion questions (with answers) (3 min)

- "What took the hat?" The wind.
- "Who got the hat back, and how?" Duck; Duck swam in the pond.
- "Find a word with igh." midnight, high or tight.

Closing (2 min)

"Reading a book again makes it sound smoother. That's what good readers do." No one is timed or compared.

One-to-one check (private, about 4 minutes per child)

In a quiet corner, with the check card. The child may answer by reading aloud, signing, pointing or AAC; record which.

1. **Long or short** (outcome 1): show kit and kite. "Which has the long sound?" (kite.)
2. **Grade 1 patterns** (outcome 2): read cape, note, seed, goat.
3. **ay and igh** (outcome 3): read day, stay, high, night.
4. **ow and oo** (outcome 4): read snow, now, moon, took. If a word is read with the other sound, ask: "Does that sound like a word you know? Try the other sound." Note whether the child changes it.
5. **Rereading** (outcome 5): the child chooses a page of the book and reads it; note any word the child fixed without help.

Record what the child did and what helped, with no score or pass mark.

Vocabulary

reread, smooth, expression

Differentiation

- **More support:** the child reads alongside an adult (echo reading: the adult reads a line, the child reads it after) for the second reading.
- **Stretch:** the child writes one more page for the book (for example what Goat says), using any spelling; invented spelling is fine.
- **Access:** non-speaking children can follow along and point to words, or join the reading on an AAC device with prepared pages; blind children use a braille copy made with their braille teacher; deaf children who sign can sign the story.

⚠ Safety

No real snow, water or ponds are needed; it is a story. Reading aloud is never forced in front of the class.

Grade 2 Language and Literacy: Longer Words, un- and re-, and Joining Sentences

Subject: English language and literacy | Grade: 2 | Lessons: 5 | Time: about 30 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.
>
> Text-checked by one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 2. Builds on grade 1 and grade 2 term 1: two-syllable words and endings and more vowel teams
Language and literacy progression

Big idea

A long word is often two short parts joined together: rain + bow is rainbow. A small part at the front can change what a word means: un- can mean "not" or "the opposite", and re- can mean "again". Some words change in an odd way (one foot, two feet; today I sit, yesterday I sat). Two short sentences can be joined with and or but.

Outcomes

By the end of the unit, most children can:

1. Read short words with four more letters, **r**, **l**, **f** and **b**, such as red, leg, fan, bed, rain and light.
2. Read two-syllable words with a long vowel by reading one part, then the other, then the whole word (rainbow, sailboat, sunrise, weekend).
3. Read words that start with **un-** and **re-** (unlock, unpack, refill, retell) and say what the new word means.
4. Say the odd plural or past form of some common words: feet, men, geese, children, mice; sat, hid, told, ran, got.
5. Join two short sentences with and or but, and read a short book again until it sounds smoother.

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**, then **y**, **h** and **w** (grade 2 term 1); magic e; the teams **ee**, **ai**, **oa**, **ay**, **igh**, **ow** and **oo**; the tricky words I, the, is, my, said, was; the endings -s, -ing and -ed; and two-syllable words such as sunset and midnight.

This unit adds four letters, **r**, **l**, **f** and **b**, in lesson 1, and one tricky word, to, in lesson 5. Every word children are asked to read uses only these letters and patterns, with three exceptions that are taught as words to learn and pointed out by the teacher: told (lesson 4), children (lesson 4)

and the apostrophe in Duck's (lesson 5). Words such as mice, teeth and fish are said and heard, not read.

At the start of lesson 1, check: can the child read day, night and moon? If not, go back to the term 1 unit first.

Lessons

1. Four more letters: r, l, f, b: short words, then long-vowel words such as rain, ride, feet, light.
2. Long words in two parts: rainbow, sailboat, sunrise, weekend.
3. un- and re-: unlock, unpack, refill, retell, and what they mean.
4. One foot, two feet; today and yesterday: odd plurals and odd past forms.
5. Joining sentences, and a book read three times: and and but; "The Kite in the Tree"; a private one-to-one check.

Materials (whole class unless noted)

- Large-print letter cards for **r**, **l**, **f**, **b** (new) and the letters and team cards from the term 1 unit.
- Large-print word cards for each lesson (listed in each lesson).
- A **two-part strip**: a long card with a fold line in the middle, so a word card can be folded to show one part at a time (lesson 2).
- Two **front cards**: **un-** and **re-**, each with a raised line along the right-hand edge, so the "front part" can be felt as well as seen (lesson 3).
- Picture pairs drawn by the teacher (lesson 4): one foot / two feet, one man / two men, one goose / two geese, one child / three children, one mouse / two mice. Stick drawings are fine.
- A small box or bag to pack and unpack, and an empty cup (lesson 3).
- Sentence strips and two **joining cards**, and and but (lesson 5).
- Mini whiteboards and pens, or paper and pencils (one per child), or the child's usual typing or letter-selection tool.
- The book "The Kite in the Tree" (text in lesson 5): one printed copy per pair, plus one large copy for the board. Copies are made by the teacher from the text; there is no publisher.
- Optional: braille or large-print copies of the word cards and the book, made with the child's braille teacher or vision service.
- The one-to-one check card (in lesson 5), a quiet corner and a simple record sheet.

⚠ Safety and access

- Cards and strips are large; nothing small enough to swallow is needed.
- **Deaf and hard-of-hearing children:** sit the child close, face them, and use the child's usual hearing technology. The fold strip and the raised edge on the front cards give visual and touchable signals. Agree with the child's specialist teacher how sound work is done.
- **Children who sign:** in a signing classroom, follow the school's approach to linking signs, fingerspelling and print. Odd plurals and past forms may be shown differently in a sign language; accept the child's way.
- **Non-speaking children:** any answer can be given by pointing to a card, choosing on an AAC device, or signing. Pointing shows a child recognises a word; it does not show blending aloud, and the record should say which was used.

- **Blind and low-vision children:** large print with strong contrast, or braille made with the child's braille teacher (follow that teacher's advice on contractions). Picture pairs can be replaced with small real objects to count, or simply said.
- **Colour** is never the only clue on any card.
- **Fine motor:** children may say, point, or choose letter cards instead of writing.
- **Reading aloud is never forced in front of the class.** No timing of reading in public, no reading-speed charts, no rankings.
- **Dialects differ.** Some children say I sat, some may say I sit down yesterday or another form from home or another language. Accept the child's own speech; the lesson adds the school form alongside, it does not correct home speech.

Assessment

- **Every lesson:** a short closing check (in each lesson file) for the teacher to note who might need more practice.
- **Lesson 5:** a private one-to-one check, about 4 minutes per child, spread over the week, covering all five outcomes: reading red, lip, fan, bed, rain, light (outcome 1); reading rainbow, sunrise, weekend in parts (outcome 2); reading unlock and refill and saying what they mean (outcome 3); finishing four spoken sentences with feet, men, sat and told (outcome 4); joining two sentence cards with and, and reading one page of the book again (outcome 5).
- Record what each child did and what helped, with no score or pass mark.
- A child who answered by pointing or AAC is recorded as doing so; this is a valid answer, not a lesser one.

Sources

- Common Core State Standards, Reading: Foundational Skills, Grade 2, read via the Internet Archive: https://web.archive.org/web/2025/https://www.thecorestandards.org/ELA-Literacy/RF/2/
  - RF.2.3.c: "Decode regularly spelled two-syllable words with long vowels."
  - RF.2.3.d: "Decode words with common prefixes and suffixes."
  - RF.2.4.b: "Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings."
- Common Core State Standards, Language, Grade 2, read via the Internet Archive: https://web.archive.org/web/2024/https://www.thecorestandards.org/ELA-Literacy/L/2/
  - L.2.1.b: "Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish)."
  - L.2.1.d: "Form and use the past tense of frequently occurring irregular verbs (e.g., sat, hid, told)."
  - L.2.1.f: "Produce, expand, and rearrange complete simple and compound sentences".
  - L.2.4.b: "Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., happy/unhappy, tell/retell)."
- IES What Works Clearinghouse, Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (practice guide landing page only): https://ies.ed.gov/ncee/wwc/PracticeGuide/21 . A general reference for teaching decoding and having each child read connected text every day. It does not validate this exact unit.
- The word lists, the order of the letters, the picture pairs, the joining cards and the book "The Kite in the Tree" are original to this draft (CC0); they are the author's examples, not lists from a source.

Known gaps

- Written 10 November 2026. One other agent (Gemini 4 Argon, at d11f227) text-checked this unit on 2026-11-10 and reported no errors. That is a text check by an AI agent, not a teacher review or classroom test.
- **Letters this unit assumes.** The written units teach only some single letters. This unit adds r, l, f and b because the planned words need them. Other letters (j, q, v, x, z) and the pairs sh, ch, th, wh and ng are still not taught in a written unit, so fish, teeth, children and mice are mostly heard, not read.
- **Suffixes.** RF.2.3.d names prefixes and suffixes. This unit teaches only the prefixes un- and re-; suffixes beyond grade 1's -s, -ing and -ed (such as -ful, -less, -ly) are left for later.
- Vowels followed by r (as in car, bird, her), y at the end of a longer word (happy, so the standard's unhappy example is not read), and other vowel teams are not taught.
- told has a long o without a team or magic e; it is taught as a word to learn. Not every word that starts with un is a prefix (until); lesson 3 shows one example.
- L.2.1.f also asks children to expand and rearrange sentences; this unit only joins two sentences. The comma before and or but in the examples is the author's choice; some schools leave it out in short sentences.
- Collective nouns (L.2.1.a) and reflexive pronouns (L.2.1.c) are not covered here.
- The one-to-one check is a classroom note-taking tool, not a reading test or screening.
- Little Hill characters (Goat, Duck) and the book are made up. Goat and a kite also appear in a grade 1 book; the callback is deliberate.

Lesson 1: Four more letters: r, l, f, b

Unit overview - Next: Lesson 2

Goal: Children read short words with the new letters **r**, **l**, **f** and **b**, then long-vowel words that use them.

Length: 30 minutes

Materials

- Letter cards **r**, **l**, **f**, **b** (new), plus a, e, i, o, u, d, g, n, p, t, s, k.
- Team cards **ai**, **ee**, **oa**, **igh**.
- Large word cards: day, night, moon (Opening); red, rat, run, leg, lip, log, fan, fun, fig, bed, bus, bag (Warm-up and Main); rain, ride, feet, boat, like, light (Main); red, leg, fan, bed, rain, light (Closing check).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- Optional: braille or large-print word cards.

Steps

✎ Opening (3 min)

Read day, night and moon together. "You know lots of letters and teams. Today we learn four more letters, so we can read many more words."

Warm-up: the four letters (5 min)

Show each card and say its sound: **r** as in red, **l** as in leg, **f** as in fan, **b** as in bed. Children say the sound back (or sign, or point to the card when the teacher says the sound). Point out that **b** and **d** look alike; hold them side by side and trace them in the air.

✎ Main activity (15 min)

1. **Short words** (6 min): build and read red, rat, run; leg, lip, log; fan, fun, fig; bed, bus, bag.
2. **Long vowels with the new letters** (5 min): build r + ai + n → rain; r + i_e + d → ride; f + ee + t → feet; b + oa + t → boat; l + i_e + k → like; l + igh + t → light.
3. **Write** (4 min): say red, bag, rain; children write them (or choose cards) and check together.

✓ Discussion questions (with answers) (3 min)

- "Which new letter looks a bit like d?" b.
- "Which team is in boat?" oa.
- "Is the vowel in rat long or short?" Short.

✓ Closing check (with answers) (4 min)

Show red, leg, fan, bed, rain, light. Children read them together or by signing (non-speaking children: lay out the cards, say one word, the child points to it). "Which word has the team igh?" light.

Vocabulary

letter, sound, vowel team, long vowel, short vowel

Differentiation

- **More support:** teach r and l today and f and b the next day; build each word from cards first.
- **Stretch:** read words with grade 1 endings: rains, riding, liked, boats.
- **Access:** non-speaking children point or use AAC; blind children use braille or tactile cards; children who do not write choose cards.

⚠ Safety

Large flat cards only.

Lesson 2: Long words in two parts

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

Goal: Children read two-syllable words with long vowels by reading one part, then the other, then the whole word.

Length: 30 minutes

Materials

- The two-part strip (a long card with a fold line in the middle).
- Large word cards: sunset, midnight (Opening); rainbow, sailboat, raincoat, sunlight, highway (Warm-up and Main); pancake, sunrise, inside, weekend (Main); rainbow, sailboat, sunrise, weekend (Closing check).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- Optional: braille or large-print word cards.

Steps

✎ Opening (3 min)

Read sunset and midnight together. "These are long words made of two short parts. Today the parts have long vowels in them."

Warm-up: fold and read (5 min)

Put rainbow on the two-part strip and fold it so only rain shows. Read rain. Unfold: bow (ow as in snow). Then the whole word: rainbow. Do the same with sailboat and raincoat.

✎ Main activity (15 min)

1. **Two teams** (5 min): read sunlight (sun + light) and highway (high + way). Ask: "Which part has the long vowel?" In sunlight the second part; in highway both.
2. **Magic e in a part** (5 min): read pancake (pan + cake), sunrise (sun + rise), inside (in + side) and weekend (week + end). Show that the magic e only reaches back inside its own part.
3. **Write** (5 min): say rainbow and sunrise. Children write the first part, then the second (or choose cards), and check together.

✓ Discussion questions (with answers) (3 min)

- "What are the two parts of sailboat?" sail and boat.
- "Where is the long e in weekend?" In the first part, week.
- "Why does folding the word help?" A short part is easier to read than a long word all at once.

✓ Closing check (with answers) (4 min)

Show rainbow, sailboat, sunrise, weekend. Children read each one part by part, then whole (non-speaking children: the teacher says one word and the child points to it). "Which word has a magic e?" sunrise.

Vocabulary

syllable, part, long vowel, magic e

Differentiation

- **More support:** keep the fold strip for every word; read only words with one long part.
- **Stretch:** read rainbows, sailboats, weekends; try daylight and moonlight.
- **Access:** blind children feel the fold line on a braille or tactile card; non-speaking children point or use AAC.

⚠ Safety

Large flat cards only.

Lesson 3: un- and re-

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

Goal: Children read words that start with **un-** and **re-** and say what the new word means.

Length: 30 minutes

Materials

- The front cards **un-** and **re-** (raised line along the right-hand edge).
- Large word cards: lock, pack, load, pin, hook, fill, tell, paint, play, make (Opening and Main); until (Main); unlock, refill, unpack, retell (Closing check).
- A small box with a lid, or a bag that can be packed and unpacked (Warm-up).
- An empty cup (Warm-up; filling is mimed).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- Optional: braille or large-print word cards.

Steps

✎ Opening (3 min)

Read lock, pack and fill. "Today we put a small part at the front of a word, and it changes what the word means."

Warm-up: pack and unpack (5 min)

Put two cards into the box: "I pack the box." Take them out: "Now I unpack it." Put the **un-** card in front of pack: unpack. "Un- can mean the opposite." Fill a cup with pretend water (an empty cup and a mime): "I fill it. I drink. I refill it: I fill it again." Put **re-** in front of fill: refill. "Re- can mean again."

✎ Main activity (15 min)

1. **un-** (5 min): read unlock, unpack, unload, unpin, unhook. For each, a child says, mimes or signs what it means ("the opposite of lock").
2. **re-** (5 min): read refill, retell, repaint, replay, remake. For each: "do it again".
3. **Careful** (2 min): show until. "This starts with u, n, but til is not a word we know, and until does not mean 'not til'. Not every un at the front is a prefix."
4. **Write** (3 min): say unlock and replay; children write them (or choose cards).

✓ Discussion questions (with answers) (3 min)

- "What does retell mean?" To tell again.
- "What does unpack mean?" The opposite of pack: take things out.
- "Is the un in until a front part that means 'not'?" No.

✓ Closing check (with answers) (4 min)

Show unlock, refill, unpack, retell. Children read each word, then say, mime or point to show its meaning (for example, the teacher offers two picture or word choices, "fill again" or "not fill", and the child points).

Vocabulary

prefix, front part, opposite, again

Differentiation

- **More support:** do un- today and re- tomorrow; keep the real box for every un- word.
- **Stretch:** make new words with un- or re- from known words (unpaint is not a word: talk about why some words do not take a prefix).
- **Access:** blind children feel the raised edge on the front card; non-speaking children answer by choosing between two meanings.

⚠ Safety

Large flat cards and an empty cup only; no real water is needed.

Lesson 4: One foot, two feet; today and yesterday

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

Goal: Children say, and read where the letters are known, odd plural and past forms of some common words.

Length: 30 minutes

Materials

- Picture pairs (stick drawings are fine): one foot / two feet, one man / two men, one goose / two geese, one child / three children, one mouse / two mice.
- Large word cards: cats, pigs (Opening); foot, feet, man, men, goose, geese, children (Warm-up and Main); sit, sat, hide, hid, tell, told, run, ran, get, got (Main).
- Mini whiteboards and pens or paper and pencils (one per child), or the child's usual tool.
- Optional: braille or large-print word cards; small real objects to count instead of pictures.

Steps

✎ Opening (3 min)

Read cats and pigs. "Most words add s when there is more than one. Today we meet some words that change in an odd way instead."

Warm-up: one and more (5 min)

Show one foot and two feet. "One foot, two..." Children finish: feet. Show the word cards foot and feet and read them (oo, then ee). Do the same with man / men and goose / geese. Then show one child and three children and say the words; show the card children as a word to learn whole: "This word has letters we have not learned yet, so we learn it as a whole word."

✎ Main activity (15 min)

1. **Heard, not read** (3 min): show one mouse and two mice. Say "one mouse, two mice" together. These words are only said today.
2. **Today and yesterday** (8 min): "Today I sit. Yesterday I..." sat. Read the pairs sit / sat, hide / hid, tell / told, run / ran, get / got. Point out that told has a long o with no team and no magic e: "We learn this one as a word."
3. **Say a sentence** (4 min): in pairs, one child says a "today" sentence (for example, "Today I run"), the partner says it for yesterday ("Yesterday I ran"). Children may sign or point to the card.

✓ Discussion questions (with answers) (3 min)

- "Why is feet odd?" It does not add s; the vowel changes.
- "What is yesterday for hide?" hid.
- "Do we say mouses?" No, we say mice (but it is fine that the word sounds like it should be mouses).

✓ Closing check (with answers) (4 min)

Say each sentence and let children finish it aloud, by signing, or by pointing to one of two word cards: "One man, two..." men. "One goose, two..." geese. "Today I sit; yesterday I..." sat. "Today I tell; yesterday I..." told.

Vocabulary

plural, more than one, past, yesterday

Differentiation

- **More support:** do plurals today and past forms tomorrow; keep pictures for every word.
- **Stretch:** read the sentences I see geese. and Goat hid.
- **Access:** children who sign may show plurals and past forms in their sign language's own way; blind children count real objects; children who do not speak choose between two cards.

⚠ Safety

Large flat cards only. If real objects are used for counting, use objects too large to swallow.

Lesson 5: Joining sentences, and a book read three times

Unit overview - Previous: Lesson 4

Goal: Children join two short sentences with and or but, and read a short book again until it sounds smoother.

Length: 30 minutes, plus the one-to-one check spread over the week

Materials

- Sentence strips: Duck had a kite. / Goat had a kite.; Goat ran up the hill. / Duck ran up the hill.; The kite had a rip. / Goat did not get sad.
- Two joining cards: and, but.
- A word card for the new tricky word to.
- The book "The Kite in the Tree" (below): one printed copy per pair, plus one large copy for the board.
- Optional: braille or large-print copies of the book.
- The one-to-one check card (below), a quiet corner and a record sheet.

Steps

✎ Opening (3 min)

Show the word card to: "This is a tricky word. We say it 'too'. We learn it as a whole word." Read it together.

Warm-up: joining two sentences (5 min)

Lay down Duck had a kite. and Goat had a kite. "Two sentences. We can join them." Put and between them and read: Duck had a kite, and Goat had a kite. Do the same with the hill strips. Then The kite had a rip. and Goat did not get sad.: "This one is a surprise, so we use but." Read: The kite had a rip, but Goat did not get sad. Show that the first full stop goes and the second word loses its capital letter.

✎ Main activity (14 min)

1. **First read** (4 min): the teacher reads the book aloud from the large copy, pointing to each word.
2. **Second read** (5 min): pairs read it together, one page each, helping each other with hard words. On page 7, stop and find unhooked: "What does un- mean here?" Opposite of hooked. On page 4, point out Duck's: the small mark means the kite belongs to Duck.
3. **Third read** (5 min): pairs read it again, trying to make it sound like talking. Find the two sentences joined with but (pages 8 and 9).

✓ Discussion questions (with answers) (3 min)

- "Why did Duck say 'My kite!'?" It was stuck in the tree.
- "How did Goat get the kite?" Goat held up a big stick and unhooked it.
- "Which joining word shows a surprise?" but.

✓ Closing check (with answers) (5 min)

Show two strips, Goat sat. and Duck sat. Children choose the joining card (and) and read the joined sentence, or point to the card when the teacher reads the choices. Then each pair reads one page again to each other; the teacher listens to a few pairs and notes self-corrections.

The book: "The Kite in the Tree"

(CC0, original to this draft. One sentence or pair of sentences per page.)

1. Goat had a red kite. Duck had a kite too.
2. "It is a fine day," said Goat. "The wind is good."
3. Goat and Duck ran up the hill, and the kites went up high.
4. A big gust came. Duck's kite went into a tree.
5. "My kite!" said Duck. "It is stuck."
6. Goat did not run off. Goat got a big stick.
7. Goat held up the stick and unhooked the kite.
8. The kite had a rip, but Goat and Duck stuck tape on it.
9. Duck's kite went back up. The sun was low, but the kites stayed up high.

Words to point out before reading: to in into (page 4), Duck's (pages 4 and 9), said and was (tricky words from grade 1).

One-to-one check (about 4 minutes per child, spread over the week)

In a quiet corner, one child at a time. Answers may be spoken, signed, pointed to, or given on AAC.

1. Read red, lip, fan, bed, rain, light. (Outcome 1)
2. Read rainbow, sunrise, weekend, part by part if needed. (Outcome 2)
3. Read unlock and refill. "What does it mean?" (opposite of lock; fill again). A child may choose between two spoken meanings. (Outcome 3)
4. Finish: "One foot, two..." (feet); "One man, two..." (men); "Today I sit, yesterday I..." (sat); "Today I tell, yesterday I..." (told). (Outcome 4)
5. Lay out Goat ran. and Duck ran. "Join them with a joining card." (and). Then read one page of the book again; note any word the child fixed. (Outcome 5)

Record what the child did and what helped, with no score.

Vocabulary

join, joining word, and, but, sentence, reread

Differentiation

- **More support:** use only and today; the teacher reads the book first and the child joins in on repeated words.
- **Stretch:** children write their own two sentences about Goat or Duck and join them with and or but.
- **Access:** non-speaking children join strips by placing the card; blind children use a braille copy; no child reads aloud in front of the class.

⚠ Safety

Large flat cards and paper only.

Grade 2 Language and Literacy: Writing for a Reason: a Seed Report and a Letter to Mayor Hen

Subject: English language and literacy | Grade: 2 | Lessons: 5 | Time: about 30 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 writing program, or a diagnostic instrument. Adapt to students and local practice. Check any plan to send letters outside the classroom 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 2 year plan - Term 3. Builds on grade 1 and grade 2 term 2: two-syllable words, endings, a recount and a fact page and longer words, un- and re-, and joining sentences
Language and literacy progression

Big idea

We write for a reason. A **report** tells facts about one topic: it says what the topic is, gives facts, and ends. An **opinion** says what I think and gives a reason, often with because. A **letter** starts with a greeting and ends with a closing, each with a comma. Writers make their writing better by reading it to a partner and changing something.

Outcomes

By the end of the unit, most children can:

1. Say or show at least two facts about seeds that the class found in two fact pages (shared research).
2. Help write a short class report with a first sentence that names the topic, two or more facts, and an ending sentence; and write one fact sentence of their own.
3. Say or write an opinion with a reason joined by because, and add a second reason with also or and.
4. Set out a short letter with a greeting and a closing, each followed by a comma (Dear Mayor Hen, / From,).
5. Listen to a partner's comment on their letter and change or add one thing.

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 teams **ee**, **ai**, **oa**, **ay**, **igh**, **ow** (as in low) and **oo** (as in moon); the tricky words I, the, is, my, said, was and to; the endings -s, -ing and -ed; and joining two sentences with and or but.

Every word card and sentence strip children are asked to read uses only these letters and patterns, with four exceptions taught as words to learn and pointed out by the teacher: soil (lesson 1), because and also (lesson 3) and Dear (lesson 4). Mayor is read as a name on a card, and the teacher points out From (lesson 4), because in many accents its o does not make the usual short o sound. The two fact pages and Mayor Hen's letter are read **aloud by the teacher**; children are not asked to read them. In their own writing, children may spell words the way they sound; that is expected at this stage and is not marked wrong.

At the start of lesson 1, check: can the child read seed, rain and grow? If not, go back to the term 1 unit first.

Lessons

1. Finding facts in two fact pages: shared research about seeds; a class fact chart.
2. Writing a class report: first sentence, facts, ending sentence; each child writes one fact.
3. I think... because...: Mayor Hen asks what the park needs; opinions and reasons.
4. Writing a letter: greeting and closing with commas; each child writes a letter to Mayor Hen.
5. Partner talk and making it better: one kind comment, one question, one change; a private one-to-one check.

Materials (whole class unless noted)

- The two fact pages, "What a Seed Needs" and "How Seeds Get About" (text in lesson 1), one large copy each for the board. Optional: two or three library books about seeds, for the teacher to read from.
- Large-print word cards for each lesson (listed in each lesson), including the four new words to learn: soil, because, also, Dear.
- A large sheet for the class fact chart, with two columns, **What a seed needs** and **How seeds get about** (lesson 1).
- Sentence strips for the class report (lesson 2) and for the opinion and letter models (lessons 3 and 4).
- Three picture cards drawn by the teacher: **a pond**, **a tree**, **a sandpit** (lesson 3). Stick drawings are fine.
- Mayor Hen's letter (text in lesson 3), one large copy.
- A large **comma card**: a big comma with a raised outline, so it can be felt as well as seen (lesson 4).
- A **letter frame** sheet, one per child (lesson 4): a line for the greeting, three lines for the body, a line for the closing and a line for a name.
- A box with a slot labelled "Mayor Hen's post box" (lessons 4 and 5).
- Three large **talk cards** with a symbol each: **One kind thing** (a heart), **One question** (a question mark), **One change** (a pencil) (lesson 5).
- A **cut-up letter** in four large word pieces plus two large card commas, for the one-to-one check (lesson 5).
- Mini whiteboards and pens, or paper and pencils (one per child), or the child's usual typing or letter-selection tool.
- Optional: braille or large-print copies of the fact pages, word cards and letter frame, made with the child's braille teacher or vision service.
- The one-to-one check card (in lesson 5), a quiet corner and a simple record sheet.

⚠ Safety and access

- **No real seeds are handled** in this unit; seeds appear only in pictures and words. (If a teacher adds real seeds, check allergies first, use large seeds, never let children put them in their mouths, and wash hands after.)
- Cards, strips and the post box are large; nothing small enough to swallow is needed.
- **Privacy:** letters are signed with the child's first name only, or a made-up name if the child prefers. Letters go in the classroom post box to the made-up Mayor Hen. No home details, addresses or photos go in any letter.
- **Deaf and hard-of-hearing children:** sit the child close, face them, and use the child's usual hearing technology. The fact pages are shown on the board while read. Agree with the child's specialist teacher how sound work is done.
- **Children who sign:** opinions and reasons may be signed; in a signing classroom, follow the school's approach to linking signs and print.
- **Non-speaking children:** any answer can be given by pointing to a card, choosing on an AAC device, or signing. A child may build sentences from word cards instead of writing. The record should say which was used.
- **Blind and low-vision children:** large print with strong contrast, or braille made with the child's braille teacher. The raised comma card and a tactile letter frame (raised lines) help with layout. Picture cards can be described aloud.
- **Colour** is never the only clue on any card or chart.
- **Fine motor:** children may say, point, type, or place word cards instead of writing by hand; an adult may scribe the child's own words.
- **Partner talk is kind and opt-in to share.** No child is made to read their writing to the whole class. Comments are about the writing, not the writer.
- **Dialects and home languages differ.** Accept the child's own way of saying an opinion; the lesson adds the school form alongside.

Assessment

- **Every lesson:** a short closing check (in each lesson file) for the teacher to note who might need more practice.
- **Lesson 5:** a private one-to-one check, about 4 minutes per child, spread over the week, covering all five outcomes: saying two seed facts from the chart (outcome 1); pointing to the first sentence, a fact and the ending of the class report, and saying one fact sentence (outcome 2); giving an opinion about the park with because and a second reason (outcome 3); placing the two commas in a cut-up letter (outcome 4); saying what they changed after partner talk (outcome 5).
- Record what each child did and what helped, with no score or pass mark.
- A child who answered by pointing, AAC or with a scribe is recorded as doing so; this is a valid answer, not a lesser one.

Sources

Standards are quoted exactly; the unit is not a full alignment.

- Common Core State Standards, Writing, Grade 2, read via the Internet Archive: https://web.archive.org/web/2025/https://www.thecorestandards.org/ELA-Literacy/W/2/
  - W.2.1: "Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because , and , also) to connect opinion and reasons, and provide a concluding statement or section."
  - W.2.2: "Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section."
  - W.2.5: "With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing."
  - W.2.7: "Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations)."
- Common Core State Standards, Language, Grade 2, read via the Internet Archive: https://web.archive.org/web/2024/https://www.thecorestandards.org/ELA-Literacy/L/2/
  - L.2.2.b: "Use commas in greetings and closings of letters."
- Seed facts were checked against Wikipedia, "Germination" (https://en.wikipedia.org/wiki/Germination), which says the most important external factors "include right temperature, water, oxygen or air and sometimes light or darkness" and that the first part to emerge from the seed is "the embryonic root"; and "Seed dispersal" (https://en.wikipedia.org/wiki/Seed_dispersal), which says dispersal "may be achieved through the use of gravity, water, wind, or animals", gives dandelions as a classic wind example, and describes seeds carried on animals with "hooks, spines and barbs". The fact pages simplify these for seven-year-olds.
- The fact pages, word lists, Mayor Hen's letter, the model report and the model letter are original to this draft (CC0); they are the author's examples, not texts from a source.

Known gaps and cautions

- Written 11 November 2026. Two other agents (Gemini 3.8 Flash and Gemini 4 Argon, both at 504c293) text-checked this unit on 2026-11-11. Gemini 3.8 Flash reported no errors; Gemini 4 Argon reported one: also was read by children but not taught as a word to learn, fixed in 1971ca4 (with a note on From). Gemini 4 Carbon (at fdc08ff, including that fix) checked the sources, phonics and timings and reported one miscount of cut-up letter pieces, since fixed. Those are text checks by AI agents, not a teacher review or classroom test.
- **Shared research is small here.** W.2.7's example is reading "a number of books on a single topic". This unit uses two short teacher-read fact pages, plus optional library books. A class with good library books on seeds should use them.
- **Words this unit adds.** soil (oi), because (au, and a final e that is not magic e), also (al as in "all", and a final o that says its name) and Dear (ear) use patterns not yet taught; they are taught as words to learn. Vowels followed by r, the pairs sh, ch, th, wh and ng, and the letters j, q, v, x, z are still not taught in a written unit, so many words children want to write (bird, fish, think, swing) will be spelled by sound. That is expected.
- Mayor is read as part of a name card (Mayor Hen), not sounded out. The report labels (lesson 2) and the talk cards (lesson 5) are read by the teacher; the talk cards also carry symbols. Mayor Hen's letter and the fact pages are read aloud by the teacher.

- **Seed facts are simplified.** "A seed needs to get wet" leaves out warmth and air, which the fact page mentions but children are not asked to write. Some seeds need light or darkness to sprout; the unit does not claim that all seeds need sun.
- **Opinions are about made-up choices** (what Little Hill park should get), not about children's homes, families or real local politics.
- Editing for spelling and capital letters (W.2.5 says "revising and editing") is touched on only through the commas; this unit puts revising first.
- Other L.2.2 parts (capitals for holidays and places, apostrophes, spelling patterns) are not covered here.
- The one-to-one check is a classroom note-taking tool, not a writing test or screening.
- Little Hill, Mayor Hen, Duck and Goat are made up.

Lesson 1: Finding facts in two fact pages

Unit overview - Next: Lesson 2

Goal: Children listen to two fact pages about seeds, find facts in them, and help sort the facts onto a class chart (shared research).

Length: 30 minutes

Materials

- The two fact pages (below), one large copy each for the board. Optional: one or two library books about seeds.
- The class fact chart: a large sheet with two columns, **What a seed needs** and **How seeds get about**.
- Large-print fact cards to stick on the chart: A seed needs to get wet. / A root grows in the soil. / Wind can lift a seed. / A seed can stick to a dog. / A seed can float in a pond.
- A word card for the new word to learn: soil.
- Mini whiteboards and pens, or paper and pencils (one per child), or the child's usual typing or letter-selection tool.
- Optional: braille or large-print copies of the fact pages and fact cards.

Steps

✎ Opening (4 min)

"This week we are writers. Writers write for a reason. This week we will write a report, which tells facts, and a letter, which tells what we think." Ask: "What is a fact?" (Something true that we can check.) "Today we are researchers: we find facts in more than one place."

Show the word card soil: "This is a word to learn. We say it 'soil'. It is the earth that plants grow in." Read it together.

✎ Main activity (16 min)

1. **Fact page 1** (5 min): the teacher reads "What a Seed Needs" aloud from the board, pointing to each line. Children show a thumb when they hear a fact. Stop after each part and ask, "What fact did we find?"
2. **Fact page 2** (5 min): the same with "How Seeds Get About".
3. **Sort the facts** (6 min): hold up each fact card. Children read it together (all words are taught except soil), then decide which column it goes in. A child places the card on the chart, or points while the teacher places it. Ask: "Which fact page told us that?"

✓ Discussion questions (with answers) (5 min)

- "What comes out of a seed first?" A tiny root.

- "Name one way a seed can get about." Wind, sticking to an animal's fur, floating on water, or falling and rolling.
- "Why do we look in two fact pages, not one?" Each one tells us different facts, and we can check that facts agree.

✓ Closing check (with answers) (5 min)

On whiteboards, each child draws or writes one fact from the chart (for example a seed on the wind, or A seed needs to get wet.). Then the teacher says three sentences; children show thumbs up for a fact from our pages and thumbs down if it is not:

- "A seed can float in a pond." (Up.)
- "A seed needs to get wet." (Up.)
- "Seeds grow best in the freezer." (Down: seeds need the right warmth; the fact page says not too cold.)

The fact pages (read aloud by the teacher)

(CC0, original to this draft. Children are not asked to read these.)

What a Seed Needs

1. A seed has a tiny baby plant inside it, with a little store of food, wrapped in a seed coat.
2. To start to grow, a seed needs water. It gets wet and swells.
3. It also needs air, and it must not be too cold. Some seeds need light to start, and some need dark.
4. When a seed starts to grow, a tiny root comes out first. The root grows down into the soil and takes in water.
5. Then a shoot grows up towards the light.

How Seeds Get About

1. A plant cannot walk. Its seeds need help to move away from it.
2. Some seeds ride on the wind. A dandelion seed has a fluffy top, like a little umbrella.
3. Some seeds have tiny hooks. They stick to an animal's fur and drop off somewhere else.
4. Some seeds float on water and grow where they wash up.
5. Some heavy fruits just fall off the plant, and some roll away.

Vocabulary

fact, research, report, seed, root, shoot, soil

Differentiation

- **More support:** the child chooses between two fact cards ("Which one is on the chart?") instead of drawing or writing.
- **Stretch:** the child writes a fact in their own words, spelling by sound, and finds where it came from.

- **Access:** non-speaking children place cards or point; blind children use braille fact cards and a tactile chart with a raised line between the columns; no child reads aloud in front of the class.

⚠ Safety

No real seeds are used; pictures and cards only. If real seeds are added, see the unit overview.

Lesson 2: Writing a class report

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

Goal: Children help put together a short class report about seeds with a first sentence, facts and an ending sentence, then each writes one fact sentence of their own.

Length: 30 minutes

Materials

- The class fact chart from lesson 1.
- Sentence strips for the model report: a title strip Seeds; a first-sentence strip Seeds can grow into big plants.; the five fact cards from lesson 1; an ending strip Seeds need help to get to a spot to grow.
- Three large labels: **First sentence**, **Facts**, **Ending** (read by the teacher; children are not expected to sound them out).
- A sentence-starter card: A seed can
- Mini whiteboards and pens, or paper and pencils (one per child), or the child's usual typing or letter-selection tool.
- Optional: braille or large-print copies of the strips.

Steps

✎ Opening (4 min)

Read the fact chart together. "A report tells facts about one topic. What is our topic?" (Seeds.) "A good report has three parts." Put up the three labels: **First sentence**, **Facts**, **Ending**.

✎ Main activity (16 min)

1. **Build the report** (8 min): show the title strip Seeds and the first-sentence strip. "The first sentence tells the reader what the report is about." Children read it together. Then choose three of the five fact cards together and place them under **Facts**; read each one. Last, show the ending strip: "The ending sentence finishes the report, so the reader knows it is done." Read the whole report together, top to bottom.
2. **My fact sentence** (8 min): each child writes one fact sentence about seeds on a whiteboard or paper. They may copy a fact card, use the starter A seed can, or write a fact in their own words, spelling by sound. Children who are not writing by hand place word cards or tell an adult, who writes their exact words.

✓ Discussion questions (with answers) (5 min)

- "Which sentence tells us the topic?" Seeds can grow into big plants.
- "Why does a report need an ending?" So the reader knows it is finished; it sums up.

- "Is I like seeds a fact?" No: it is what someone thinks (an opinion). We will write opinions next lesson.

✓ Closing check (with answers) (5 min)

The teacher mixes up three strips: Seeds can grow into big plants. / Wind can lift a seed. / Seeds need help to get to a spot to grow. Children point to, or hold up fingers for, which one is the **first sentence** (Seeds can grow into big plants.), which is a **fact** (Wind can lift a seed.) and which is the **ending** (Seeds need help to get to a spot to grow.). Note who can sort all three.

The model report

(CC0, original to this draft.)

Seeds

Seeds can grow into big plants. A seed needs to get wet. A root grows in the soil. Wind can lift a seed. Seeds need help to get to a spot to grow.

(The class may choose different facts; any three from the chart work.)

Vocabulary

report, topic, fact, first sentence, ending

Differentiation

- **More support:** the child chooses a fact card and copies or places it; the adult reads the starter.
- **Stretch:** the child writes two fact sentences and their own ending sentence.
- **Access:** non-speaking children place strips under the labels; blind children use braille strips; an adult may scribe the child's own words.

⚠ Safety

Large flat cards and paper only.

Lesson 3: What should the park get? Giving a reason

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

Goal: Children say and write an opinion about what Little Hill park should get, give a reason with because, and add a second reason with also or and.

Length: 30 minutes

Materials

- Mayor Hen's letter (below), on a large sheet for the teacher to read aloud.
- Three large picture cards with labels: a pond, a tree, a sandpit.
- Large word cards for the words to learn: because and also.
- A name card: Duck.
- A sentence-frame strip: I like the ___ best because
- A small word card: and.
- Sentence strips for the model opinion (below).
- Mini whiteboards and pens, or paper and pencils (one per child), or the child's usual typing or letter-selection tool.
- Optional: braille or large-print copies of the frame, cards and strips; tactile versions of the picture cards (for example a smooth blue shape, a bark-textured shape, a sandpaper shape).

Steps

✎ Opening (4 min)

"We have had a letter!" The teacher reads Mayor Hen's letter aloud. "What does Mayor Hen want to know?" (What the park should get.) Show the three picture cards and read the labels together. Show the word card because and teach it: "because tells the reason why." Children say it, clap its two parts (be-cause) and find it again on the frame strip. Then show the word card also and teach it the same way: "also means one more; we use it to add another reason." Children say it and clap its two parts (al-so).

✎ Main activity (16 min)

1. **Fact or opinion?** (3 min): the teacher says two sentences: "A pond has water in it." (fact: everyone can check it) and "A pond is the best thing for the park." (opinion: what someone thinks). Children show thumbs up for fact and a flat hand for opinion.
2. **Model opinion** (5 min): build the model with strips (below). Read it together. Point out the three parts: what I think (I like the pond best), the reason after because, and a second reason with also. "Mayor Hen needs reasons, not just a choice."
3. **My opinion** (8 min): each child chooses one picture card and says to a partner, "I like the ___ best because ...". Then they write it using the frame, spelling their own words by sound. Children who finish add a second sentence with also or and. Children who are

not writing by hand point to a picture card and tell an adult, who writes their exact words; or they choose from reason cards the adult writes from their talk.

✓ Discussion questions (with answers) (5 min)

- "Is I like the tree best a fact or an opinion?" An opinion: it is what one person thinks.
- "What word tells us a reason is coming?" because.
- "Can two people have different opinions and both give good reasons?" Yes. There is no one right choice; a good opinion has a reason.

✓ Closing check (with answers) (5 min)

The teacher reads two sentences: "I like the sandpit best." and "I like the sandpit best because I can dig in it." "Which one would help Mayor Hen more?" Children point or hold up one or two fingers. Answer: the second, because it gives a reason (it has because). Then each child says, or shows on a card, one reason for their own choice. Note who gives a reason.

Mayor Hen's letter (teacher reads aloud)

(CC0, original to this draft. Children are not expected to read it themselves.)

> Dear class,
>
> The park in Little Hill has a bare patch of land. We can put one thing there: a pond, a tree or a sandpit. Which one do you think is best? Please tell me why, so I can choose well.
>
> From, Mayor Hen

The model opinion

(CC0, original to this draft; an example, not from a source.)

I like the pond best because Duck can swim in it. It is also a cool spot on a hot day. The pond is the best!

Vocabulary

opinion, reason, because, also

Differentiation

- **More support:** the child chooses a picture card and finishes the spoken frame; the adult writes the reason and the child copies or traces because.
- **Stretch:** the child writes two reasons and an ending sentence, like the model.
- **Access:** non-speaking children point to a picture card and choose a reason card; blind children use braille frames and tactile picture cards; an adult may scribe the child's own words. Any choice with a reason counts.

⚠ Safety

Picture cards only; no real sand, water or plants in this lesson.

Teacher notes and misconceptions

- Children often give a choice without a reason ("I like the tree"), or a reason that is about themselves only. Both are fine to start with; ask "why?" to draw out the because.
- Some children think an opinion can be wrong. Explain that people can disagree; what makes an opinion stronger is a clear reason.
- The choices are made up. Nobody is asked about their own garden, home or park.

Lesson 4: A letter to Mayor Hen

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

Goal: Children write a short letter to Mayor Hen with a greeting, their opinion and reason, and a closing, putting a comma after Dear Mayor Hen and after From.

Length: 30 minutes

Materials

- Mayor Hen's letter from lesson 3.
- A large word card for the word to learn: Dear.
- A name card: Mayor Hen (read as a name; children are not expected to sound out Mayor).
- A large comma card with a raised outline, so it can be felt as well as seen.
- A large model letter on a sheet or board (below).
- Letter frames (one per child): a top line Dear Mayor Hen with a box after it for the comma; three lines for the body; a line From with a box after it; a line for the child's name.
- Children's opinion sentences from lesson 3.
- "Mayor Hen's post box": a classroom box with a slot.
- Pencils and crayons.
- Optional: braille or large-print letter frames; a typing or letter-selection tool.

Steps

✎ Opening (4 min)

Re-read Mayor Hen's letter. "Mayor Hen wrote to us, so we will write back." Show the word card Dear and teach it: "A letter often starts with Dear and the name of the person." Children read Dear together and find it on the frame. Show the name card Mayor Hen. Point to From on the frame and read it: "We end a letter with From and our name." (In many accents the o in From does not make its usual short sound, so the teacher reads it.)

✎ Main activity (16 min)

1. **The parts of a letter** (5 min): show the model letter. Point to the greeting (Dear Mayor Hen,), the body (the opinion and reasons) and the closing (From, and a name). Hold up the raised comma card: "A comma is a small mark. In a letter, a comma goes after the greeting and after From." Children trace a comma in the air, then find the two commas in the model.
2. **Writing the letter** (11 min): each child fills in a letter frame. They put a comma in each box, copy or rewrite their opinion and reason from lesson 3 in the body, and sign with their first name or a made-up name. Children who finish may add a picture of their choice for the park. Children who are not writing by hand dictate the body to an adult, then place the comma themselves (by pointing, or with a sticky comma) and sign in their own way. When finished, children post their letters in Mayor Hen's post box.

✓ Discussion questions (with answers) (5 min)

- "Who is our letter to?" Mayor Hen. "How do we know?" It says Dear Mayor Hen at the top.
- "Where do the two commas go?" After Dear Mayor Hen and after From.
- "Why do we put our name at the end?" So Mayor Hen knows who the letter is from.

✓ Closing check (with answers) (5 min)

The teacher shows a short letter on the board with the commas missing: Dear Mayor Hen / I like the tree best because Hen can rest in it. / From / Goat. Children say or point to where the two commas go. Answer: after Dear Mayor Hen and after From. Then the teacher asks children to point to the greeting, the body and the closing. Note who places both commas.

The model letter

(CC0, original to this draft; an example, not from a source.)

> Dear Mayor Hen,
>
> I like the pond best because Duck can swim in it. It is also a cool spot on a hot day. The pond is the best!
>
> From, Goat

Vocabulary

letter, greeting, closing, comma, Dear

Differentiation

- **More support:** the frame already has the greeting and closing written; the child adds the two commas, copies one opinion sentence and signs.
- **Stretch:** the child writes two reasons and an ending sentence in the body.
- **Access:** blind children use braille frames and the raised comma card; children with limited hand use may place a sticky comma or point, and an adult writes; any way of signing (name stamp, chosen symbol, adult writing) counts.

⚠ Safety

- Letters go into the classroom post box only. Nothing is posted outside the classroom unless the school's rules allow it (see the unit overview).
- Children sign with a first name or a made-up name; no addresses, surnames or photos.
- Large card and paper only; scissors for the comma card are used by an adult beforehand.

Lesson 5: Partner talk, one change, and sharing

Unit overview - Previous: Lesson 4

Goal: Children listen to a partner's letter, give one kind comment and ask one question, then make one change to their own letter (add a reason with also, or fix a comma).

Length: 30 minutes

Materials

- The children's letters, taken out of Mayor Hen's post box and handed back.
- Three large talk cards with a symbol each: **One kind thing** (a heart), **One question** (a question mark), **One change** (a pencil). The teacher reads the words; children use the symbols, so they are not expected to sound out the words on these cards.
- The model letter from lesson 4, and the word cards also and and.
- The large comma card with a raised outline.
- Pencils, or the child's usual typing or letter-selection tool.
- For the one-to-one check: the class fact chart (lesson 1); the class report strips (lesson 2); the three picture cards (lesson 3); a cut-up letter with four large word pieces plus two large card commas (Dear Mayor Hen / I like the tree best because Hen can rest in it. / From / Goat); the check card (below); a simple record sheet.

Steps

✎ Opening (4 min)

Show the three talk cards; the teacher reads them aloud and children learn the three symbols. Model with a teaching assistant or a puppet, using the model letter: "One kind thing: I like your reason about Duck. One question: what else can Duck do at the pond? One change: I could add also and another reason." Agree the rule: "We talk about the writing, not the writer."

✎ Main activity (16 min)

1. **Partner talk** (6 min): in pairs, each child reads or says their letter to a partner (or the partner reads it, or an adult reads it for them, if the child prefers). The partner gives one kind thing and asks one question. Then they swap. Sharing is opt-in: a child may share with an adult instead of a partner.
2. **One change** (6 min): each child makes one change to their own letter. Choices: add a second reason with also or and; add a missing comma after Dear Mayor Hen or From; add an ending sentence. Children may answer their partner's question in the new sentence. Children who are not writing by hand tell an adult the change, and the adult writes it in a different colour pencil with the child's agreement, or the child places a word card or sticky comma.

3. **Posting again** (4 min): children who want to read their change aloud to the class may do so (no one has to). All letters go back into Mayor Hen's post box. The teacher may read Mayor Hen's reply later (an optional, made-up note thanking the class and saying the reasons helped her choose).

✓ Discussion questions (with answers) (5 min)

- "What did you change, and why?" Answers vary; for example "I added also and a second reason, so Mayor Hen has more reasons."
- "How does a question from a partner help a writer?" It shows what the reader wants to know, so the writer can add it.
- "What makes a kind comment?" It is true, it is about the writing, and it says what worked.

✓ Closing check (with answers) (5 min)

Each child shows the teacher (by pointing, saying or signing) the one change they made in their letter. Note who can show a change. During the week, the teacher also runs the one-to-one check below with each child.

One-to-one check card (about 4 minutes per child)

Done privately, in a quiet corner, spread over the week. Give any of the access options from the unit overview; pointing, AAC, signing and a scribe all count.

1. **Two facts** (outcome 1): point to the fact chart. "Tell me two things you know about seeds." Look for two facts from the chart, for example A seed needs to get wet. and Wind can lift a seed.
2. **Report parts** (outcome 2): show the class report strips. "Point to the first sentence. Point to a fact. Point to the ending." Answers: Seeds can grow into big plants.; any fact strip; Seeds need help to get to a spot to grow. Then: "Tell me one fact sentence about seeds." Any true fact counts.
3. **Opinion and reasons** (outcome 3): show the three picture cards. "Which one should the park get? Why?" Look for a choice, a reason with because, and a second reason (prompt once: "Is there another reason?").
4. **Commas** (outcome 4): give the cut-up letter pieces in a mixed pile. "Put the letter together and add the two commas." Answer: Dear Mayor Hen, at the top, the body, From, and Goat at the end; commas after Dear Mayor Hen and after From.
5. **One change** (outcome 5): look at the child's letter together. "Show me what you changed after partner talk." Look for one change (an added reason, a comma, or an ending).

Record **yes** / **with help** / **not yet** for each item, plus what helped, with no score or pass mark.

Vocabulary

kind comment, question, change, also

Differentiation

- **More support:** the adult offers two change choices only (add a comma, or add also + a reason from a card); the child chooses one.
- **Stretch:** the child makes two changes and explains each one.
- **Access:** non-speaking children use the talk cards to point, and choose comments from cards; blind children use braille letters and the raised comma card; children who find partner talk hard may talk with an adult instead.

⚠ Safety

- Partner talk is kind and opt-in; no child is made to read aloud to the class.
- Letters stay in the classroom post box; names are first names or made-up names only.
- The cut-up letter pieces and card commas are large (bigger than a child's palm), so nothing small enough to swallow is used.

Grade 2 Mathematics: Adding and Taking Away Within 100 (5 lessons, about 4 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 10 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard.
>
> Text-checked by one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 1. Builds on grade 1: Adding and taking away within 20 and Tens and ones to 100

Big idea

Two-digit numbers are tens and ones, so we can add or take away tens with tens and ones with ones. Sometimes ten ones join to make a new ten, and sometimes a ten has to be broken into ten ones. Adding and taking away undo each other, so one can check the other. A drawing with a box for the unknown helps us see what a story problem is asking, even when it has two steps.

Outcomes

By the end of the unit most children can:

1. Add and take away within 20 quickly using a strategy they can name (doubles, near doubles, making ten, or "what do I add?").
2. Add two two-digit numbers by adding tens and tens and ones and ones, using cubes, drawings or the hundred square, including sums where the ones make a new ten (38 + 25 = 63).
3. Take away a two-digit number from a two-digit number, including when a ten has to be broken into ones (52 - 17 = 35), and check the answer by adding.
4. Explain with cubes or a drawing why their method works ("8 ones and 5 ones are 13 ones, which is 1 ten and 3 ones").
5. Solve one-step story problems within 100 of the five kinds (adding to, taking from, putting together, taking apart, comparing), and two-step story problems, using a drawing and a number sentence with a box for the unknown.

Prior knowledge

The grade 1 units: facts within 20 with strategies (fluency within 10 only), tens and ones to 100, 10 more and 10 less, adding a one-digit number or a multiple of ten to a two-digit number. Children still building these can work with numbers to 50, or with sums that do not make a new ten, in every lesson.

Lessons

Each lesson is about 45 minutes: a short whole-class start, paired work with cubes, and a closing check. Split a lesson over two days if needed; the unit runs over about 4 weeks, so each method should come back in short daily practice (5 minutes of quick facts or one story problem).

1. Facts within 20: checking and speeding up
2. Adding tens and ones
3. Adding when the ones make a new ten
4. Taking away, breaking a ten, and checking by adding
5. One-step and two-step story problems

Materials (whole class unless noted)

- Linking cubes too large to swallow, per pair: 10 towers of ten and 20 loose cubes (lessons 2 to 5). Straw bundles of ten wrapped with tape (no rubber bands, which may contain latex) work as well.
- Two ten-frames and 20 counters per child (lesson 1), in two colours or two kinds of object so colour is not the only clue.
- A tens-and-ones mat per pair: a sheet with a left column for tens and a right column for ones, with a raised line (glued string) between them (lessons 2 to 5).
- A 1 to 100 hundred square per pair, in large print, with optional raised lines between rows (lessons 2 and 4); one large hundred square for the board.
- Fact cards and four strategy cards (double, near double, make ten, what do I add?) per pair for lesson 1 (see lesson 1).
- Optional: a cup marked "ten" per pair (lesson 3, for children who slide ten loose cubes into it instead of snapping), and egg boxes or a 2 by 5 grid of cups for tactile ten-frames (lesson 1).
- Two sets of digit cards 0 to 9 per pair, so children can build and point to two-digit 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 cubes and counters too large to swallow; no rubber bands.
- Cube towers and the raised line on the mat let children who are blind or have low vision feel tens and ones; large-print or tactile hundred squares help too.
- Pointing to digit cards, moving cubes, 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 or races. "Quick" means without counting all from 1, in the child's own way.

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 8 + 7? How did you work it out?" (15; for example 7 + 7 + 1, or 8 + 2 + 5.) "What is 13 - 5?" (8; for example "5 and what make 13?")

- "What is 43 + 25?" (68: 4 tens and 2 tens are 6 tens, 3 ones and 5 ones are 8 ones.)
- "What is 37 + 48? Show me with cubes or a drawing." (85: 7 ones and 8 ones are 15 ones, which is 1 ten and 5 ones, so 3 + 4 + 1 = 8 tens and 5 ones.)
- "What is 62 - 27? How can you check?" (35: break a ten so there are 5 tens and 12 ones, take 2 tens and 7 ones, leaving 3 tens and 5 ones; check 35 + 27 = 62.)
- "56 leaves were on a branch. The wind blew some away. Now there are 29. How many blew away?" (27; 29 + □ = 56 or 56 - 29 = □.)
- "Duck had 18 pebbles. Duck found 20 more, then gave 9 to Hen. How many pebbles does Duck have now?" (29: 18 + 20 = 38, then 38 - 9 = 29.)

Record yes, with help or not yet for each part. A child who answers correctly by counting in ones has the answer but not yet the tens-and-ones method; note that rather than marking it wrong.

Sources

- Common Core State Standards, Grade 2 Operations and Algebraic Thinking (read to check what is usually expected in grade 2, not to claim alignment): https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/OA/
    - 2.OA.A.1 one- and two-step word problems within 100 involving adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions, using drawings and equations with a symbol for the unknown; 2.OA.B.2 fluently add and subtract within 20 using mental strategies, and by the end of grade 2 know from memory all sums of two one-digit numbers.
- Common Core, Grade 2 Number and Operations in Base Ten: https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/NBT/
    - 2.NBT.B.5 fluently add and subtract within 100 using strategies based on place value, properties of operations and the relationship between addition and subtraction; 2.NBT.B.6 add up to four two-digit numbers (lesson 3 stretch only); 2.NBT.B.9 explain why addition and subtraction strategies work, using place value (explanations may be supported by drawings or objects).
- Common Core, Grade 2 introduction (its critical areas include fluency with addition and subtraction within 100): https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/introduction/

Known gaps and cautions

- Peer check: Gemini 4 Argon did a script-verified text check at 6e0e80a (keys, working, timings and links; as reported, not an educator or accessibility review) and reported 0 errors (see PEERCHECKS.md).
- Knowing all sums of two one-digit numbers from memory is an end-of-year aim in the source; this unit starts that work, and the daily quick-facts practice should continue all year.
- Odd and even numbers and adding equal groups (2.OA.C.3, 2.OA.C.4) are left for term 2, where the year plan puts equal groups. Three-digit numbers and adding within 1000 are also term 2.
- Problems with the unknown at the start ("Some stamps... now there are 60") are the hardest kind and appear in lesson 5 as a stretch task.
- A written column method is not taught. Children record tens and ones in their own way (drawings of towers and cubes, or splitting numbers into tens and ones); a written method can follow once the meaning is secure.

- The names in story problems (Remy, Duck, Hen, Mouse, Goat, Bear) 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.

Lesson 1: Facts within 20: checking and speeding up

Unit overview - Next: Lesson 2

About 45 minutes.

Goal

Children recall the grade 1 strategies for facts within 20 (doubles, near doubles, making ten, "what do I add?"), choose one for a given fact, and start answering more facts without counting all from 1.

Materials

- Two ten-frames and 20 counters per child, in two colours or two kinds of object.
- Fact cards per pair: 12 cards, each with one fact on it: 6 + 6, 7 + 8, 9 + 5, 8 + 6, 5 + 6, 9 + 9, 13 - 4, 15 - 8, 12 - 9, 17 - 8, 14 - 7, 11 - 3. Write the answer small on the back.
- Four strategy cards per pair, each with a word and a picture: double (two equal towers), near double (two towers, one cube taller), make ten (a full ten-frame), what do I add? (a question mark).
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Pairs to ten. Show 6 on a ten-frame. "How many more make 10?" (4.) Repeat with 3 (7), 8 (2), 1 (9) and 5 (5). Children answer with fingers, counters or digit cards.

✎ Main activity (32 min)

1. **Remember the strategies (10 min).** Work one fact of each kind on the board with ten-frames:
    - 7 + 7 = 14 (double).
    - 7 + 8 = 7 + 7 + 1 = 15 (near double).
    - 9 + 6: move 1 counter across to fill the first frame, so 10 + 5 = 15 (make ten).
    - 13 - 9: "9 and what make 13?" 9 + 1 = 10, then 3 more, so 4 (what do I add?).
2. **Sort the facts (12 min).** Pairs lay out the four strategy cards and put each fact card under the strategy they would use, then work it out and check the back. More than one place can be right (8 + 6 can be a near double, 7 + 7, or make ten, 8 + 2 + 4). Answers: 6 + 6 = 12, 7 + 8 = 15, 9 + 5 = 14, 8 + 6 = 14, 5 + 6 = 11, 9 + 9 = 18, 13 - 4 = 9, 15 - 8 = 7, 12 - 9 = 3, 17 - 8 = 9, 14 - 7 = 7, 11 - 3 = 8.
3. **Quick facts game (10 min).** Pairs shuffle the fact cards face down. One child turns a card and answers in their own way; the partner checks the back. If the answer took a

long count, the pair talks about which strategy would be quicker next time. Swap after each card. No timing and no scores.

✓ Discussion questions (with answers)

- Why is 7 + 8 easy if you know 7 + 7? 8 is one more than 7, so the answer is one more than 14: 15.
- For 12 - 9, why is "what do I add?" quicker than counting back 9? 9 is close to 12; adding up from 9 to 12 is just 3 steps.
- Can a fact belong to more than one strategy? Yes; any strategy that gives the right answer works.

✓ Closing check (8 min, with answers)

Each child answers on a whiteboard, with digit cards or by pointing: "7 + 8" (15), "14 - 6" (8; 6 and 8 make 14), "9 + 6" (15). Then one child at a time quietly tells the teacher which strategy they used for one of the three.

Vocabulary

double, near double, make ten, fact, strategy

Differentiation

- **Support:** stay with doubles and make ten for sums to 14, using ten-frames.
- **Stretch:** make a fact card of your own for each strategy, and explain why 6 + 8 can be solved as a double of 7 (take 1 from 8 and give it to 6: 7 + 7 = 14).
- Ten-frames can be made tactile (counters in an egg box or a 2 by 5 grid of cups). Fact cards can be read aloud by the partner or made in large print or braille.

⚠ Safety

Use counters too large to swallow.

Teacher notes and misconceptions

- Some children still count all from 1. That is fine in this lesson; note who does, and give them daily make-ten and doubles practice.
- "What do I add?" is a way to think about a take-away, not a different operation. Saying both ("13 take away 9 is 4, because 9 and 4 make 13") helps.

Lesson 2: Adding tens and ones

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

About 45 minutes.

Goal

Children add two two-digit numbers where the ones do not make a new ten, by adding tens with tens and ones with ones, using cubes, a tens-and-ones mat and the hundred square.

Materials

- Per pair: 10 towers of ten linking cubes, 20 loose cubes, a tens-and-ones mat and a hundred square.
- A large hundred square for the board.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

10 more and 10 less. Point to 47 on the big hundred square. "What is 10 more?" (57, the square below.) "10 less?" (37, the square above.) Repeat with 62 (72, 52) and 18 (28, 8).

✎ Main activity (30 min)

1. **Build both numbers (10 min).** On the board: 34 + 25. Build 34 (3 towers, 4 loose cubes) and 25 (2 towers, 5 loose) on the mat, towers on the tens side and loose cubes on the ones side. "Tens with tens: 3 tens and 2 tens are 5 tens. Ones with ones: 4 and 5 are 9. 5 tens and 9 ones is 59." Pairs build and add:
    - 42 + 36 (78)
    - 51 + 27 (78)
    - 23 + 45 (68)
2. **Hundred square jumps (10 min).** Show 34 + 25 on the big hundred square: start at 34, jump down 2 rows for 2 tens (44, 54), then 5 squares along for 5 ones (55, 56, 57, 58, 59). Pairs use their own squares for 23 + 45 and check it matches the cubes (68). Then 60 + 38 (98: start at 60, jump down 3 rows to 90, then 8 along to 98).
3. **Record it your own way (10 min).** Children write or draw one of their sums: drawings of towers and cubes, or splitting into tens and ones (34 + 25: 30 + 20 = 50, 4 + 5 = 9, 50 + 9 = 59). Any clear record counts.

✓ Discussion questions (with answers)

- Why do we put tens with tens and ones with ones? They are different sizes; 5 tens and 9 ones is 59, but adding 3 to 5 as if both were ones would give the wrong number.
- On the hundred square, why does jumping down one row add 10? Each row has ten squares, so the square below is always 10 more.
- Does 25 + 34 give the same answer as 34 + 25? Yes, 59; the order does not change the total.

✓ Closing check (10 min, with answers)

"Show me 32 + 46 with cubes or on the hundred square, then show the answer with digit cards." (78.) Then "14 + 53." (67.) Note who adds tens and ones and who counts every cube in ones.

Vocabulary

tens, ones, tower, loose cubes, hundred square, row

Differentiation

- **Support:** add a multiple of ten first (34 + 20 = 54), then a two-digit number with small ones (34 + 21 = 55).
- **Stretch:** find two different pairs of two-digit numbers that add to 79 without making a new ten (for example 45 + 34 and 23 + 56).
- Children who are blind or have low vision can feel the towers and loose cubes on either side of the raised line on the mat; the hundred square can be a large-print or tactile copy, or skipped in favour of cubes.

⚠ Safety

Use cubes too large to swallow.

Teacher notes and misconceptions

- Some children add all four digits together (3 + 4 + 2 + 5 = 14). Building with towers and loose cubes shows why that does not work.
- Keep to sums where the ones total 9 or less in this lesson; lesson 3 deals with making a new ten.

Lesson 3: Adding when the ones make a new ten

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

About 45 minutes.

Goal

Children add two two-digit numbers where the ones make a new ten, by joining ten loose cubes into a tower, and explain why the tens go up by one.

Materials

- Per pair: 10 towers of ten linking cubes, 20 loose cubes and a tens-and-ones mat.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Make ten with loose cubes. Show 8 loose cubes and 5 loose cubes. "How many ones? Can we make a ten?" (13 ones: snap 10 into a tower, leaving 3, so 1 ten and 3 ones.) Repeat with 7 and 6 (13: 1 ten and 3 ones) and 9 and 9 (18: 1 ten and 8 ones).

✎ Main activity (30 min)

1. **A new ten (12 min).** On the board: 38 + 25. Build both numbers on the mat. "Tens: 3 and 2 are 5 tens. Ones: 8 and 5 are 13 ones. That is too many to leave loose: snap 10 of them into a tower and move it to the tens side. Now 6 tens and 3 ones: 63." Pairs build and add:
    - 47 + 26 (73)
    - 29 + 34 (63)
    - 56 + 18 (74)
2. **Say why (8 min).** Each pair explains one sum to another pair using the cubes: "7 ones and 6 ones are 13 ones. 10 ones make a new ten, so there are 4 + 2 + 1 = 7 tens and 3 ones: 73."
3. **Ones exactly ten (10 min).** 45 + 45. Ones: 5 and 5 are 10, which makes a whole new ten with no loose ones left. Tens: 4 + 4 + 1 = 9 tens, 0 ones:
4. Pairs try 36 + 24 (60) and 17 + 53 (70), then record one sum in their own way.

✓ Discussion questions (with answers)

- Why does the tens number go up by one in 38 + 25? The 13 ones contain a full ten, which joins the other tens.

- Why is 45 + 45 not "8 tens and 10 ones"? 10 ones is the same as 1 ten, so we write it as 9 tens and 0 ones: 90.
- How can you tell before adding whether the ones will make a new ten? If the two ones digits add to 10 or more.

✓ Closing check (10 min, with answers)

"Show me 27 + 35 with cubes or a drawing and tell me or a partner what happened to the ones." (62: 7 and 5 are 12 ones, a new ten and 2 ones, so 2 + 3 + 1 = 6 tens and 2 ones.) Then, with digit cards, "48 + 16." (64.)

Vocabulary

new ten, snap, too many ones, exchange

Differentiation

- **Support:** start with a two-digit number plus a one-digit number that makes a new ten (27 + 5 = 32, as in grade 1), then 27 + 15.
- **Stretch:** add four two-digit numbers by finding friendly pairs: 12 + 30 + 18 + 20 (12 + 18 = 30, then 30 + 30 + 20 = 80).
- Children who cannot snap cubes can slide ten loose cubes into a cup marked "ten" instead; an adult or partner can build while the child directs.

⚠ Safety

Use cubes too large to swallow.

Teacher notes and misconceptions

- A common error is writing 513 for 38 + 25 (5 tens, then 13 ones). Ask "Is this more than 100? Is that sensible?" and rebuild with cubes.
- "Exchange" is optional vocabulary; "snap ten ones into a ten" is enough.

Lesson 4: Taking away, breaking a ten, and checking by adding

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

About 45 minutes.

Goal

Children take away a two-digit number from a two-digit number, break a ten into ten ones when there are not enough ones, check by adding, and count up when the two numbers are close.

Materials

- Per pair: 10 towers of ten linking cubes, 20 loose cubes, a tens-and-ones mat and a hundred square.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Take away tens. "70 - 30?" (40.) "85 - 20?" (65.) "56 - 10?" (46.) Children use towers or the hundred square (jump up a row for each ten).

✎ Main activity (32 min)

1. **Enough ones (7 min).** 68 - 25: build 68, take away 2 towers and 5 loose cubes, leaving 4 towers and 3 cubes: 43. Pairs try 79 - 34 (45).
2. **Breaking a ten (12 min).** 52 - 17: build 52 (5 towers, 2 loose). "We need to take 7 ones but have only 2. Break one tower into 10 loose cubes: now 4 tens and 12 ones. Take 7 ones: 5 left. Take 1 ten: 3 tens left. 3 tens and 5 ones: 35." Pairs try:
    - 43 - 18 (25)
    - 60 - 24 (36: break a tower, so 5 tens and 10 ones; take 4 ones, leaving 6; take 2 tens, leaving 3)
3. **Check by adding (6 min).** "If 52 - 17 = 35, then 35 + 17 should be 52." Pairs put the 35 and the 17 back together with cubes (35 + 17 = 52, a new ten made from 5 and 7 ones), then check 25 + 18 = 43 and 36 + 24 = 60.
4. **Close numbers: count up (7 min).** 61 - 58: taking away 58 cubes is slow. "58 and what make 61?" On the hundred square: 58 to 60 is 2, 60 to 61 is 1, so 3. Pairs try 72 - 69 (3) and 40 - 37 (3).

✓ Discussion questions (with answers)

- Why do we break a ten in 52 - 17? There are only 2 ones and we need to take 7; one ten becomes 10 ones, giving 12.
- How does adding check a take-away? If we put back what we took away, we should get the number we started with.
- When is counting up quicker than taking away? When the two numbers are close together, like 61 and 58.

✓ Closing check (8 min, with answers)

"Show me 54 - 28 with cubes or a drawing, then check it by adding." (26: break a ten so there are 4 tens and 14 ones; take 8 ones, leaving 6; take 2 tens, leaving 2 tens; check 26 + 28 = 54.) Answer with digit cards, cubes, words or a drawing.

Vocabulary

take away, break a ten, check, count up, difference

Differentiation

- **Support:** stay with take-aways that need no breaking (68 - 25), then a one-digit number that needs breaking (32 - 5 = 27).
- **Stretch:** explain why 50 - 26 and 54 - 30 give the same answer (24 both times: adding 4 to both numbers keeps the difference the same).
- An adult or partner can break and move towers while the child directs; a child can answer by pointing to digit cards.

⚠ Safety

Use cubes too large to swallow.

Teacher notes and misconceptions

- The most common error is taking the smaller ones digit from the larger (52 - 17 giving 45, because "7 take away 2 is 5"). Building 52 and trying to take 7 loose cubes shows why that does not work.
- Keep "borrowing" out of the language; "break a ten into ten ones" says what happens.

Lesson 5: One-step and two-step story problems

Unit overview - Previous: Lesson 4

About 45 minutes.

Goal

Children solve one-step story problems within 100 of the five kinds and two-step story problems, by drawing the story and writing a number sentence with a box for the unknown.

Materials

- Story-problem cards (one set per pair; the problems are in the steps below), each with a small picture, read aloud by the teacher or a partner.
- Per pair: 10 towers of ten linking cubes, 20 loose cubes and a tens-and-ones mat.
- Two sets of digit cards 0 to 9 per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Quick facts from lesson 1: "8 + 5?" (13.) "16 - 9?" (7.) "6 + 7?" (13.)

✎ Main activity (32 min)

1. **Draw the story (10 min).** Read: "Remy had 36 shells and found 27 more. How many shells now?" Draw a long bar split into two parts, 36 and 27, with a box above the whole bar. Write 36 + 27 = □. Solve with cubes or tens and ones (63). Then: "The Little Hill shop had 54 apples. Some were sold. Now there are 38. How many were sold?" Draw a bar for 54 split into 38 and a box. Write 38 + □ = 54 or 54 - 38 = □ (16).
2. **Problem cards (14 min).** Pairs read each card (or have it read to them), draw the story, write a number sentence with a box, and solve:
    - "45 boats are in the harbour. 28 are red and the rest are blue. How many are blue?" (17; 28 + □ = 45.)
    - "Hen has 62 seeds. Mouse has 25 fewer seeds than Hen. How many seeds does Mouse have?" (37; 62 - 25 = □.)
    - "Goat picked 71 apples and Duck picked 48. How many more did Goat pick?" (23; 48 + □ = 71.)
    - Stretch: "Bear had some stamps. Bear got 25 more. Now Bear has 60. How many stamps did Bear have at the start?" (35; □ + 25 = 60.)
3. **Two steps (8 min).** "Bear had 40 berries, ate 12, then picked 25 more. How many berries now?" Draw two steps: 40 - 12 = 28, then 28 + 25 = 53. Pairs try: "23 people

are on the Little Hill bus. 15 get on and 9 get off. How many are on the bus now?" (29: 23 + 15 = 38, then 38 - 9 = 29.)

✓ Discussion questions (with answers)

- In the apple problem, why can we add or take away? The 38 apples left and the apples sold make the 54 we started with; 38 + □ = 54 and 54 - 38 = □ find the same missing part.
- "Mouse has 25 fewer" has the word "fewer". Do we add or take away? Take away: Mouse has less than Hen, so 62 - 25.
- How do you know a problem has two steps? Two things happen, one after the other, and we need the first answer to do the second.

✓ Closing check (8 min, with answers)

Read aloud: "Duck had 34 pebbles and found 19 more. Then Duck gave 20 to Hen. How many pebbles does Duck have now?" Children draw the story and answer with digit cards, cubes, words or a drawing. (33: 34 + 19 = 53, then 53 - 20 = 33.)

Vocabulary

story problem, bar, part, whole, unknown, fewer, more than, two steps

Differentiation

- **Support:** one-step problems with numbers to 50 that do not make or break a ten; act the story out with cubes before drawing.
- **Stretch:** write a two-step story problem for a partner, with the answer on the back.
- Story cards can be in large print or braille, read aloud, or acted with objects; the bar can be built from cube towers instead of drawn. Answers can be given by pointing or with a communication device.

⚠ Safety

Use cubes too large to swallow.

Teacher notes and misconceptions

- Key words can mislead: "more" appears in "How many more did Goat pick?", which is a take-away or missing-part problem. Drawing the story is more reliable than hunting for words.
- The bar drawing is one way to show a story; any drawing that shows the parts and the whole works.

Grade 2 Mathematics: Hundreds, Tens and Ones to 1000 (5 lessons, about 4 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 10 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard.
>
> Text-checked by one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 2. Builds on grade 1: Tens and ones to 100 and grade 2 term 1: Adding and taking away within 100

Big idea

Ten ones make a ten, and ten tens make a hundred. The three digits of a number like 243 tell us how many hundreds, tens and ones there are, and a zero means "none of these". Because of this, we can compare numbers by looking at the hundreds first, and we can add or take away 10 or 100 by changing just one digit. Some numbers of things can be shared into pairs with none left over (even) and some cannot (odd), and things set out in equal rows can be counted by adding the rows.

Outcomes

By the end of the unit most children can:

1. Show that 100 is ten tens, and that 100, 200, 300 and so on up to 900 are one, two, three and so on up to nine hundreds, with no tens and no ones.
2. Build, read and write three-digit numbers as numerals, as number names and as hundreds, tens and ones (243 = 200 + 40 + 3), including numbers with a zero (706 is 7 hundreds, 0 tens and 6 ones).
3. Count on within 1000, including across a hundred (198, 199, 200, 201), and count in fives, tens and hundreds from different starting numbers.
4. Compare two three-digit numbers by looking at the hundreds, then the tens, then the ones, and record the result with >, = or <.
5. Say 10 more, 10 less, 100 more and 100 less than a number from 100 to 900 in their heads, and add or take away whole hundreds (300 + 400 = 700) or whole tens (570 - 40 = 530) when no new ten or hundred is made.
6. Tell whether a group of up to 20 objects is odd or even by pairing them, write an even number as a double (14 = 7 + 7), and find the total of an array of up to 5 rows and 5 columns by adding equal rows (4 + 4 + 4 = 12).

Prior knowledge

The grade 1 unit on tens and ones to 100 (tens and ones, comparing two-digit numbers with >, = and <, 10 more and 10 less) and the grade 2 term 1 unit on adding and taking away within 100. Children who are still building two-digit place value can work with hundreds and tens only (300, 340) before adding ones, in every lesson.

Lessons

Each lesson is about 45 minutes: a short whole-class start, paired work with cubes and hundred cards, and a closing check. Split a lesson over two days if needed; the unit runs over about 4 weeks, so counting in fives, tens and hundreds should come back in short daily practice (5 minutes).

1. Ten tens make a hundred
2. Hundreds, tens and ones
3. Counting in fives, tens and hundreds, and comparing
4. 10 more, 10 less, 100 more, 100 less
5. Odd and even, and equal rows

Materials (whole class unless noted)

- Linking cubes too large to swallow, per pair: 10 towers of ten and 20 loose cubes (lessons 1 to 4), as in term 1. Straw bundles of ten wrapped with tape (no rubber bands, which may contain latex) work as well.
- Hundred cards, per pair: 9 squares of card, each the size of ten towers laid side by side, with a 10 by 10 grid drawn on and the grid lines raised with glued string or thick glue so they can be felt (lessons 1 to 4). Ten extra hundred cards for the class (lesson 1).
- A hundreds-tens-ones mat per pair: a sheet with three columns labelled hundreds, tens and ones, with raised lines (glued string) between them (lessons 2 to 4).
- Three sets of digit cards 0 to 9 per pair, so children can build and point to three-digit numbers (lessons 2 to 4).
- Number-name word cards per pair, in large print: one to nine, ten to nineteen, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, and hundred (lesson 2).
- Symbol cards >, = and < per pair, large enough to feel the shape (lessons 3 and 4).
- A large number line from 0 to 1000 marked in hundreds, for the board (lessons 3 and 4).
- A counting-in-tens chart for the board and one large-print copy per pair: ten rows, 10 to 100 in the first row, 110 to 200 in the second, and so on to 910 to 1000, with optional raised lines between rows (lesson 4).
- Hen's seed shop picture cards: a loose seed, a packet of 10 seeds and a box of 100 seeds (10 packets), plus order cards (lessons 1 and 2; see lesson 1).
- 20 counters per child, and a squared mat (a sheet ruled into 5 rows of 5 squares, with raised lines) per child (lesson 5).
- Whiteboards and pens, or paper and pencils.

⚠ Safety and access

- Use cubes and counters too large to swallow; no rubber bands.
- Towers, raised grid lines on the hundred cards and raised column lines on the mat let children who are blind or have low vision feel hundreds, tens and ones. Large-print or braille digit cards help children who read them.
- Pointing to digit cards, moving cubes and cards, sign, writing or a communication device all count as answers. Saying number names aloud is not required.
- No public timing or races. Counting games go round the class or pair, and a child may pass.

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:

- "Show me 100 with towers. How many tens is it?" (10.) "Show me 600 with hundred cards." (6 cards.)
- "Build 438. How many hundreds, tens and ones? Write it as hundreds, tens and ones." (4 hundreds, 3 tens, 8 ones; 400 + 30 + 8.)
- Show the digit cards 5, 0, 6. "Read this number and build it." (Five hundred six: 5 hundreds, 0 tens, 6 ones.)
- "Count on in tens from 370." (380, 390, 400, 410.) "Count in fives from 225 to 250." (230, 235, 240, 245, 250.)
- "Which is more, 614 or 641? Put the right sign between them." (641; 614 < 641, because 1 ten is less than 4 tens.)
- "What is 100 more than 752? 10 less than 752? What is 400 + 500?" (852; 742; 900.)
- "Is 13 odd or even? Show me with counters." (Odd: 6 pairs and 1 left over.) "Make 3 rows of 5 counters and write an adding sentence for the total." (5 + 5 + 5 = 15.)

Record yes, with help or not yet for each part. A child who counts every cube in ones has the answer but not yet the place-value idea; note that rather than marking it wrong.

Sources

- Common Core State Standards, Grade 2 Number and Operations in Base Ten (read to check what is usually expected in grade 2, not to claim alignment): https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/NBT/
  - 2.NBT.A.1 the three digits of a three-digit number represent amounts of hundreds, tens and ones ("706 equals 7 hundreds, 0 tens, and 6 ones"), with 100 as "a bundle of ten tens" and 100, 200 ... 900 as one to nine hundreds; 2.NBT.A.2 count within 1000 and skip-count by 5s, 10s and 100s; 2.NBT.A.3 read and write numbers to 1000 using base-ten numerals, number names and expanded form; 2.NBT.A.4 compare two three-digit numbers using

    , = and <; 2.NBT.B.8 mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from it.

- Common Core, Grade 2 Operations and Algebraic Thinking: https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/OA/
  - 2.OA.C.3 odd or even for groups of up to 20 objects, "by pairing objects or counting them by 2s", and an even number as a sum of two equal addends; 2.OA.C.4 the total of a rectangular array with up to 5 rows and up to 5 columns, as a sum of equal addends.

Known gaps and cautions

- One other agent (Gemini 4 Argon, at 74bdc04) text-checked this unit on 2026-11-10 and reported no errors. That is a text check by an AI agent, not a teacher review or classroom test.
- Adding and taking away three-digit numbers where a new ten or hundred is made, or one has to be broken (2.NBT.B.7), is only touched as a stretch task (10 more than 395, 10 less

than 608). Adding up to four two-digit numbers (2.NBT.B.6) is not taught here. The grade 2 year plan does not give either a full unit, so a teacher may want to add one.

- English number names differ: some speakers say "five hundred six" and others "five hundred and six". Both are accepted; use the form your school uses on the word cards.
- Hundred cards are flat while towers are not, so a hundred card stands for ten towers rather than looking exactly like them. Lesson 1 has children lay towers on a card to check.
- Arrays stop at 5 by 5 and only use adding; multiplying is left for grade 3.
- Hen's seed shop and the other names (Duck, Mouse, Goat, Bear) are the made-up Little Hill characters used in other units.
- The lesson order, timings, examples and the seed-shop context are my choice, not taken from a source.

Lesson 1: Ten tens make a hundred

Unit overview - Next: Lesson 2

About 45 minutes.

Goal

Children see that ten tens make a hundred, use hundred cards to stand for a hundred, and count in hundreds to 1000.

Materials

- Per pair: 10 towers of ten linking cubes, 20 loose cubes and 9 hundred cards (10 by 10 grid, raised lines).
- Ten extra hundred cards for the class.
- Hen's seed shop picture cards: a loose seed, a packet of 10 seeds, and a box of 100 seeds (10 packets), plus order cards: "3 boxes", "5 boxes", "2 boxes and 4 packets", "6 boxes, 1 packet and 7 seeds".
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Count in tens to 100 together, holding up a tower for each ten: 10, 20, 30 ... 100. "How many towers did we need to make 100?" (10.)

✎ Main activity (30 min)

1. **Ten towers on a card (10 min).** Each pair lays its 10 towers side by side on one hundred card. "The towers cover the whole card. Ten tens is one hundred." Children count the towers in tens to check (10, 20 ... 100) and run a finger along one row of the grid (10 squares) and down one column (10 rows). From now on, one hundred card stands for ten towers.
2. **Counting in hundreds (10 min).** Pairs put their hundred cards in a line along the floor or tables, and the class counts them in hundreds: 100, 200, 300 ... When the line has 9 cards, ask "What is one more hundred?" Add one of the class's extra cards: 1000, "one thousand", which is ten hundreds. Count back in hundreds from 1000 to 100. Ask "How many hundreds make 700?" (7) and "What number is 4 hundreds?" (400).
3. **Hen's seed shop (10 min).** Show the seed shop cards: Hen sells loose seeds, packets of 10 and boxes of 100. Read each order card; pairs build it with hundred cards, towers and cubes and say the number:
    - "3 boxes" (300)
    - "5 boxes" (500)
    - "2 boxes and 4 packets" (240)

    - "6 boxes, 1 packet and 7 seeds" (617)

✓ Discussion questions (with answers)

- How many ones are in a hundred? 100: ten tens, and each ten is ten ones.
- Why do we use a card instead of ten towers? It is quicker to build and count big numbers; the card covers exactly the same space as ten towers.
- What is ten hundreds? One thousand (1000).

✓ Closing check (10 min, with answers)

"Show me 400 with hundred cards." (4 cards.) "How many tens make 100?" (10.) "How many hundreds is 700?" (7.) Note who counts the cards in hundreds and who counts the grid squares one by one.

Vocabulary

hundred, hundred card, tens, ones, thousand, box, packet

Differentiation

- **Support:** build 100 with towers first, then 200 with towers on two cards, before using cards alone.
- **Stretch:** "Hen has 1000 seeds in boxes. How many boxes?" (10.) "How many packets of 10 make 300?" (30.)
- Children who are blind or have low vision feel the towers on the card and the raised grid; the line of cards can be on a table so it can be touched along its length.

⚠ Safety

Use cubes too large to swallow. Keep the floor line of cards out of walkways.

Teacher notes and misconceptions

- Some children think a hundred card is "one" because it is one piece. Keep asking "How many tens is that card?" and let them check with towers.
- Thousand is mentioned only as ten hundreds; numbers above 1000 are not taught.

Lesson 2: Hundreds, tens and ones

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

About 45 minutes.

Goal

Children build, read and write three-digit numbers as numerals, number names and hundreds, tens and ones, including numbers with a zero.

Materials

- Per pair: 9 hundred cards, 10 towers of ten, 20 loose cubes and a hundreds-tens-ones mat.
- Three sets of digit cards 0 to 9 per pair.
- Number-name word cards per pair (one to nine, ten to nineteen, twenty to ninety, hundred).
- Hen's seed shop picture cards (from lesson 1).
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Count in hundreds from 100 to 900 and back, pointing to hundred cards. Show the seed shop box card: "How many seeds in 3 boxes?" (300.)

✎ Main activity (30 min)

1. **Build it and read it (10 min).** On the board: 243. Build it on the mat: 2 hundred cards, 4 towers and 3 loose cubes. "2 hundreds, 4 tens and 3 ones: two hundred forty-three." Show the digit cards 2, 4, 3 under the right columns. Pairs build, put digit cards under and read:
    - 365
    - 512
    - 128
2. **When there is a zero (10 min).** Build 706: 7 hundred cards, no towers, 6 cubes. "The tens column is empty, so we write 0 tens: seven hundred six." Then build 760 and 67 next to it. "Which has the most? Which digit tells you?" (760: it has 7 hundreds and 6 tens; 67 has no hundreds.) Pairs build 607 and 670 and say how they differ (607 has 0 tens and 7 ones; 670 has 7 tens and 0 ones).
3. **Three ways to write it (10 min).** Show 352 three ways: the numeral, the name (three hundred fifty-two, with word cards) and hundreds, tens and ones (300 + 50 + 2). Pairs choose two numbers they built and write each in all three ways. Words may be built from word cards instead of written.

✓ Discussion questions (with answers)

- Why can't we leave out the 0 in 706? Without it, the 7 and 6 move up and the number reads 76, which is much less.
- In 352, what is the 5 worth? 50, or 5 tens.
- Is 300 + 50 + 2 the same number as 352? Yes, it is the same number split into hundreds, tens and ones.

✓ Closing check (10 min, with answers)

"Build 409 and tell me how many hundreds, tens and ones." (4 hundreds, 0 tens, 9 ones; 400 + 9.) "What number is 300 + 50 + 2?" (352.) Note who puts a 0 in the tens place and who writes 49.

Vocabulary

hundreds, tens, ones, digit, zero, number name

Differentiation

- **Support:** build only hundreds and tens first (340, 520), then add ones.
- **Stretch:** "Make the biggest and the smallest number you can with the digit cards 3, 0 and 8." (830 and 308; a number does not start with 0.)
- Children who are blind or have low vision feel the raised columns on the mat and the grid on the hundred cards; number names can be said, signed or pointed to instead of written.

⚠ Safety

Use cubes too large to swallow.

Teacher notes and misconceptions

- Some children write two hundred forty-three as 20043, writing each part as they hear it. Building on the mat and putting one digit card under each column helps.
- Some speakers say "two hundred and forty-three". Both forms are fine.

Lesson 3: Counting in fives, tens and hundreds, and comparing

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

About 45 minutes.

Goal

Children count on within 1000, including across a hundred, count in fives, tens and hundreds from different starting numbers, and compare three-digit numbers using >, = and <.

Materials

- Per pair: 9 hundred cards, 10 towers of ten, 20 loose cubes, a hundreds-tens-ones mat, three sets of digit cards 0 to 9, and symbol cards

  , = and <.

- The large number line from 0 to 1000 marked in hundreds, for the board.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Count in fives from 0 to 50 together, clapping on each number. Then count on in ones from 196 to 204, pointing near 200 on the number line: 197, 198, 199, 200, 201 ... "What happened after 199?" (A new hundred: 200.)

✎ Main activity (30 min)

1. **Counting from different places (10 min).** Go round the class or pair, each child saying the next number (a child may pass):
   - fives from 115 to 150 (120, 125, 130, 135, 140, 145, 150)
   - tens from 340 to 420 (350, 360, 370, 380, 390, 400, 410, 420)
   - hundreds from 50 to 950 (150, 250, 350 ... 950) Point to roughly where each count is on the number line.
2. **Which is more? (10 min).** Duck's sack has 352 seeds; Mouse's sack has
3. Pairs build both. "Look at the hundreds first: both have 3. Then the tens: 5 tens is more than 2 tens. So 352 is more." Write 352 > 325 and read it: "352 is greater than 325." Show that < means "is less than", and that the wide-open side of the sign faces the bigger number. Pairs compare and put a symbol card between:
   - 418 and 481 (418 < 481)
   - 609 and 690 (609 < 690)
   - 700 and 699 (700 > 699)
   - 534 and 534 (534 = 534)

4. **Make and compare (10 min).** Each child in a pair draws three digit cards and makes a three-digit number (not starting with 0). Together they build both, put the right symbol between and read the sentence. Play several rounds; there is no winner, only the sentence.

✓ Discussion questions (with answers)

- Why do we look at the hundreds first? A hundred is more than any number of tens and ones we could have in the other columns (99 at most), so the hundreds decide unless they are the same.
- 700 has only zeros after the 7. Why is it more than 699? 700 has 7 hundreds; 699 has only 6 hundreds and 9 tens and 9 ones, which is one less.
- What comes after 399? 400.

✓ Closing check (10 min, with answers)

"Which is more, 263 or 236? How do you know?" (263: same hundreds, and 6 tens is more than 3 tens.) "Put the right sign: 507 and 570." (507 < 570.) "Count on in tens from 280." (290, 300, 310.)

Vocabulary

greater than, less than, equal to, compare, count on, fives

Differentiation

- **Support:** compare numbers with different hundreds first (245 and 512), building both, before numbers with the same hundreds.
- **Stretch:** "Put these in order from least to greatest: 489, 498, 849, 894." (489, 498, 849, 894.) Count back in tens from 430 to 370 (420, 410, 400, 390, 380, 370).
- Children who are blind or have low vision feel the symbol cards and the built numbers; counts can be tapped on a table as well as said.

⚠ Safety

Use cubes too large to swallow.

Teacher notes and misconceptions

- Some children say 418 is more than 481 "because 8 is bigger than 1". Going column by column, starting with the hundreds, fixes this.
- Counting on across a hundred (what comes after 399, or after 390 when counting in tens) is often shaky; keep it in daily counting practice.

Lesson 4: 10 more, 10 less, 100 more, 100 less

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

About 45 minutes.

Goal

Children say 10 more, 10 less, 100 more and 100 less than a number from 100 to 900 in their heads, and add or take away whole hundreds or whole tens when no new ten or hundred is made.

Materials

- Per pair: 9 hundred cards, 10 towers of ten, 20 loose cubes, a hundreds-tens-ones mat, three sets of digit cards 0 to 9 and symbol cards

  , = and <.

- The counting-in-tens chart for the board and one large-print copy per pair.
- The large number line from 0 to 1000 marked in hundreds.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Quick 10 more and 10 less within 100, as in term 1: "10 more than 47?" (57.) "10 less than 62?" (52.) "10 more than 90?" (100.)

✎ Main activity (30 min)

1. **Change one card (10 min).** Pairs build 346. "Add one hundred card. What number is it now?" (446.) "Take it away again and add one tower." (356.) "Which digit changed each time?" (The hundreds digit for 100 more, the tens digit for 10 more.) Pairs build, change and say:
   - 100 more than 521 (621)
   - 100 less than 874 (774)
   - 10 more than 235 (245)
   - 10 less than 653 (643)
2. **The counting-in-tens chart (10 min).** On the chart, 10 more is one step along a row and 100 more is one row down. Start at 340: one step along (350), one row down (450). Pairs find on their copies: 100 less than 580 (480), 10 more than 720 (730), 100 more than 260 (360). Then without the chart: "What is 100 more than 263?" (363.)
3. **Whole hundreds and whole tens (10 min).** "3 hundreds and 4 hundreds is 7 hundreds, so 300 + 400 = 700." Pairs work out in their heads and check with cards:
   - 300 + 400 (700)

- 800 - 500 (300)
- 240 + 30 (270)
- 570 - 40 (530)
- 600 + 200 + 100 (900)

✓ Discussion questions (with answers)

- Why does only one digit change when we add 100 to 346? We add one hundred, so only the number of hundreds changes; the tens and ones stay the same.
- Why is 300 + 400 like 3 + 4? We are adding hundreds instead of ones: 3 hundreds and 4 hundreds are 7 hundreds.
- On the chart, why is one row down 100 more? Each row has ten steps of 10, which is 100.

✓ Closing check (10 min, with answers)

"What is 100 more than 263?" (363.) "10 less than 263?" (253.) "What is 500 + 300?" (800.) "700 - 200?" (500.) Note who answers in their head and who needs to build.

Vocabulary

10 more, 10 less, 100 more, 100 less, in my head

Differentiation

- **Support:** keep building every number and changing one card or tower before trying in their heads.
- **Stretch:** "10 more than 395?" (405: 9 tens and 1 more ten make a new hundred.) "10 less than 608?" (598: a hundred is broken into ten tens.) Children check with cards and towers.
- Children who are blind or have low vision use the mat and cards; the counting-in-tens chart can have raised lines between rows, or be skipped in favour of building.

⚠ Safety

Use cubes too large to swallow.

Teacher notes and misconceptions

- Some children add 100 by adding 1 to the ones digit (346 becomes 347). Ask "What did you add: a cube, a tower or a hundred card?"
- The stretch tasks cross a hundred, which needs a new hundred to be made or a hundred to be broken. That is not expected of everyone in this unit.

Lesson 5: Odd and even, and equal rows

Unit overview - Previous: Lesson 4

About 45 minutes.

Goal

Children tell whether a group of up to 20 objects is odd or even by pairing, write an even number as a double, and find the total of an array with up to 5 rows and 5 columns by adding equal rows.

Materials

- 20 counters per child, too large to swallow.
- A squared mat per child: a sheet ruled into 5 rows of 5 squares, with raised lines.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Count in twos to 20 together, then back to 0.

✎ Main activity (30 min)

1. **Can every counter have a partner? (12 min).** Take 12 counters and put them in pairs: 6 pairs and none left over. "12 is even." Take 13: 6 pairs and 1 left over. "13 is odd." Children test these and sort them into odd and even:
    - 8 (even: 4 pairs)
    - 11 (odd: 5 pairs and 1 left)
    - 14 (even: 7 pairs)
    - 17 (odd: 8 pairs and 1 left)
    - 20 (even: 10 pairs)
    - 9 (odd: 4 pairs and 1 left) Then split each even number into two equal rows and write it as a double: 12 = 6 + 6, 14 = 7 + 7, 20 = 10 + 10.
2. **Goat's carrot rows (13 min).** Goat plants carrots in rows with the same number in each row. Show 3 rows of 4 on the mat: "4 + 4 + 4 = 12." Children build each array on their mat with counters and write an adding sentence:
    - 2 rows of 5 (5 + 5 = 10)
    - 4 rows of 3 (3 + 3 + 3 + 3 = 12)
    - 3 rows of 5 (5 + 5 + 5 = 15)
    - 5 rows of 5 (5 + 5 + 5 + 5 + 5 = 25)
3. **Turn it round (5 min).** Turn the mat a quarter turn so 4 rows of 3 become 3 rows of 4. "Is it the same number of carrots?" (Yes, 12: 3 + 3 + 3 + 3 = 12 and 4 + 4 + 4 = 12.)

✓ Discussion questions (with answers)

- How can you tell 17 is odd without counting by ones? Put the counters in pairs: one is always left over.
- Is every double an even number? Yes: two equal rows can always be put together in pairs, one from each row.
- Why is adding rows quicker than counting every carrot? Each row has the same number, so we can count on in that number.

✓ Closing check (10 min, with answers)

"Is 15 odd or even? Show me." (Odd: 7 pairs and 1 left over.) "Write 16 as a double." (8 + 8.) "Make 2 rows of 4 and write an adding sentence." (4 + 4 = 8.)

Vocabulary

odd, even, pair, double, row, column, array

Differentiation

- **Support:** work with numbers up to 10 for odd and even, and arrays with 2 rows first.
- **Stretch:** "Make every array you can with 12 counters, using no more than 5 rows and 5 columns." (3 rows of 4 and 4 rows of 3.) "Is the total of two odd numbers odd or even? Try some." (Even: the two left-over counters make a pair.)
- Children who are blind or have low vision feel the raised squares on the mat and the pairs of counters; answers can be said, signed or shown with counters.

⚠ Safety

Use counters too large to swallow.

Teacher notes and misconceptions

- Some children think a number is even if it "looks big" or ends in a big digit. Pairing real counters is the check.
- Multiplying and the times sign are not taught here; arrays are counted by adding equal rows.

Grade 2 Mathematics: Measuring, Time, Money and Shapes (5 lessons, about 5 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 coins, units and clock conventions against your school's rules and your country's money.
>
> Text-checked by two other agents (Gemini 3.8 Flash and Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 3. Builds on grade 1: Measuring length and composing shapes and grade 2 term 2: Hundreds, tens and ones to 1000

Big idea

We measure by counting equal units, and a ruler is a line of equal units already counted for us, starting from 0. A smaller unit needs more of them to cover the same length. Clocks and coins also use counting: the minute hand moves in fives, and coins of different values can be counted on from the biggest. Shapes can be named by counting their sides and corners, and a bar graph lets us count and compare a set of data at a glance.

Outcomes

By the end of the unit most children can:

1. Measure a length to the nearest whole centimetre with a ruler, starting at the 0 mark, and say how much longer one length is than another (25 cm is 10 cm longer than 15 cm).
2. Measure the same length in centimetres and in inches, explain why the number of centimetres is bigger (a centimetre is a smaller unit, so more of them are needed), and estimate lengths in centimetres, inches, feet or metres before measuring.
3. Tell and write the time to five minutes on a clock with hands and as digital time (4:25), and say whether a time in a story is a.m. or p.m.
4. Find the value of a set of coins (pennies, nickels, dimes and quarters) by counting on from the biggest value, write it with the ¢ sign, know that $1 is 100¢, and solve one-step story problems with made-up prices.
5. Name triangles, quadrilaterals, pentagons and hexagons by counting sides and corners, say how many faces a cube has, and put shapes together to make a new shape.
6. Make a bar graph with up to four categories, one square for each item, and use it to answer "how many altogether?" and "how many more?" questions.

Prior knowledge

The grade 1 unit on measuring length and composing shapes (lining up ends, measuring with equal units laid end to end, triangles, squares and rectangles, putting shapes together), counting in fives and tens from grade 2 term 2, and adding and taking away within 100 from grade 2 term 1. No earlier unit in this set teaches clocks or coins, so lesson 3 starts with o'clock and half past and lesson 4 starts by meeting the coins.

Lessons

Each lesson is about 45 minutes: a short whole-class start, paired work and a closing check. The five topics are quite different, so a teacher may want to spread each lesson over two or three days; the unit runs over about 5 weeks, with short daily practice (5 minutes) reading the class clock and counting coins.

1. Measuring with a centimetre ruler
2. Centimetres and inches
3. Telling the time to five minutes
4. Counting coins at the Little Hill market
5. Sides, corners and a shape bar graph

Materials (whole class unless noted)

- A 30 cm ruler per pair, marked in whole centimetres with the 0 clearly marked, and with inches on the other edge (lessons 1 and 2). Tactile rulers with raised or notched marks for children who need them.
- Paper strips per pair, cut exactly to length, each with its letter in large print and a raised dot sticker on the left end: A 10 cm, B 15 cm, C 20 cm, D 25 cm and E 12 cm (lessons 1 and 2). A few spare raised dot stickers.
- Linking cubes too large to swallow, about 10 per pair, as in grade 1 (lesson 1).
- Small classroom objects per pair to measure: a pencil, a crayon, a glue stick and a book (lessons 1 and 2).
- A large board ruler or number line from 0 to 40 (lesson 1).
- A metre stick and a 12-inch ruler (one foot) for the teacher (lesson 2).
- A two-column chart headed "centimetres" and "inches" for the board, and a copy per pair (lesson 2).
- A teaching clock with geared hands for the board, and a card clock per pair with an hour hand and a minute hand fixed by a paper fastener (lesson 3; see Safety and access).
- Digital time cards in large print, and Little Hill day cards (lesson 3; see lesson 3).
- A minutes card per pair for support: a ring of 5, 10, 15 ... 60 to sit around the card clock (lesson 3).
- Card coins per pair, too large to swallow, printed on both sides with the value raised (glued string or thick glue) so it can be felt: 4 quarters, 6 dimes, 6 nickels and 10 pennies, plus one card dollar bill (lesson 4).
- Little Hill market price cards with made-up prices (lesson 4; see lesson 4).
- Card shapes per pair in different sizes and turned different ways: triangles, quadrilaterals (including squares, rectangles and some with no equal sides), pentagons and hexagons (lesson 5).
- Pattern blocks too large to swallow, per pair: 6 triangles, 2 trapezoids, 2 rhombuses (diamonds) and 1 hexagon (lesson 5).
- A cube per pair, such as a large wooden or foam block (lesson 5).
- A shape bag per pair holding exactly 19 card shapes: 5 triangles, 7 quadrilaterals, 3 pentagons and 4 hexagons (lesson 5).
- Squared paper (2 cm squares) and dot paper per child; card squares and glue for raised bar graphs (lesson 5). Small stickers for marking corners (lesson 5).
- A bar graph for the board made with raised card squares: boats on the Little Hill pond, with sailing boats 3, rowing boats 5 and canoes 2 (lesson 5).
- Whiteboards and pens, or paper and pencils.

⚠ Safety and access

- **Small parts:** card coins, not real coins (real coins are a choking risk and are handled by many people). Pattern blocks and shapes too large to swallow.
- **Card clocks:** an adult fixes the paper fasteners before the lesson and tapes over the sharp ends on the back.
- **Seeing and touching:** tactile rulers, raised dot stickers on the strips, card coins with raised values, raised clock numbers (glued string or thick glue dots) and bar graphs made from stuck-on card squares let children who are blind or have low vision measure, read and compare by touch. Large-print or braille labels help children who read them. Children can feel the clock hands on the teaching clock or their card clock.
- **Answering:** pointing, moving cards, sign, writing or a communication device all count as answers. Saying number names aloud is not required.
- **Privacy:** times, prices and data in the lessons are about the made-up Little Hill characters and a bag of shapes. Never ask children about their own wake or bed times, family money, pocket money or what things cost at home.
- No public timing or races. Games go round the pair or group, and a child may pass.

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 last week:

- Give strip E and a ruler. "How long is this strip?" (12 cm.) "Strip D is 25 cm. How much longer is it than strip E?" (13 cm.)
- "Measure strip C in centimetres and in inches." (20 cm; about 8 inches.) "Why is the number of inches smaller?" (An inch is longer than a centimetre, so fewer inches fit.)
- Set the teaching clock to 9:50. "What time is it? Write it." (9:50; ten to ten is also fine.) "Duck eats breakfast at 7:20. Is that a.m. or p.m.?" (a.m.)
- Give a quarter, a dime, a nickel and two pennies. "How much money is this?" (42¢.) "A ribbon costs 20¢ and a pencil costs 15¢. How much for both?" (35¢.)
- Show a card shape with 6 sides that are not all the same length. "What is this shape called? How do you know?" (A hexagon: 6 sides and 6 corners.) "How many faces does a cube have?" (6.)
- Show a bar graph of kites at the Little Hill fair: red 4, blue 6, yellow 2, green 3. "How many kites altogether?" (15.) "How many more blue kites than yellow kites?" (4.)

Record yes, with help or not yet for each part. A child who starts a ruler at the 1 mark and is 1 out every time has a measuring habit to fix, not a counting problem; note that rather than marking it wrong.

Sources

- Common Core State Standards, Grade 2 Measurement and Data (read to check what is usually expected in grade 2, not to claim alignment): https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/MD/
  - 2.MD.A.1 "Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes."; 2.MD.A.2 measure an object twice with units of different lengths and "describe how the two measurements relate to the size of the unit chosen"; 2.MD.A.3 "Estimate lengths using units of

inches, feet, centimeters, and meters."; 2.MD.A.4 measure "how much longer one object is than another".
    - 2.MD.B.5 adding and taking away within 100 in word problems about lengths, "by using drawings (such as drawings of rulers)".
    - 2.MD.C.7 "Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m."; 2.MD.C.8 "Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately." with the example "If you have 2 dimes and 3 pennies, how many cents do you have?"
    - 2.MD.D.10 "Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories."
- Common Core, Grade 2 Geometry: https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/G/
    - 2.G.A.1 "Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces." and "Identify triangles, quadrilaterals, pentagons, hexagons, and cubes."
- Common Core, Grade 1 Measurement and Data, read to check what children may have met before: 1.MD.B.3 "Tell and write time in hours and half-hours using analog and digital clocks." https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/1/MD/

Known gaps and cautions

- Two other agents (Gemini 3.8 Flash and Gemini 4 Argon, both at 122c91c) text-checked this unit on 2026-11-11 and reported no errors. Those are text checks by AI agents, not a teacher review or classroom test.
- Some grade 2 standards are not taught here: line plots of measurement data (2.MD.D.9), partitioning a rectangle into rows and columns of squares (2.G.A.2), and halves, thirds and fourths of circles and rectangles (2.G.A.3). Number lines (2.MD.B.6) appear only in lesson 1. A teacher may want to add these.
- The coins are United States coins because the Common Core standard names them. Schools in other countries should use their own coins and change the values in lesson 4. Writing amounts with a decimal point ($0.42) is not taught; amounts under a dollar are written with ¢.
- Inches and feet are used in the United States; many other countries use only centimetres and metres. Lesson 2 can be taught with centimetres and a longer unit such as a 5 cm card strip instead of inches.
- The strips in lessons 1 and 2 were chosen so the inch measurements are close to whole numbers (25 cm is about 9.8 inches, so "about 10 inches"). Children measure to the nearest whole unit, so small differences between pairs are expected.
- Many rulers have a gap before the 0 mark. Lesson 1 teaches starting at 0 for this reason.
- Clocks with hands are less common in some homes than digital ones, so some children will need much more practice than one lesson; the daily 5 minutes matters. Times are always on a five-minute mark; reading to the nearest five minutes when the hand is between marks is left for later practice.
- The prices, times and graph data are made up for Little Hill and are not real prices or schedules. Duck, Hen, Mouse, Goat and Mayor Hen are the made-up Little Hill characters used in other units.
- The lesson order, timings, strip lengths, examples and contexts are my choice, not taken from a source.

Lesson 1: Measuring with a centimetre ruler

Unit overview - Next: Lesson 2

Back to the grade 2 year plan

About 45 minutes.

Goal

Children measure lengths to the nearest whole centimetre with a ruler, starting at the 0 mark, and find how much longer one length is than another.

Materials

- A 30 cm ruler per pair, with the 0 clearly marked. Tactile rulers with raised or notched marks for children who need them.
- Paper strips per pair, cut exactly to length, each with its letter in large print and a raised dot sticker on the left end: A 10 cm, B 15 cm, C 20 cm, D 25 cm and E 12 cm. A few spare raised dot stickers.
- Small classroom objects per pair: a pencil, a crayon, a glue stick and a book.
- A large board ruler or number line from 0 to 40.
- Linking cubes too large to swallow, about 10 per pair, for the opening.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Hold up strip C next to a row of linking cubes laid end to end. "In grade 1 we measured by laying equal units with no gaps or overlaps. How many cubes long is this strip?" (Count with the class; the answer depends on your cubes.) "Different cubes give different answers. A ruler uses a unit everyone agrees on: the centimetre. The small spaces between the marks are each one centimetre, and the numbers have already counted them for us."

✎ Main activity (30 min)

1. **Start at 0 (10 min).** On the board ruler, show that the numbers count the spaces, not the lines: the space from 0 to 1 is the first centimetre. Show strip A lined up with the very end of a real ruler (many rulers have a gap before the 0) and read where it ends. Then line it up with the 0 mark. "Which way gives the right length?" (Starting at 0: strip A is 10 cm.) Next lay strip A from the 1 mark to the 11 mark. "It ends at 11. Is it 11 cm long?" (No: count the spaces from 1 to 11; there are 10.) Children who use a tactile ruler feel for the 0 notch first.
2. **Measure the strips (10 min).** Pairs measure strips A to D, taking turns to hold the ruler and to read the number, and write each length with "cm": A 10 cm, B 15 cm, C 20 cm, D 25 cm. Then they measure the pencil, crayon, glue stick and book to the nearest

whole centimetre. "If the end is between two numbers, which number is it closer to?" Answers for the objects will differ between pairs.

3. **How much longer? (10 min).** "Put strips D and B side by side, lined up at one end. How much longer is D?" Measure the part of D that sticks out, or take away: 25 - 15 = 10, so D is 10 cm longer. Repeat with C and A (10 cm) and D and A (15 cm). Then a story, drawn as a ruler on the board with jumps along the number line: "Goat's kite tail is 34 cm long. Duck's kite tail is 20 cm long. How much longer is Goat's?" (34 - 20 = 14, so 14 cm.) Show the jump from 20 to 34 on the board number line.

✓ Discussion questions (with answers)

- Why do we start at 0 and not at the end of the ruler? The numbers count centimetres from the 0 mark. Many rulers have a gap before the 0, so starting at the end gives the wrong length.
- Why is everyone's strip D the same length but their pencils different? The strips were cut to the same length; the pencils are different pencils.
- Can you measure a strip that does not start at 0? Yes, by counting the centimetres from where it starts to where it ends, but starting at 0 is easier.

✓ Closing check (10 min, with answers)

"Measure strip E." (12 cm.) "A strip starts at 2 and ends at 9 on a ruler. How long is it?" (7 cm.) "Mouse's ribbon is 18 cm long and Hen's ribbon is 30 cm long. How much longer is Hen's ribbon?" (12 cm.) Note who starts at 0 every time and who still starts at the end or at 1.

Vocabulary

centimetre, cm, ruler, length, measure, longer, shorter, how much longer, nearest

Differentiation

- **Support:** measure only strips A to D, which end on numbers that end in 0 or 5, before measuring objects. Put a spare raised dot sticker on the 0 mark of the ruler.
- **Stretch:** "Which two strips together are as long as strip D?" (A and B: 10 + 15 = 25.) "How much longer is strip D than strip E?" (13 cm.)
- Children who are blind or have low vision use a tactile ruler and the raised dot on the left end of each strip, and count notches from the 0 notch with a finger.

⚠ Safety

Use linking cubes too large to swallow. Rulers stay on tables, not waved.

Teacher notes and misconceptions

- Many children start at the end of the ruler or at 1. Ask "Where does the first centimetre start?" and let them check by counting spaces.

- Some children count the lines instead of the spaces and get one more than the length. Point to each space as it is counted.
- "Cm" is the short way to write centimetres; the "s" is never added.

Lesson 2: Centimetres and inches

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

Back to the grade 2 year plan

About 45 minutes.

Goal

Children measure the same strips in centimetres and in inches, explain why the number of centimetres is bigger, and estimate lengths before measuring.

Materials

- A 30 cm ruler per pair with inches on the other edge. Tactile rulers with raised or notched marks for children who need them.
- Paper strips A to E per pair from lesson 1 (A 10 cm, B 15 cm, C 20 cm, D 25 cm, E 12 cm), each with a raised dot sticker on the left end.
- Small classroom objects per pair: a pencil, a crayon, a glue stick and a book.
- A metre stick and a 12-inch ruler (one foot) for the teacher.
- A two-column chart for the board headed "centimetres" and "inches", and a copy per pair.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

"Last time strip D was 25 cm long. Turn your ruler over. The other edge has bigger spaces. Each of those spaces is one inch." Show one centimetre and one inch on the board side by side. "Which is longer, a centimetre or an inch?" (An inch.)

✎ Main activity (30 min)

1. **Measuring in inches (10 min).** Pairs measure strips A to D on the inch edge, starting at 0, to the nearest whole inch, and write the answers in the inches column of their chart. The strips do not end exactly on an inch mark, so the class agrees which mark each end is closest to: A about 4 inches, B about 6 inches, C about 8 inches, D about 10 inches.
2. **Same strip, two numbers (10 min).** Pairs copy the centimetre lengths from lesson 1 into the other column: A 10, B 15, C 20, D 25. "Strip D is 25 cm and about 10 inches. It is the same strip. Why is the number of centimetres bigger?" Take ideas, then show with strip D: lay a finger on each centimetre space and then on each inch space. "An inch is longer than a centimetre, so fewer inches fit along the strip. A smaller unit needs more of them." Link to grade 1: when the class measured with smaller units, it needed more of them to cover the same length.

3. **Estimate, then measure (10 min).** Show the metre stick (100 cm) and the 12-inch ruler ("12 inches is one foot"; a 30 cm ruler is about one foot long). For each object, pairs first write a guess, then measure:
    - the pencil and the book in centimetres;
    - the crayon and the glue stick in inches;
    - with the teacher: "Is the classroom door wider or narrower than one metre?" The teacher holds the metre stick against the door so the class can check.

Guesses that are close count as good estimates; the point is to have a picture of each unit in mind.

✓ Discussion questions (with answers)

- If you measure the same book in centimetres and in inches, which number is bigger? The centimetres, because a centimetre is a smaller unit.
- Why did different pairs get "about 6 inches" for strip B when it does not end exactly on 6? It is closer to the 6 mark than to the 5 or 7 mark, so we say about 6 inches.
- Would you measure the classroom in centimetres or in metres? Metres would be quicker; centimetres would give a very big number.

✓ Closing check (10 min, with answers)

"Measure strip E in inches." (About 5 inches.) "A strip is 8 inches long. Will its length in centimetres be a bigger number or a smaller number?" (Bigger.) "Which do you need more of to measure the same book, centimetres or inches?" (Centimetres.) Note who explains with the size of the unit and who only says "because the numbers are different".

Vocabulary

inch, foot, metre, centimetre, estimate, about, unit, closest

Differentiation

- **Support:** measure strips C and D only, with a finger walking along each inch space while counting.
- **Stretch:** "Strip D is about 10 inches. Two strips D laid end to end would be about how many inches?" (About 20.) "How many centimetres?" (50.)
- Children who are blind or have low vision feel the bigger notches on the inch edge of a tactile ruler and compare one centimetre space with one inch space by touch.

⚠ Safety

Only the teacher handles the metre stick. Rulers stay on tables, not waved.

Teacher notes and misconceptions

- Some children think a bigger number means a longer object even when the units differ. Keep putting the same strip next to both edges of the ruler.
- On some rulers the inch edge is split into halves and quarters as well. Show children which marks are the whole inches (the longest marks with numbers).
- In countries that do not use inches, the same idea can be shown with centimetres and a 5 cm card strip as a longer unit.

Lesson 3: Telling the time to five minutes

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

Back to the grade 2 year plan

About 45 minutes.

Goal

Children read and set times to five minutes on a clock with hands, write them as digital times, and decide whether a time in a story is a.m. or p.m.

Materials

- A teaching clock with geared hands for the board, with raised numbers (glued string or thick glue dots) so it can be felt.
- A card clock per pair with an hour hand and a minute hand fixed by a paper fastener. An adult fixes the fasteners before the lesson and tapes over the sharp ends on the back.
- Digital time cards in large print: 3:00, 3:30, 4:25, 7:40, 10:05, 11:55.
- Little Hill day cards, each with a picture, a sentence and a time: "Hen opens the bakery at 7:15 in the morning", "The bus leaves for school at 8:40 in the morning", "Lunch is ready at the market at 12:10 in the afternoon", "Mayor Hen rings the town bell at 3:25 in the afternoon", "The lamps on the bridge are lit at 6:45 in the evening".
- A minutes card per pair for support: a ring of 5, 10, 15 ... 60 to sit around the card clock, one number beside each clock number.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Point to each number on the teaching clock and count in fives together: 1 is 5 minutes, 2 is 10 minutes, and so on round to 12, which is 60 minutes or "o'clock". "The minute hand goes all the way round in one hour. Each number is 5 more minutes."

✎ Main activity (30 min)

1. **O'clock and half past (8 min).** "The short hand is the hour hand. The long hand is the minute hand." Set 3:00: the minute hand on 12, the hour hand on 3. Move the minute hand slowly round to 6 and show the hour hand moving too. "Half an hour has gone. It is half past 3, or 3:30. The hour hand is halfway between 3 and 4." Show the digital cards 3:00 and 3:30.
2. **Five-minute jumps (12 min).** Set 4:25 on the teaching clock. "The minute hand points to 5. Count in fives: 5, 10, 15, 20, 25. The hour hand has gone past 4 but is not yet halfway to 5. It is 4:25." Pairs set each time on their card clock and match the digital card: 7:40 (minute hand on 8, hour hand more than halfway from 7 to 8), 10:05 (minute hand on 1, hour hand just past 10), 11:55 (minute hand on 11, hour hand

almost at 12 but still 11 o'clock and some minutes). Partners take turns: one sets a time, the other reads it and writes it.

3. **a.m. and p.m. (10 min).** "There are two of every time each day: one in the morning and one in the afternoon or evening. Times from midnight until midday are a.m. Times from midday until midnight are p.m." Hand out the Little Hill day cards. Pairs set each time on the card clock, write it with a.m. or p.m., then the class puts the cards in order through the day:
    - 7:15 a.m. Hen opens the bakery;
    - 8:40 a.m. the bus leaves for school;
    - 12:10 p.m. lunch is ready at the market;
    - 3:25 p.m. Mayor Hen rings the town bell;
    - 6:45 p.m. the lamps on the bridge are lit.

✓ Discussion questions (with answers)

- How do you know which hand is which? The hour hand is shorter; the minute hand is longer.
- At 11:55, the hour hand is almost on 12. Why do we say 11:55 and not 12:55? The hour hand has not reached 12 yet, so it is still 11 and some minutes.
- Is lunch at 12:10 a.m. or p.m.? p.m., because it is just after midday.

✓ Closing check (10 min, with answers)

Set 2:35 on the teaching clock. "What time is it? Write it." (2:35.) "Show me 6:10 on your clock." (Minute hand on 2, hour hand just past 6.) "Goat reads a story before bed at 7:30. Is that a.m. or p.m.?" (p.m.) Note who reads the hour from the number the hour hand has just passed, and who reads the nearest number.

Vocabulary

clock, hour hand, minute hand, o'clock, half past, minutes, a.m., p.m., morning, afternoon, evening, midday, midnight

Differentiation

- **Support:** set only o'clock, half past, and times where the minute hand points to 1, 2 or 3 (5, 10 or 15 minutes past). Put the minutes card around the card clock.
- **Stretch:** "The bus leaves at 8:40. Hen arrives 10 minutes later. What time does Hen arrive?" (8:50.) Talk about "quarter past" and "quarter to" as other ways to say 15 and 45 minutes.
- Children who are blind or have low vision feel the raised numbers and the hands of the teaching clock or their card clock.

⚠ Safety

An adult fixes the paper fasteners and tapes over the sharp ends before the lesson. Never ask children about their own wake, meal or bed times; the times belong to the Little Hill characters.

Teacher notes and misconceptions

- The most common mistake is reading the hour from the nearest number when the minute hand is past 30, so 9:50 is read as 10:50. Ask "Has the hour hand reached 10 yet?"
- Some children mix up the hands. Giving the minute hand a different colour and a different feel (a strip of tape along it) and saying "long hand, minutes" helps.
- Times exactly at 12:00 can confuse even adults (12:00 midday is often written 12:00 p.m.), so the lesson avoids them.
- Many children see more digital clocks than clocks with hands. Keep a clock with hands in the classroom and read it together each day.

Lesson 4: Counting coins at the Little Hill market

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

Back to the grade 2 year plan

About 45 minutes.

Goal

Children name pennies, nickels, dimes and quarters and their values, find the value of a set of coins by counting on from the biggest, write amounts with the ¢ sign, and solve one-step story problems with made-up prices.

Materials

- Card coins per pair, too large to swallow, printed on both sides with the value raised (glued string or thick glue) so it can be felt: 4 quarters, 6 dimes, 6 nickels and 10 pennies, plus one card dollar bill. Draw the coins in the same order of size as real coins (the dime smallest, then the penny, the nickel and the quarter).
- Little Hill market price cards with made-up prices (an example, not real prices): pear 35¢, ribbon 20¢, pencil 15¢, packet of seeds 50¢, toy kite 75¢.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

Count together in fives to 50 and in tens to 100, as in term 2. "Today we will use counting in fives and tens to count money."

✎ Main activity (30 min)

1. **Meeting the coins (8 min).** Show each card coin and say its value: a penny is 1 cent (1¢), a nickel is 5¢, a dime is 10¢ and a quarter is 25¢. A dollar is 100¢, written $1. Pairs sort their coins into four piles. "Which coin is the smallest?" (The dime.) "Which coin is worth the most?" (The quarter.) "Is the smallest coin worth the least?" (No: a dime is worth more than a penny or a nickel.)
2. **Counting a handful (12 min).** Model counting on from the biggest value: quarter, dime, dime, penny: "25, 35, 45, 46. That is 46¢." Pairs take turns to give their partner a set of coins to count, then try these together:
    - 2 dimes and 3 pennies (23¢);
    - 3 dimes, 2 nickels and 4 pennies (dimes 10, 20, 30; nickels 35, 40; pennies 41, 42, 43, 44: 44¢);
    - a quarter, a dime and a nickel (40¢);
    - 4 quarters (25, 50, 75, 100: 100¢, which is $1).

3. **The Little Hill market (10 min).** Put out the price cards. Pairs pay for each thing with card coins in one way, then find a second way (the pear, 35¢: a quarter and a dime, or 3 dimes and a nickel). Then story problems, solved with coins and written as a number sentence:
    - "Duck has 2 quarters and buys a pear. How much money is left?" (50¢ - 35¢ = 15¢.)
    - "Goat buys a packet of seeds and a pencil. How much is that?" (50¢ + 15¢ = 65¢.)
    - "Mouse has 60¢. The toy kite costs 75¢. How much more does Mouse need?" (75¢ - 60¢ = 15¢.)

✓ Discussion questions (with answers)

- Why do we start counting with the coin worth the most? It is quicker: big jumps first, then small ones.
- How many dimes make a dollar? 10, because 10 tens make 100.
- Can two children have different coins but the same amount of money? Yes: a quarter and a nickel is 30¢, and so are 3 dimes.

✓ Closing check (10 min, with answers)

Show 2 quarters, a dime and a penny. "How much money is this?" (61¢.) "Show me 30¢ in two different ways." (For example 3 dimes; a quarter and a nickel; 6 nickels.) "Hen has 50¢ and buys a packet of seeds. How much is left?" (0¢.) Note who counts on from the biggest coin and who counts every coin as 1.

Vocabulary

penny, nickel, dime, quarter, dollar, cent, ¢, $, value, worth, price, cost, left, more

Differentiation

- **Support:** use only dimes and pennies first, which works like tens and ones (3 dimes and 4 pennies is 34¢), then add nickels.
- **Stretch:** "Find all the ways to pay 25¢ with dimes, nickels and pennies if you use no more than 5 coins." (2 dimes and 1 nickel; 1 dime and 3 nickels; 5 nickels.)
- Children who are blind or have low vision feel the raised values on the card coins. Sorting by size alone does not work because the dime is the smallest coin.

⚠ Safety

Use card coins, not real coins: real coins are a choking risk and are handled by many people. Never ask children about family money, pocket money or what things cost at home; the prices belong to the Little Hill market.

Teacher notes and misconceptions

- Many children think a bigger coin is worth more, so the nickel seems worth more than the dime. Keep asking "What is it worth?" rather than "Which is bigger?"
- Some children count every coin as one. Ask "How many cents is this coin?" before counting.
- These are United States coins. Schools in other countries should use their own coins and change the values and prices.
- Writing amounts with a decimal point ($0.42) is not taught here; amounts under a dollar are written with ¢.

Lesson 5: Sides, corners and a shape bar graph

Unit overview - Previous: Lesson 4

Back to the grade 2 year plan

About 45 minutes.

Goal

Children name triangles, quadrilaterals, pentagons and hexagons by counting sides and corners, say how many faces a cube has, put shapes together to make new shapes, and make and read a bar graph with four categories.

Materials

- Card shapes per pair in different sizes and turned different ways: triangles, quadrilaterals (including squares, rectangles and some with no equal sides), pentagons and hexagons.
- Pattern blocks too large to swallow, per pair: 6 triangles, 2 trapezoids, 2 rhombuses (diamonds) and 1 hexagon.
- A cube per pair, such as a large wooden or foam block.
- A shape bag per pair holding exactly 19 card shapes: 5 triangles, 7 quadrilaterals, 3 pentagons and 4 hexagons.
- Squared paper (2 cm squares) and dot paper per child; card squares and glue for raised bar graphs. Small stickers for marking corners.
- A bar graph for the board, also made with raised card squares: boats on the Little Hill pond, with sailing boats 3, rowing boats 5 and canoes 2.
- Whiteboards and pens, or paper and pencils.

Steps

✎ Opening (5 min)

"In grade 1 we found out what makes a triangle a triangle." Hold up a long, thin triangle and a square. "How did we know?" (Count the straight sides and the corners: 3 for a triangle.) "Today we count sides and corners to name more shapes."

✎ Main activity (30 min)

1. **Count and name (10 min).** Pairs take turns to pick a card shape, run a finger along each side while counting, then touch each corner. Name each group as it is found: 3 sides and 3 corners is a triangle; 4 sides and 4 corners is a quadrilateral (squares and rectangles are quadrilaterals too); 5 is a pentagon; 6 is a hexagon. "Does turning the shape or making it bigger change its name?" (No.) Then hold up the cube: pairs count its flat faces (6, all squares the same size) and its corners (8). Each child draws a shape with 5 corners on dot paper and a partner checks it is a pentagon.

2. **Making new shapes (8 min).** With pattern blocks: "Put 2 triangles together to make a shape with 4 sides." (A rhombus, which is a quadrilateral.) "Can you cover a trapezoid with triangles?" (Yes, 3.) "Can you cover the hexagon with triangles?" (Yes, 6.) "With trapezoids?" (Yes, 2.) Pairs lay the pieces on top of the hexagon to check, then count the sides of each new shape they make.
3. **A shape bar graph (12 min).** Each pair tips out its shape bag and sorts the shapes into four rows by name, one card for each shape, lined up at the left like a picture graph. Then they make a bar graph on squared paper: one square for each shape, filled in or covered with a card square, with the four names written along the bottom. Ask:
    - "How many shapes altogether?" (5 + 7 + 3 + 4 = 19.)
    - "Which shape is there least of?" (Pentagons.)
    - "How many more quadrilaterals than pentagons?" (7 - 3 = 4.)
    - "How many triangles and hexagons together?" (5 + 4 = 9.)

✓ Discussion questions (with answers)

- Is a square a quadrilateral? Yes: it has 4 sides and 4 corners.
- A shape has 6 sides but they are not all the same length. Is it a hexagon? Yes: it has 6 sides and 6 corners.
- Why do the bars start at the same line? So we can compare them fairly, just like lining up strips at one end before measuring.

✓ Closing check (10 min, with answers)

Hold up a pentagon with sides of different lengths. "What is this shape?" (A pentagon: 5 sides and 5 corners.) "Draw a shape with 4 corners. What is it called?" (A quadrilateral.) Show the boats bar graph. "How many boats altogether?" (10.) "How many more rowing boats than canoes?" (3.) Note who counts sides carefully and who names shapes by how they look.

Vocabulary

side, corner, triangle, quadrilateral, pentagon, hexagon, cube, face, rhombus, trapezoid, bar graph, picture graph, altogether, how many more

Differentiation

- **Support:** sort triangles and quadrilaterals first, then add the other shapes. Put a small sticker on each corner as it is counted.
- **Stretch:** count the edges of the cube (12). "How many triangles would cover 2 hexagons?" (12.)
- Children who are blind or have low vision feel the sides and corners of the card shapes and pattern blocks, and read the bar graph by feeling the raised card squares in each bar.

⚠ Safety

Use pattern blocks and cubes too large to swallow. Cubes stay on tables.

Teacher notes and misconceptions

- Many children think a shape turned on its corner is a different shape (a square "becomes a diamond"). Turn shapes and ask "Did the number of sides change?"
- Some children only call a shape a hexagon if all its sides are the same. Show irregular hexagons often.
- Counting corners on a shape with many sides is easy to get wrong; touching each corner, or putting a small sticker on it, helps.
- Line plots, splitting rectangles into rows of squares, and halves, thirds and fourths are not taught in this unit (see Known gaps in the unit overview).

Grade 2 Science: Solids, Liquids and Melting Ice (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

Materials around us can be solids or liquids. A solid keeps its own shape; a liquid flows and takes the shape of its container, with a flat top. Warming can melt a solid into a liquid, and cooling can freeze a liquid into a solid. Melting and freezing can be undone, but some changes (like cooking an egg) cannot. Some coverings slow down melting by keeping warmth out.

Outcomes

By the end of the unit a student can:

1. Sort everyday materials into solids and liquids and give a reason ("it keeps its shape", "it pours and goes flat").
2. Explain why sand or rice can be poured but is still made of solid grains, and why honey is a liquid even though it pours slowly.
3. Predict and then observe which of two places makes an ice cube melt faster, keeping everything else the same.
4. Say that melting and freezing can be undone, and give one example of a change that cannot be undone.
5. Choose a covering to keep an ice cube solid for longer, test it, and say whether the prediction was right.
6. Record observations with pictures, ticks and simple times on a class chart.

Prior knowledge

- Children have seen ice, water, rain and puddles.
- Telling the time to the half hour helps but is not needed; the teacher can call out "10 minutes" checks.
- Simple "I think... / I saw..." talk from kindergarten and grade 1 science.

Lessons

Lessons are 30-40 minutes. Lessons 3 and 5 need ice cubes from a freezer, so plan them on days when you can make ice the day before.

1. Solid or liquid? - feel, pour and sort a tray of materials.
2. Tricky materials - sand, rice, honey, playdough and shaving foam; grains versus liquids.
3. Where does ice melt fastest? - a fair test with ice cubes in a warm spot and a cool spot.
4. Can we undo it? - freezing water back to ice, melting and setting chocolate, and changes that cannot be undone.

5. Ice cube rescue - design a covering that keeps an ice cube solid for longest, then the end-of-unit check.

Materials

For a class of about 25 in groups of 4-5:

- Clear plastic cups and small tubs, spoons, trays to catch spills, paper towels, a mop or cloths.
- Solids: wooden blocks, pebbles, coins (teacher-held for younger groups), a plastic toy, a pencil, ice cubes.
- Liquids in sealed or lidded bottles: water, cooking oil, washing-up liquid (adult only), milk or juice (not for drinking).
- Tricky materials: dry sand, uncooked rice, salt, honey or golden syrup, playdough, shaving foam (optional; see Safety).
- Ice: about 3 trays of cubes made the day before, all the same size.
- Small plates or saucers (identical), a timer, class chart paper.
- Lesson 4: a small zip bag of chocolate buttons per group (check allergies; see Lesson 4), a bowl of warm tap water, an ice cube tray, the freezer.
- Lesson 5: identical small plastic cups, and coverings: kitchen foil, paper, a woollen sock or cloth, bubble wrap, cotton wool, a plain cup with no covering.

Assessment

- Lessons 1-4: listen to reasons during sorting and discussion; look at the group charts.
- Lesson 5: an 8-question end-of-unit check (16 marks) in Lesson 5. It is formative: use it to see what to revisit, not to grade children.

Sources

- Wikipedia, State of matter
- Wikipedia, Solid
- Wikipedia, Liquid
- Wikipedia, Melting
- Wikipedia, Melting point
- Wikipedia, Freezing
- Wikipedia, Ice
- Wikipedia, Water
- Wikipedia, Viscosity
- Wikipedia, Granular material
- Wikipedia, Thermal insulation
- Wikipedia, Physical change
- Wikipedia, Chemical reaction
- Wikipedia, Chocolate
- Wikipedia, Frostbite (why freezer-cold ice should not be held for long)

Known gaps and cautions

- Gases are left out on purpose. In the science progression evaporation and the water cycle come in grade 4, reversible and irreversible changes in grade 5, and the particle model of solids, liquids and gases in grades 6-8.

- "Solid" and "liquid" are simplified. Thick or odd materials (shaving foam, slime, toothpaste) do not fit neatly; the unit treats them as talking points, not as a test of right answers.
- "Can be undone" and "cannot be undone" are the words used here instead of "reversible" and "irreversible". Melting chocolate can change its texture (it may set dull or streaky), so "undone" means back to a solid, not perfect.
- Melting times depend on the room, the sun and the ice size. Compare results within one class on one day only.
- No images yet. No educator review.

Lesson 1: Solid or liquid?

Back to the unit

Goal

Children sort everyday materials into solids and liquids and give a reason: a solid keeps its own shape; a liquid pours, takes the shape of its container and has a flat top.

Materials

- Per group, on a tray: a wooden block, a pebble, a plastic toy, a pencil, a lidded bottle of water, a lidded bottle of cooking oil, a lidded bottle of milk or juice (not for drinking).
- Per group: three clear containers of different shapes (a tall cup, a wide tub, a small bowl), paper towels.
- Two sorting hoops or two large sheets labelled with a picture of a block ("solid") and a picture of a drop ("liquid").
- Class chart with two columns: "Keeps its shape" and "Pours and goes flat".

Steps

✎ Opening (5 minutes)

Hold up a wooden block and a cup of water. Ask: "If I tip these over, what happens to each one?" Tip the block onto the tray (it stays a block). Pour a little water onto a tray (it spreads out). Ask children to describe what they saw.

✎ Main activity (20 minutes)

1. Groups take each solid object and try to put it into each of the three containers. Does the object change shape to fit? (No - it stays the same.)
2. The teacher, or a careful child with the teacher holding the cup, pours the same bottle of water into the tall cup, then into the wide tub, then into the bowl. Children watch the water change shape every time.
3. Children look at the water from the side, with eyes level with the cup: the top is flat, even when the cup is tipped a little.
4. Groups place each material in the "solid" or "liquid" hoop. Each child says one reason using the sentence starter "It is a solid/liquid because it...".
5. The class fills in the chart together.

✓ Discussion questions (with example answers)

- **What did the water do when we poured it into a different cup?** It changed shape to fit the cup. It went flat on top.
- **Did the block change shape in the tall cup?** No. It stayed a block. It just sat there.

- **Is the milk a solid or a liquid? How do you know?** A liquid, because it pours and takes the shape of the bottle.
- **Can you think of a solid in our classroom? A liquid at home?** Solid: chair, book, door. Liquid: water, juice, bath water, shampoo.

✓ Closing check (5 minutes, with answers)

Show pictures or real items; children show thumbs up for solid, thumbs to the side for liquid:

1. A spoon - solid.
2. Orange juice - liquid.
3. A brick - solid.
4. Rain - liquid.
5. An ice cube - solid (it keeps its shape, for now - "we will find out more about ice soon").

Vocabulary

solid, liquid, shape, pour, flow, container

Differentiation

- **Extra support:** use only the hoops and pictures; sentence starter printed on a card; work with an adult in a small group.
- **Extra challenge:** "Is a pile of paper clips a solid or a liquid? It takes the shape of the box!" (Each clip is a solid; the pile only looks like it pours.) This leads into Lesson 2.

⚠ Safety

- Keep liquids in lidded bottles; open only for pouring, over a tray.
- No tasting or drinking any material, even milk or juice.
- Mop spills at once; wet floors are slippery.
- Cooking oil makes floors very slippery; pour it only over a tray, or keep that bottle closed and just tip it to watch.
- Small objects (coins, pebbles) can be choking hazards; count them back in.

Teacher notes and common misconceptions

- Children often say a liquid is "wet" and a solid is "hard". Accept these as starting points, but steer towards shape: soft solids (a sponge, cloth) are still solids, and some liquids (oil) do not feel "wet" in the same way.
- Some children think a liquid has no shape. It does - it borrows the shape of whatever it is in, apart from the flat top.

Lesson 2: Tricky materials

Back to the unit

Goal

Children explore materials that do not fit the solid/liquid sort easily. They learn that sand, rice and salt can be poured but are made of tiny solid grains, and that honey is a liquid even though it flows slowly.

Materials

- Per group, on a tray: a cup of dry sand, a cup of uncooked rice, a small cup of salt, a lidded jar of honey or golden syrup, a ball of playdough, two spoons, a magnifying glass, a dark sheet of card.
- Optional (teacher demonstration only): a can of plain shaving foam.
- The class chart from Lesson 1, plus a third column: "Not sure - let's talk".

Steps

✎ Opening (5 minutes)

Pour rice slowly from one cup into another. Ask: "Is rice a liquid? It pours!" Take a show of hands. Do not give the answer yet.

✎ Main activity (25 minutes)

1. **Grains.** Groups sprinkle a few grains of rice, sand and salt onto the dark card and look with the magnifying glass. Ask: does each grain keep its own shape? (Yes.) Can you press one grain and change its shape? (No.)
2. **Piles.** Groups pour sand onto the tray. Does it go flat like water? (No - it makes a heap with sloping sides.) Pour water beside it for comparison, over the tray.
3. **Slow flow.** Groups tip the closed honey jar and watch it move. Then the teacher spoons a little honey onto a plate: it slowly spreads out and goes flat. Honey is a "thick" liquid; it is slow, but it still flows and takes the shape of the plate.
4. **Squash it.** Children squash and roll playdough. It changes shape when pushed, but when you stop pushing it stays in its new shape - it does not flow by itself. It is a soft solid.
5. **Optional demonstration.** The teacher squirts a little shaving foam on a tray. Is it a solid or a liquid? Let children argue; put it in the "Not sure" column. (It is a foam, mostly gas bubbles trapped in a liquid; it is fine for it to stay "not sure".)
6. Update the class chart.

✓ Discussion questions (with example answers)

- **Rice pours. Why isn't it a liquid?** Because each grain is a tiny solid that keeps its shape. The pile makes a heap; it doesn't go flat.
- **Honey is slow. Why is it a liquid?** Because it flows by itself and goes flat on the plate, just slowly.
- **Playdough changes shape. Why is it a solid?** Because it only changes when we push it, and then it stays. It doesn't pour.
- **What would happen to sand in a cup if you looked very closely?** You'd see lots of tiny solid bits with air between them.

✓ Closing check (5 minutes, with answers)

Children answer on whiteboards with S (solid) or L (liquid):

1. Sugar - S (tiny solid grains).
2. Ketchup - L (a thick liquid; it flows slowly).
3. Flour - S (very tiny solid grains).
4. Shampoo - L.
5. A ball of clay - S.

Vocabulary

grain, heap, thick, runny, flow, soft solid

Differentiation

- **Extra support:** focus on two materials only (rice and honey) and the question "does each bit keep its shape?".
- **Extra challenge:** "Why does a big heap of sand slope at the sides but water goes flat?" Accept ideas such as "the grains lean on each other".

⚠ Safety

- No tasting. Uncooked rice and dried foods are not snacks.
- Keep sand away from faces and eyes; pour low, over trays. If sand gets in an eye, do not rub; rinse with clean water and tell an adult.
- Salt stings cuts and eyes; wash hands after the lesson.
- Check allergies before using honey, flour or playdough (playdough often contains wheat).
- Shaving foam: teacher only, plain unscented if possible; keep it away from eyes and mouths; check skin allergies before letting anyone touch it.
- Sweep up spilled sand and rice at once - they are slippery underfoot.

Teacher notes and common misconceptions

- "If it pours, it's a liquid" is the main misconception to tackle. The grain test (does each piece keep its shape?) and the heap test (does it go flat?) are the two simple checks.
- "Thick" and "runny" are fine everyday words for what scientists call viscosity. There is no need to introduce that word.
- Some materials genuinely do not fit (foams, gels, slime). Saying "scientists have extra names for these" is honest and enough at this age.

Lesson 3: Where does ice melt fastest?

Back to the unit

Goal

Children carry out a simple fair test: two identical ice cubes on identical plates, one in a warm spot and one in a cool spot. They predict, observe at regular times and say what they found. They learn that warmth makes ice melt into water.

Materials

- Ice cubes made the day before in the same tray, so they are the same size (2 per group, plus spares).
- Per group: two identical small plates or saucers, two labels ("warm" and "cool"), a recording sheet (see below), a pencil.
- A warm spot: a sunny windowsill, or a table about one metre from a heater (never on or touching the heater).
- A cool spot: a shady corner, a table by an outside wall, or a corridor.
- A timer or the classroom clock; a thermometer is optional, for the teacher to show which place is warmer.

Recording sheet: a table with rows "Start", "10 minutes", "20 minutes", "30 minutes", "40 minutes" and columns "Warm spot" and "Cool spot". In each box children draw the cube and puddle, or tick one of three pictures: "all ice", "some ice and water", "all water".

Steps

✎ Opening (5 minutes)

Show an ice cube on a plate. Ask: "Is this a solid or a liquid?" (Solid.) "What will it be like at home time?" (Water, a liquid.) Ask: "Could we make it change faster or slower?" Collect ideas.

✎ Main activity (30-40 minutes, with other work between checks)

1. Explain the fair test: "We will change only ONE thing - where the plate goes. Everything else stays the same: the same size ice cube, the same kind of plate, the same start time."
2. Each child predicts which cube will melt first by putting a sticker or name on "warm" or "cool" on a class prediction chart.
3. At the same moment, an adult puts one cube on each plate. Groups carry the "warm" plate to the warm spot and the "cool" plate to the cool spot.
4. Children draw the "Start" row.
5. Every 10 minutes, groups look (without touching the ice) and record. The class can do quiet work between checks.
6. Stop when the first cube is all water, or after 40 minutes, whichever comes first.

✓ Discussion questions (with example answers)

- **Which cube melted faster? Was your prediction right?** Usually the warm spot. "I thought warm, and I was right." It is fine to be wrong; say so.
- **Why did we use the same size ice cubes and the same plates?** So it was fair; only the place was different, so the place made the difference.
- **Where did the ice go?** It didn't disappear - it turned into water, the puddle on the plate.
- **What could you do to make ice melt even more slowly?** Put it in a colder place, or wrap it up (this leads to Lesson 5).

✓ Closing check (5 minutes, with answers)

1. What does warmth do to ice? It makes it melt into water.
2. Is the puddle a solid or a liquid? A liquid.
3. In our test, what was the one thing we changed? Where we put the plate.
4. Name one thing we kept the same. The size of the ice cube / the type of plate / the start time.

Vocabulary

melt, warm, cool, fair test, predict, observe

Differentiation

- **Extra support:** use only the three-picture tick boxes; an adult reads the time.
- **Extra challenge:** add a third plate (e.g. a metal tray in the cool spot) and ask whether the plate makes a difference. Discuss that this is a second test, because now two things could change.

⚠ Safety

- Ice straight from a freezer can stick to skin and cause a cold burn. Let cubes sit on the plate for a minute before anyone touches them, and touch only briefly.
- Ice is not for eating in class (choking risk; classroom trays and hands are not clean).
- Never put plates on or against heaters, radiators or lamps.
- Carry plates slowly and level; wipe up meltwater at once (slip risk).
- Windowsills: no climbing; an adult places and moves the plates if the sill is high.

Teacher notes and common misconceptions

- Some children think the ice "disappears" or "goes into the plate". Point to the water: the same stuff, now a liquid. You can weigh a cube in a cup before and the water after on kitchen scales if you have them: the amount is about the same.
- "Cold makes ice" is true, but "cold goes into things" is a common idea. Keep the talk about warmth: warmth from the room or the Sun goes into the ice and melts it. Coverings keep warmth out (Lesson 5).

- On a cold, cloudy day, the difference may be small. That is still a result; talk about why.

Lesson 4: Can we undo it?

Back to the unit

Goal

Children see that melting and freezing can be undone: water freezes to ice and ice melts to water; chocolate melts in warm water and sets solid again when cooled. They compare this with changes that cannot be undone, such as cooking an egg or toasting bread.

Materials

- The day before: children help pour water into an ice cube tray; the teacher puts it in the freezer. Also keep one cup of water from the same jug in the classroom, for comparison.
- Per group: a small zip-lock bag with 4-5 chocolate buttons, sealed and with the air pressed out; a bowl of warm tap water (adult-filled; it should feel comfortably warm on the back of a hand, like a bath, not hot); a paper plate; a cool place or fridge for later.
- **If any child has a milk, soy or nut allergy, or chocolate is not allowed:** use a small piece of plain ice lolly made from fruit juice instead, or keep the chocolate as a teacher-only demonstration in a sealed bag. Check your school's food policy first.
- For "cannot be undone": a raw egg (in its shell) and a hard-boiled egg cooked at home by an adult and cooled; a slice of bread and a slice of toast made before the lesson. Pictures are fine instead.
- Class chart with two columns: "Can be undone" and "Cannot be undone".

Steps

✎ Opening (5 minutes)

Take out the frozen tray. Compare the ice with the cup of water saved from yesterday. Ask: "What changed? How did it change?" (It got very cold in the freezer and turned solid.) Ask: "Can we turn it back into water?"

✎ Main activity (25 minutes)

1. **Ice back to water.** Put two of the new ice cubes on a plate in the warm spot from Lesson 3. They will melt during the lesson. Water became ice, and ice becomes water again.
2. **Chocolate.** Each group holds its sealed bag in the bowl of warm water for 3-5 minutes, keeping the top of the bag out of the water. Children watch the solid buttons go soft and runny. Ask: "Is it a solid or a liquid now?"
3. Groups lay the bags flat on a plate and squash the melted chocolate into a shape (a flat circle, a letter). The adult puts the plates in a cool place or fridge for 20-30 minutes, or until the next lesson.
4. **Cannot be undone.** While the chocolate sets, show the raw egg (crack it into a clear bowl so children see the runny inside) and the boiled egg (cut in half). Ask: "Could we turn the cooked egg back into a runny egg?" (No.) Do the same with bread and toast.

5. Check the chocolate: it is solid again, in its new shape. Fill in the class chart.

✓ Discussion questions (with example answers)

- **What made the chocolate melt?** The warm water warmed it up.
- **How did we make it solid again?** We let it cool down in a cool place or the fridge.
- **Can you un-cook an egg? Why not?** No. Cooking changed it into something new; cooling it down doesn't make it runny again.
- **Is melting ice something we can undo?** Yes - put the water in the freezer and it turns back into ice.

✓ Closing check (5 minutes, with answers)

Thumbs up for "can be undone", thumbs down for "cannot be undone":

1. Water freezing into ice - can be undone.
2. Baking a cake - cannot be undone.
3. Butter melting in a warm room - can be undone (it goes solid in the fridge).
4. Burning a piece of paper - cannot be undone (adult-only; do not demonstrate).
5. An ice lolly melting - can be undone (refreeze it, though it may look different).

Vocabulary

freeze, melt, set, cool down, warm up, can be undone, cannot be undone

Differentiation

- **Extra support:** use only ice and chocolate; ask "solid or liquid now?" at each step.
- **Extra challenge:** "When the chocolate set again, was it exactly the same as before?" (It is a solid again, but its shape is different and it may look dull or streaky.) Is it still "undone"?

⚠ Safety

- Food allergies: check every child before using chocolate, eggs, bread or butter. Follow your school's food policy.
- No eating in this lesson. Chocolate that has been handled in class is not for eating, even after it sets.
- Raw egg: adult cracks it; wash hands and surfaces after; children don't touch raw egg (Salmonella risk).
- Warm water only, filled by an adult from the warm tap. No kettles, hot plates or candles in the classroom. If the water feels hot, add cold.
- Freezer-cold ice: let it sit a minute before touching (cold burns).
- Zip bags: check seals before dipping; wipe drips at once (slip risk).
- Toast: make it before the lesson; no toaster within children's reach.

Teacher notes and common misconceptions

- In everyday speech "melting" is sometimes used for dissolving (sugar "melting" in tea). Keep "melting" for a solid turning into a liquid because it was warmed. Dissolving comes later (grade 5 in the science progression).
- Children may think the fridge "makes" the chocolate solid. A good way to say it: the fridge takes warmth away, so the chocolate cools down and sets.
- Do not use the words "reversible" or "irreversible" unless children are ready; "can be undone" is enough here.

Lesson 5: Ice cube rescue

Back to the unit

Goal

Children choose a covering they think will keep an ice cube solid for longest, test it against an uncovered cube, and compare results. They learn that some coverings slow melting by keeping warmth out. The lesson ends with the end-of-unit check.

Materials

- Ice cubes made the day before in the same tray, so they are the same size (one per group, plus one for the uncovered "control" cup and spares).
- Identical small plastic cups, one per group plus one.
- Coverings (one per group; groups can choose): kitchen foil, a sheet of paper, a woollen sock or piece of wool cloth, bubble wrap, cotton wool, a paper towel.
- Elastic bands or tape to hold coverings in place.
- A warm spot (as in Lesson 3), a timer, a class results chart.
- A copy of the end-of-unit check per child (or read aloud).

Steps

✎ Opening (5 minutes)

Tell the story: "Polar Bear Class has an ice cube, and they want it to last until lunchtime. Can we help them?" Ask what children might wrap it in. Show the coverings.

✎ Main activity (30-40 minutes, including the check while waiting)

1. Each group chooses one covering and predicts: will their cube melt faster or slower than a cube with no covering? Record the prediction on the class chart.
2. An adult puts one ice cube in each cup. Groups wrap their cup quickly with their covering, covering the top and sides. One cup stays uncovered (the control) so everyone can compare.
3. All cups go side by side in the same warm spot at the same time. Ask: "Why do they all go in the same place?" (To keep it fair - only the covering is different.)
4. While waiting, children do the end-of-unit check (below).
5. After about 30 minutes (or when the uncovered cube is mostly water), an adult unwraps each cup and the class looks. Rank the cups from "most ice left" to "least ice left" on the chart.

✓ Discussion questions (with example answers)

- **Which covering kept the most ice?** Often wool, cotton wool or bubble wrap. Results vary; say what your class found.

- **Did any covering make it melt faster than no covering?** Sometimes thin or dark coverings in strong sun do. That is a real result too.
- **Why do you think the woolly sock helped?** It keeps the warmth from the room out, so the ice warms up more slowly.
- **But we wear woolly socks to keep warm! How can wool keep ice cold?** Wool slows warmth moving through it either way: it keeps our warmth in, and it keeps the room's warmth away from the ice.

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

Read each question aloud. Children answer by circling a picture, writing a word or drawing. Two marks each; one mark for a partly right answer. There is no pass mark: use the results to plan what to revisit.

1. Circle the two liquids: a stone, milk, a pencil, juice. **Answer:** milk, juice (1 mark each).
2. Water is poured from a tall glass into a wide bowl. What happens to its shape? **Answer:** it changes to the shape of the bowl (1) and stays flat on top (1).
3. Sand can be poured. Is sand a solid or a liquid? Why? **Answer:** solid (1) because each grain is a tiny solid that keeps its own shape (1). "It makes a heap" on its own is a good observation but not the reason; ask "what about each grain?" before giving the second mark.
4. Honey pours very slowly. Is it a solid or a liquid? **Answer:** liquid (1) because it flows and goes flat, just slowly (1).
5. Sam puts one ice cube on a sunny windowsill and one in a shady corner. Which melts first? **Answer:** the one on the sunny windowsill (2).
6. In question 5, what must Sam keep the same to make it fair? Name two things. **Answer:** any two of: the size of the ice cube, the kind of plate, the start time (1 each).
7. Can we undo melting ice? How? **Answer:** yes (1); put the water in the freezer / make it very cold (1).
8. Draw or name one change that cannot be undone. **Answer:** any of: cooking an egg, baking a cake, toasting bread, burning paper (2).

Vocabulary

covering, wrap, control, fair test, keep warmth out, melt, solid, liquid

Differentiation

- **Extra support:** give a choice of just two coverings (wool and foil); answer the check orally with an adult.
- **Extra challenge:** "Plan a second test to check whether foil works better shiny side out or shiny side in. What would you keep the same?"

⚠ Safety

- Freezer-cold ice: an adult places cubes in cups; let them sit a minute before anyone touches them.
- Ice is not for eating (choking; not clean).
- Never put cups on or against heaters or lamps.

- Wipe up meltwater at once (slip risk).
- Bubble wrap and plastic: keep away from faces; not for popping near ears or putting over heads.
- Wool and cotton wool: check for wool allergies; offer a different covering if needed.

Teacher notes and common misconceptions

- Many children (and adults) believe a woolly covering "makes heat", so they predict the ice in the sock will melt fastest. This test is a good way to challenge that: coverings slow warmth moving, they do not make warmth.
- Foil results can surprise: shiny foil reflects sunlight, so in strong sun it may do well; in a shady room it may do about the same as paper.
- If time allows, repeat the test another day. Getting the same pattern twice makes a result more trustworthy.

Grade 2 Science: Land and Water, Fast and Slow (5 lessons, about 3 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 every safety note against your school's rules.
>
> Text-checked by two other agents (Gemini 4 Carbon and Claude Haiku 5.5); see Known gaps.

Back to the grade 2 year plan - Term 2. Builds on grade 2 term 1: Solids, liquids and melting ice, grade 1 society: Maps with a key, and land and water on a globe and the science progression

Big idea

Water is found in oceans, rivers, lakes and ponds, and it can be liquid water or solid ice. We can make a model or a map to show the shapes and kinds of land and water in a place. Moving water and wind can carry soil, sand and rock from one place and drop them somewhere else, so they change the shape of the land. Some changes to the land happen very quickly; others happen so slowly that nobody could watch them happen. People design different ways to slow down water and wind, and comparing the designs helps us choose.

This is the second science unit of grade 2 (term 2). It uses solid and liquid from the term 1 unit Solids, liquids and melting ice, and maps with a key and land and water on a globe from the grade 1 society unit Maps with a key, and land and water on a globe.

Outcomes

By the end of the unit most children can:

1. Name at least three places where water is found (ocean, river, lake, pond) and say that water can be liquid or solid ice. Use a heading, a contents page or a glossary in an information book (read aloud by an adult) to find one fact.
2. Build a model of a made-up place with a hill, flat land, a river and a pond, and draw or place a map of it from above with a key.
3. Say, after watching, that moving water and wind can carry sand or soil from one place and drop it in another, and point to where it went.
4. Sort Earth events into "fast" and "slow", and give evidence from at least two sources (for example a book page and our sand model).
5. Compare at least two ways of protecting a sand hill from poured water, keeping the water the same, and say which worked better and how they know.
6. Name one way people protect real land from water or wind (for example a row of trees, plants on a slope, or a bank beside a river) and say what it protects.

Prior knowledge

- Grade 2 science term 1: solid keeps its shape, liquid flows; ice melts and water freezes.
- Grade 1 society term 3: a map shows a place from above; a key explains the symbols; on a globe, blue shows water and other colours show land.

- Kindergarten and grade 1 science: "I think... / I saw..." talk, and fair tests where only one thing changes.
- No reading is needed. The information book in lesson 1 and the source cards in lesson 4 are read aloud by an adult; every page has a picture.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week. Lesson 5 can use the grass tray only if it was sown about two weeks earlier (see Materials).

1. Where is water found?: the class information book "Water in Little Hill and far away"; contents, headings and a glossary; sorting water picture cards by place and by solid or liquid.
2. A model of Little Hill: building a hill, flat land, a river and a pond in a sand tray, then a map of the model from above with a key.
3. Water and wind move sand: pouring water on a sand hill and watching where the sand goes; an adult-only wind demonstration inside a closed clear box.
4. Fast or slow?: source cards about real changes to land (a canyon carved by a river, a rockfall, sand dunes, a glacier, an earthquake, a volcano); sorting events by fast or slow with evidence from more than one source.
5. Protect the hill: comparing ways to protect a sand hill (stones, a stick fence, a cloth, grass) with the same water poured the same way; real solutions people use; the end-of-unit check.

Materials (whole class unless noted)

- **Sand trays (lessons 2, 3 and 5):** one shallow plastic tray per group of 4-5 (a cat-litter tray or seed tray, about 30 by 40 cm), each standing in a larger tray or on a towel to catch water. Washed play sand (sold for sandpits), enough to fill each tray about 5 cm deep, kept damp. A jug of water and a small cup per group.
- **Watering cans:** one small watering can with a rose (the sprinkler head) per group, all the same size, or one shared can used by the adult.
- Small blue paper or plastic sheets (or blue playdough) for a pond, a strip of blue cling film or blue paper for a river, small sticks or lolly sticks, small stones or gravel, scraps of green cloth, paper flags for labels.
- **Lesson 1:** the class information book "Water in Little Hill and far away" (made by the teacher from the page plan in Lesson 1); twelve water picture cards (listed in Lesson 1); a globe; four place mats ("ocean", "river", "lake or pond", "on a mountain") and two mats ("liquid water", "solid ice"); a few ice cubes in a clear cup.
- **Lesson 2:** the large Little Hill map from grade 1 society, if you have it; A3 paper and crayons for each group's map; key symbol cards (hill, flat land, river, pond, trees, path).
- **Lesson 3:** the sand trays; a measuring cup (all groups use the same amount of water); one clear plastic storage box with a clip-on lid (about 40 by 30 cm) with one small hole cut in one end by an adult; a hand balloon pump or a hand-squeezed bellows (adult only); safety goggles for the adult; a cup of dry play sand for the box; paper and crayons for "before" and "after" drawings of each hill (or a camera used by the adult).
- **Lesson 4:** six source cards (listed in Lesson 4), each with a picture side and a short text side read aloud by the adult; two large sorting mats "fast" (with a hare) and "slow" (with a snail); the class information book; the groups' photos or drawings of their sand hills from lesson 3; sticky notes in two colours (or two shapes) for "a card or book says" and "our model showed".

- **Lesson 5:** per group, three identical shallow plates or small trays with a rim, a plastic "hill cup" for shaping hills, three identical clear cups for collecting sand and a small scoop; protections: small stones, lolly sticks to push in as a fence, and a square of old cotton cloth. For the whole class, one grass square on a plate (a piece of turf about 10 by 10 cm, or grass seed sown on damp sand mixed with compost in a small tray about two weeks before) and one plain sand hill beside it; a ruler or a stick to hold the watering can at the same height; the class results chart; three real-solution picture cards (a row of trees beside a field, grass and bushes on a steep bank, an earth bank beside a river).
- For blind or low-vision children: a raised-relief globe (or a globe with land and water in two textures) and a cup of water to touch; a raised-line or tactile copy of the Little Hill map from grade 1; tactile key symbols (a pebble for a hill, a piece of felt for flat land, a pipe cleaner for a river, a smooth plastic lid for a pond); real objects for each source card where possible (a stone, a handful of sand, an ice cube in a cup); the sand hills themselves to feel before and after.
- Towels, a mop or cloths, a bucket for used sand, hand-washing sinks.

⚠ Safety and access

- **Sand.** Use only washed play sand sold for children. Keep it damp so it does not make dust. No throwing sand; hands below shoulder height; wash hands after every sand lesson. If sand gets in an eye, do not rub; follow your school's first-aid rules.
- **Water and floors.** Stand trays in larger trays or on towels; mop spills at once, because wet floors are slippery.
- **Wind demonstration (lesson 3).** Adult only. The sand stays inside a closed clear box with the lid clipped on; the adult wears safety goggles and pumps air through the one small hole. Children watch from at least an arm's length away through the side of the box. Do not use a hair dryer or an electric fan near water.
- **Turf and grass.** Some children have grass or soil allergies; check first, use gloves, or let the adult handle the turf. Wash hands afterwards.
- **No balloons** (latex allergy and choking); use a hand balloon pump or a bellows without a balloon. Small stones must be too large to swallow; check your school's rules for the age group.
- **Frightening events.** Earthquakes, volcanoes, floods and landslides can hurt people and destroy homes. Some children or their families may have lived through one, or may have seen one on the news. Never ask whether a child has. Use calm pictures of land (not of injured people or damaged homes), say that grown-ups work hard to keep people safe, and let any child sit out of lesson 4's "fast" cards or do a different card. If a child becomes upset, follow your school's care routines.
- **Real water outside.** This unit never visits a real river, lake, pond or beach. If your school plans a trip, follow its own safety rules.
- 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 while it is described, and face the class when reading aloud. Blind and low-vision children: use the tactile map, tactile symbols and real objects in Materials; describe each picture in words, and let them feel the sand hills before and after (after the water has stopped). Colour is never the only clue: water is also shown with a smooth texture and named in words.
- Wheelchair users: put sand trays on a table at a reachable height; a partner can pour while the child directs.

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 cards and a small sand tray (answers in brackets):

1. Show four water picture cards (sea with waves, a river, a pond, an icy mountain top). "Where is the water in each one? Is it liquid or solid?" (Ocean or sea, river, pond, ice on a mountain; liquid, liquid, liquid, solid.) Hold up the class information book open at its glossary: "This page tells us what words mean. What is it called?" (The glossary; "word list" is fine.) (Outcome 1.)
2. Show the child a group map from lesson 2. "Point to the hill. The pond. The river. How do you know?" (Points correctly; uses the key.) (Outcome 2.)
3. Make a small damp sand hill and pour a little water on it (or show the group's lesson 3 drawing). "Where did the sand go? What moved it?" (Down the hill, to the bottom or into the tray; the water.) "What else can move sand?" (Wind.) (Outcome 3.)
4. Show two source cards: the canyon and the rockfall. "Which happened fast and which slowly? How do you know?" (Rockfall fast; canyon slowly; any evidence from the card, the book or our model, such as "the river took a very, very long time".) "Tell me a second place that helps you know." (Another source: the model, a picture, what the adult read.) (Outcome 4.)
5. "In our test, which protection kept the most sand on the hill? How do you know? What did we keep the same?" (The group's own result; less sand in the cup or the hill kept its shape; same water, same can, same height.) (Outcome 5.)
6. "Tell me one way people stop wind or water from carrying land away." (A row of trees or bushes, grass or plants on a slope, a bank or wall beside a river or the sea; and what it protects: a field, a slope, a town.) (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

Standards (read on 11 November 2026):

- Next Generation Science Standards, 2-ESS2 Earth's Systems:
  - 2-ESS2-1: "Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land." Clarification: "Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land."
  - 2-ESS2-2: "Develop a model to represent the shapes and kinds of land and bodies of water in an area." (The assessment boundary leaves out quantitative scaling in models.)
  - 2-ESS2-3: "Obtain information to identify where water is found on Earth and that it can be solid or liquid."
  - Core ideas: "Wind and water can change the shape of the land." "Maps show where things are located. One can map the shapes and kinds of land and water in any area." "Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form." "Because there is always more than one possible solution to a problem, it is useful to compare and test designs."

- Next Generation Science Standards, 2-ESS1 Earth's Place in the Universe:
  - 2-ESS1-1: "Use information from several sources to provide evidence that Earth events can occur quickly or slowly." Clarification: "Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly." The assessment boundary leaves out quantitative timescales, so this unit never gives years for the slow changes.
  - Core idea: "Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe."

Background for the teacher (Wikipedia, read on 11 November 2026):

- Erosion: "Erosion is the action of surface processes (such as water flow or wind) that removes soil, rock, or dissolved material from one location on the Earth's crust and then transports it to another location where it is deposited." It also says that "physical erosion proceeds the fastest on steeply sloping surfaces" and that "some mass-wasting processes act very slowly; others occur very suddenly".
- Grand Canyon: "a steep-sided canyon carved by the Colorado River in Arizona, United States".
- Landslide: "Gravity is the primary driving force for a landslide"; landslides include rockfalls and mudflows.
- Windbreak: "a planting usually made up of one or more rows of trees or shrubs planted in such a manner as to provide shelter from the wind and to protect soil from erosion. They are commonly planted in hedgerows around the edges of fields on farms."
- Levee: "an elevated ridge alongside the banks of a river, often intended to protect against flooding of the area adjoining the river. Alternatively, it is called a dike (American English)".
- Dune: "a landform composed of wind- or water-driven sand".
- Glacier: "a persistent body of natural ice ... that is constantly moving under its own weight"; "It slowly flows".
- Earthquake: "the shaking of the Earth's surface resulting from a sudden release of energy".
- Volcano: "a vent or fissure in the crust ... that allows hot lava, volcanic ash, and gases to escape".
- Ocean: "the body of salt water that covers approximately 70.8% of Earth" (the class book in lesson 1 says "most of the Earth").
- Lake, Pond ("A pond is smaller than a lake and there are no official criteria distinguishing the two") and River.

Known gaps and cautions

- One other agent (Gemini 4 Carbon, at 3f69978) text-checked this unit on 2026-11-11 and reported no content errors, plus one broken link (an anchor link to the Assessment section), since fixed. That is a text check by an AI agent, not a teacher review or classroom test.
- A second agent (Claude Haiku 5.5, at 8741363) text-checked the README and all five lessons on 2026-11-11, in two passes, and reported no errors. It checked internal consistency, facts, safety and assessment, not the quoted sources. That is also a text check by an AI agent, not a teacher review.
- The lesson order, the Little Hill stories, the information book, the source cards, the sand-tray tests and the assessment items are the author's own choices, not taken from a source.
- The sand-tray tests are comparisons in one tray on one day, not proof. Damp sand, the slope and how hard the water is poured all change the results. The grass square is a different material from the sand hills (it has roots and soil), so that comparison is not perfectly fair; lesson 5 says so to the children.

- Timings are untested guesses. With a full class of about 25 seven-year-olds, sand and water trays take real classroom-management skill: setting up, waiting turns, spills and clean-up may not fit in 40 minutes. A teacher may want an extra adult, fewer trays shown as a demonstration, or a separate clean-up slot. (Raised by a human visitor in AI Village chat, 2026-11-11.)
- "Lake or pond" is one mat in lesson 1 because, as the Pond article says, there are no official criteria separating them.
- No years or numbers are given for slow changes, following the assessment boundary of 2-ESS1-1. Children hear "a very, very long time, longer than anyone could watch".
- Volcanoes and earthquakes are named only as fast events, with calm pictures. How they happen (plates, magma) is left for later grades in the science progression.
- Wind is shown only by an adult demonstration in a closed box, not by children, so outcome 3 for wind is about watching, not testing.
- Salt water and fresh water, the water cycle and evaporation are left out here; the term 1 unit leaves evaporation for grade 4.
- No images yet.

Lesson 1: Where is water found?

Unit overview - Next: A model of Little Hill

Back to the grade 2 year plan

Goal

Children find out where water is found on Earth (ocean, rivers, lakes, ponds, ice on mountains) from an information book read aloud, use its contents page, headings and glossary, and sort pictures of water by place and by solid or liquid.

Length

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

Materials

- The class information book "Water in Little Hill and far away" (page plan below), made by the teacher: one large picture and one or two sentences per page.
- Twelve water picture cards (list below), drawn by the teacher or printed from photos your school may use.
- Four place mats: "ocean", "river", "lake or pond", "on a mountain".
- Two state mats: "liquid water" and "solid ice".
- A globe.
- A few ice cubes in a clear cup.
- For blind or low-vision children: a raised-relief globe or a globe with land and water in two textures; real objects for liquid and solid (a cup of water to touch, an ice cube in a cup); each picture card described aloud.

Page plan for the information book (the author's own text)

- **Cover:** "Water in Little Hill and far away".
- **Contents** (page 1): The ocean ... 2; Rivers ... 3; Lakes and ponds ... 4; Ice ... 5; Glossary ... 6.
- **Page 2, heading "The ocean":** "Most of the Earth is covered by ocean. Ocean water is salty. On a globe, the ocean is blue."
- **Page 3, heading "Rivers":** "A river is water that flows across the land, downhill, to the sea or to a lake. The river in Little Hill flows under the bridge."
- **Page 4, heading "Lakes and ponds":** "A lake is water with land all around it. A pond is a small lake. Ducks swim on the pond in Little Hill."
- **Page 5, heading "Ice":** "When water is very cold it freezes into solid ice. In winter a pond can have ice on top. On high mountains there is ice and snow all year."
- **Page 6, heading "Glossary":** ocean - the very big salty water that covers most of the Earth; river - water that flows across land; lake - water with land all around it; pond - a small lake; ice - solid water; liquid - it flows and takes the shape of its container; solid - it keeps its own shape.

The twelve water picture cards (the author's descriptions)

1. Waves on a sandy beach.
2. A ship far out at sea, with no land in sight.
3. The Little Hill river flowing under the bridge.
4. A wide river with boats on it.
5. A lake with hills all around it.
6. The Little Hill pond with ducks.
7. A pond in winter with ice on top.
8. Snow and ice on a high mountain top.
9. A glacier: a long, wide river of ice between mountains.
10. An iceberg floating in the sea.
11. A small stream running between stones.
12. A pond in a park with a path around it.

Steps

✎ Opening (5 min)

1. Hold up the cup with ice cubes. "Is this solid or liquid? What will it be by the end of the lesson?" (Solid ice now; it will melt into liquid water.) Remind the class of term 1.
2. Spin the globe. "What do you think the blue shows?" (Water.) "Is there more blue or more of the other colours?" (More blue.) "Where else is water found? Let's find out from a book."

✎ Main activity (25 min)

1. **Using the book (10 min).** Show the cover and read the title. Open the contents page: "This page is called the contents. It tells us what is in the book and where." Ask: "I want to find out about ice. Which page?" A child points to "Ice ... 5"; turn to page 5 together. Show that each page has a heading in big letters. Read pages 2 to 5 aloud, pointing to each heading first.
2. **The glossary (3 min).** Turn to page 6: "This page is a glossary. It tells us what words mean." Ask a child to choose a word; read its meaning. Ask: "Where would we look to find what 'pond' means?" (The glossary.)
3. **Sorting by place (7 min).** Give each group three picture cards. Describe each card aloud. Groups place their cards on the four place mats. Author's suggested sorting (accept other answers with a good reason): ocean 1, 2, 10; river 3, 4, 11; lake or pond 5, 6, 7, 12; on a mountain 8, 9. Card 9 can also go on "river" if a child says "it is a river of ice"; that is a good reason.
4. **Solid or liquid? (5 min).** Groups take back their cards and place them on "liquid water" or "solid ice". Cards 7 and 10 have both: ice on top and liquid water around it. Let groups put them between the mats and say why.

✓ Discussion questions (5 min, with answers)

1. "Name three places where we find water." (Any three: ocean, river, lake, pond, on a mountain, a stream, ice.)

2. "Where is the most water on Earth?" (The ocean; the book says most of the Earth is covered by ocean, and the globe is mostly blue.)
3. "Can water be solid?" (Yes, ice. Ice on mountains, on a pond in winter, icebergs.)
4. "How did we find out about ice quickly?" (We used the contents page and the heading.)

✓ Closing check (5 min, with answers)

Each child is given one picture card (or holds a real object). They say, sign or point: "Where is this water?" and "Is it liquid or solid?" (Any correct place from the sorting above; liquid or solid as sorted; "both" for cards 7 and 10.) Then point to the glossary page when asked "Which page tells us what words mean?"

Vocabulary

ocean, river, lake, pond, stream, ice, glacier, solid, liquid, contents, heading, glossary

Differentiation

- Support: sort only cards 2, 3, 6 and 8, with one clue each ("no land in sight", "under the bridge", "ducks", "high mountain").
- Extension: add a new page to the class book (draw a place with water and dictate a sentence and a heading); add one word to the glossary.
- Children can place cards by pointing, signing or AAC, or ask a partner to move them. Mats can go on a table for a wheelchair user.

⚠ Safety

- Ice cubes stay in the cup; children touch them for a few seconds only.
- Do not ask about children's holidays by the sea, swimming, or trips. Talk only about the pictures and Little Hill.

Teacher notes and misconceptions

- Children may think all water is the same. The book says ocean water is salty; leave salt and fresh water for later grades.
- Some children think a pond and a lake are different kinds of water. They are only different sizes, and even scientists do not agree on where one stops and the other begins, so the mat says "lake or pond".
- A glacier looks still in a photo but moves very slowly; this comes back in lesson 4.

Lesson 2: A model of Little Hill

Unit overview - Previous: Where is water found? - Next: Water and wind move sand

Back to the grade 2 year plan

Goal

Children build a model of a made-up place with a hill, flat land, a river and a pond in a sand tray, then make a map of the model from above with a key.

Length

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

Materials

- One sand tray per group of 4-5, standing in a larger tray or on a towel, with damp washed play sand about 5 cm deep.
- Small blue paper or plastic sheets (or blue playdough) for the pond; a strip of blue paper or blue cling film for the river; small sticks for trees; small stones; paper flags for labels.
- The large Little Hill map from grade 1 society, if you have it.
- A3 paper and crayons for each group's map.
- Key symbol cards: hill, flat land, river, pond, trees, path.
- For blind or low-vision children: the tactile Little Hill map from grade 1 (or a raised-line copy) and tactile key symbols (a pebble for a hill, a piece of felt for flat land, a pipe cleaner for a river, a smooth plastic lid for a pond). They can feel the sand model and place tactile symbols on a board to make their map.

Steps

✎ Opening (5 min)

1. Show the Little Hill map (or describe it). "Who remembers this? It is Little Hill from above, like a bird flying over it. What does the key tell us?" (What the symbols mean.)
2. "A map is flat. Today we will build Little Hill so it is not flat: a real hill you can touch, a river and a pond. Scientists and map-makers call this a model: a small copy that helps us think about something big."

✎ Main activity (25 min)

1. **Plan (3 min).** Each group agrees where the hill, the flat land, the river and the pond will go. The river must start near the hill and run downhill to the pond or to the edge of the tray ("the sea").
2. **Build (12 min).** Groups push damp sand into a hill (about as high as a hand is wide), smooth flat land, press a channel for the river and lay the blue strip in it, press a hollow for the pond and lay the blue sheet in it. Add sticks for trees and stones for a path if there is time. Each group puts a paper flag on each feature: hill, flat land, river, pond.

3. **Look from above (2 min).** Everyone who can stands and looks straight down; a seated child can look from a chair placed beside the tray. "What does the hill look like from above?" (A round shape, a blob.) "How can a map show it is high?" (A symbol, a colour, a word; accept any idea.)
4. **Draw the map (8 min).** Each group draws its model from above on A3 paper, with a symbol for each feature and a key in the corner using the key symbol cards as a guide. Blind and low-vision children place tactile symbols on a board to match the model.

Keep the sand trays (damp, covered with a cloth) for lesson 3.

✓ Discussion questions (5 min, with answers)

1. "What is the difference between our model and our map?" (The model is bumpy and you can touch the hill; the map is flat and seen from above.)
2. "Why does a map need a key?" (So people know what each symbol means.)
3. "Which way will the river flow?" (Downhill, from near the hill to the pond or the sea.)
4. "Is our model the same size as a real town?" (No, it is much smaller. It is a model.)

✓ Closing check (5 min, with answers)

Each group swaps maps with another group. A child from the visiting group uses the key to point to the hill, the river and the pond on the other group's map, then finds the same three things on that group's sand model. (Points correctly; any matching is fine as long as it uses the key.)

Vocabulary

model, map, key, symbol, hill, flat land, river, pond, from above, downhill

Differentiation

- Support: the adult builds the hill; the child presses the river and the pond and places flags. Maps can use stickers instead of drawn symbols.
- Extension: add a lake, an island (land with water all around it) or a valley between two hills, and add them to the key.
- A partner can build while a child directs by pointing, signing or AAC. Put the tray on a table at a reachable height for a wheelchair user.

⚠ Safety

- Washed play sand only, kept damp. No throwing; hands below shoulder height. Wash hands after the lesson.
- Small stones must be too large to swallow (check your school's rules).
- Mop any spilled water at once.

Teacher notes and misconceptions

- Children may think a map shows everything. A map shows only what the map-maker chose and put in the key.
- Some children may draw the hill from the side (a triangle). That is a useful moment: "Is that how a bird sees it?" Accept both and talk about it.
- There is no right size for the model. The standard leaves out measuring to scale at this age.

Lesson 3: Water and wind move sand

Unit overview - Previous: A model of Little Hill - Next: Fast or slow?

Back to the grade 2 year plan

Goal

Children watch water poured on their sand hill carry sand downhill and drop it at the bottom, and watch an adult show wind moving dry sand inside a closed box. They say that moving water and wind can change the shape of the land.

Length

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

Materials

- The groups' sand trays from lesson 2 (damp, each in a larger tray or on a towel). Take out the paper river and pond first.
- One small watering can with a rose per group (all the same), and one measuring cup so every group uses the same amount of water.
- Paper and crayons for "before" and "after" drawings (or a camera used by the adult).
- For the wind demonstration (adult only): one clear plastic storage box with a clip-on lid, with one small hole cut in one end; a cup of dry play sand heaped into a small hill in the box; a hand balloon pump or a hand-squeezed bellows (no balloon); safety goggles for the adult.
- Towels, a mop, hand-washing sinks.
- For blind or low-vision children: the sand hill to feel before and after (after the water has stopped), and a cup to feel the sand collected at the bottom.

Steps

✎ Opening (5 min)

1. Look at the models. "Last time we built Little Hill. What do you think will happen to our hill when it rains hard?" Take predictions and write them down ("It will get wet", "It will fall down", "Nothing").
2. Groups draw (or the adult photographs) their hill "before".

✎ Main activity (25 min)

1. **Rain on the hill (12 min).** Each group fills the watering can with one measuring cup of water. One child holds the can at the top of the hill, about a hand's height above it, and pours slowly through the rose; then the next child pours a second cupful. Everyone watches the side of the hill and the flat land at the bottom.

2. Ask while they watch: "Where is the water going?" (Down the hill.) "Is it carrying anything?" (Sand.) "Where is the sand stopping?" (At the bottom, on the flat land, in the river or the pond hollow.)
3. **After (3 min).** Groups draw the hill "after" (or the adult photographs it). They point to two things: a place where sand was taken away (often a small channel, or gully, down the side) and a place where sand was dropped (a fan of sand at the bottom).
4. **Wind (adult demonstration, 7 min).** Children watch from at least an arm's length away through the side of the clear box. The adult, wearing goggles, checks the lid is clipped on, then pumps air through the hole towards the small dry sand hill, gently at first and then harder. "What is the moving air doing to the sand?" (Pushing it, blowing it to the other end of the box, making the hill lower or a new shape.) Leave the lid on until the sand has settled.
5. **New word (3 min).** "When water or wind carries soil, sand or rock from one place and drops it in another, scientists call that **erosion**." Write it on the word wall with two arrows: "taken away" and "dropped".

Keep the trays for lesson 5 (smooth the sand and rebuild later).

✓ Discussion questions (5 min, with answers)

1. "Was your prediction right?" (Children compare; any honest answer.)
2. "Where did the sand go?" (Down the hill to the bottom, the flat land, the river or the pond hollow.)
3. "What moved it?" (The water. In the box, the moving air: the wind.)
4. "Where in real life might water carry sand or soil away?" (A hillside in the rain, a riverbank, a beach with waves; accept any sensible idea.)

✓ Closing check (5 min, with answers)

Show the "before" and "after" drawings (or photos) of one group's hill. Each child points to (or describes) one place where sand was taken away and one place where it was dropped, and names what moved it. (Taken away from the side or top of the hill; dropped at the bottom; the water.)

Vocabulary

erosion, carry, drop, gully, downhill, wind, predict, before, after

Differentiation

- Support: the adult pours while the child watches one spot (the bottom of the hill) and says "sand is coming" or "no sand".
- Extension: pour a third cupful from higher up, or on a steeper side of the hill, and say what changed. (Usually more sand moves on the steep side.)
- A partner can pour while a child directs. Children who cannot see the water flow feel the hill before and after, and feel the sand that collected at the bottom.

⚠ Safety

- Wind demonstration: adult only, lid clipped on, adult wears goggles, children at least an arm's length away. Never a hair dryer or an electric fan near water. No balloons.
- Keep the sand damp; no throwing; wash hands afterwards.
- Mop spills at once; wet floors are slippery.

Teacher notes and misconceptions

- Children may think the water "made" new sand. The sand at the bottom is the same sand from the hill: it was carried and dropped.
- Children may think only big floods move land. Even gentle rain moves a little; more water or a steeper slope usually moves more.
- The Erosion article on Wikipedia says physical erosion "proceeds the fastest on steeply sloping surfaces"; the extension activity lets children notice this without being told first.

Lesson 4: Fast or slow?

Unit overview - Previous: Water and wind move sand - Next: Protect the hill

Back to the grade 2 year plan

Goal

Children use information from several sources (source cards read aloud, the class book, and their own sand model) to sort changes to the land into "fast" and "slow", and give evidence from at least two sources.

Length

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

Materials

- Six source cards (below). Each has a calm picture on one side (land only: no injured people and no damaged homes) and the text on the other side, read aloud by the adult.
- Two large sorting mats: "fast" (a picture of a hare) and "slow" (a picture of a snail).
- The groups' "before" and "after" drawings or photos from lesson 3.
- The class information book from lesson 1 (page 5, "Ice").
- Sticky notes in two colours or two shapes: one for "a card or book says", one for "our model showed".
- For blind or low-vision children: real objects to hold for some cards (a stone for the canyon and the rockfall, a handful of dry sand in a tub for the dunes, an ice cube in a cup for the glacier); tactile mats (a smooth card for "fast", a ridged card for "slow"); each picture described aloud.

The six source cards (the author's own text, based on the Wikipedia

articles listed in the unit's Sources)

- **A. The canyon.** Picture: the Grand Canyon, a very deep valley with a river at the bottom. Text: "This is the Grand Canyon in Arizona, in the United States. A river, the Colorado River, carved it, a little at a time, over a very, very long time, longer than anyone could watch."
- **B. The rockfall.** Picture: rocks lying at the bottom of a cliff beside an empty mountain road. Text: "Rocks broke off a cliff and fell down the slope in a few seconds. A rockfall is one kind of landslide."
- **C. The sand dunes.** Picture: sand hills in a desert, with ripples on them. Text: "Wind blows sand into hills called dunes. The wind moves a little sand at a time, and a dune changes its shape slowly."
- **D. The glacier.** Picture: a glacier between two mountains. Text: "A glacier is a huge river of ice. It moves downhill, but so slowly that you cannot see it move."
- **E. The earthquake.** Picture: a long crack across an empty field. Text: "In an earthquake the ground shakes. It happens suddenly. Grown-ups who study earthquakes work hard to help people stay safe."
- **F. The volcano.** Picture: a mountain far away with a cloud of ash above it. Text: "A volcano is an opening in the ground where very hot melted rock, ash and gas come out. When a

volcano erupts, it can change the land very quickly. Grown-ups who study volcanoes watch them closely to help people stay safe."

Steps

✎ Opening (5 min)

1. Before the lesson, tell any child who might find earthquakes or volcanoes upsetting (or whose family has told you so) that they can choose cards A to D only, or help with the mats instead. Never ask a child in front of the class.
2. Show the lesson 3 drawings. "How long did it take the water to move our sand?" (A few minutes; while we watched.) "So was that fast or slow?" (Fast.) "Today we will find out about real changes to land. Some are fast and some are so slow that nobody can watch them happen."

✎ Main activity (25 min)

1. **Read the cards (10 min).** Show each card's picture, then read its text aloud. After each one ask: "Fast or slow? What words told you?" Write the clue words on the board: "a few seconds", "suddenly", "very quickly" (fast); "a little at a time", "a very, very long time", "so slowly that you cannot see it move" (slow).
2. **Sort with evidence (10 min).** Each group gets two cards (children who chose to skip cards E and F get two of A to D). Groups place each card on "fast" or "slow" and stick on a note for each piece of evidence:
    - "A card or book says..." note: the clue words on the card, or page 5 of the class book ("ice ... on high mountains all year").
    - "Our model showed..." note: for example "our water moved sand down the hill" (for the canyon or the rockfall). Each card needs evidence from at least two sources (the card plus the book, the model, or another card).
3. **Expected sorting (5 min).** Check together. Fast: B (rockfall), E (earthquake), F (volcano). Slow: A (canyon), C (dunes), D (glacier). Accept "both" for C if a child says "a big storm could move a lot of sand quickly"; that is a good reason.

✓ Discussion questions (5 min, with answers)

1. "Our water moved sand in a few minutes. Why did the river take so long to make the canyon?" (Rock is much harder than sand; the river wears it away a little at a time.)
2. "Which changes could you watch with your own eyes?" (Fast ones: a rockfall, our sand model. Not the canyon or the glacier.)
3. "How do we know about slow changes if nobody can watch them?" (People study the land and write books and make pictures; we can read and look at more than one source.)
4. "Why is it good to use more than one source?" (If two sources say the same, we can be more sure.)

✓ Closing check (5 min, with answers)

Hold up a card the child has not sorted (or describe it). The child says, signs or points "fast" or "slow" and names two places that helped them know. (As in the expected sorting; any two real sources: the card, the class book, the model, a picture.)

Vocabulary

fast, slow, sudden, canyon, rockfall, landslide, dune, glacier, earthquake, volcano, evidence, source

Differentiation

- Support: sort only B and D (rockfall and glacier) with the clue words underlined and read twice.
- Extension: put the six cards in a line from fastest to slowest and give a reason for one pair.
- Children can sort by pointing, signing or AAC, or ask a partner to place the card. Mats can go on a table for a wheelchair user.

⚠ Safety

- Use calm pictures of land only. Never show injured people, damaged homes or news footage. Never ask whether a child has been in an earthquake, a flood, a landslide or near a volcano.
- Any child can skip cards E and F with no reason given. If a child becomes upset or shares a worrying story, follow your school's care routines.
- Stones used as objects must be too large to swallow.

Teacher notes and misconceptions

- Children may think the canyon was made by one big flood. Wikipedia says the canyon was "carved by the Colorado River"; the unit says "a little at a time, over a very, very long time". The standard leaves out numbers of years at this age, and the canyon's age is still discussed by scientists, so give no number.
- Children may think "slow" means "not happening". The glacier and the dune are moving all the time, just too slowly to see.
- Volcanoes and earthquakes are named here only as fast events. How they happen is left for later grades.

Lesson 5: Protect the hill

Unit overview - Previous: Fast or slow?

Back to the grade 2 year plan

Goal

Children compare ways of protecting a sand hill from poured water, keeping the water the same for every hill, and say which worked better and how they know. They match their designs to real ways people protect land from water and wind.

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

- Per group: three identical shallow plates or small trays with a rim, one plastic cup for shaping hills (the "hill cup"), damp washed play sand, three identical clear cups for collecting sand, a small scoop or spoon.
- Per group: protections to choose from: small stones, lolly sticks (to push in as a fence), a square of old cotton cloth.
- For the whole class: one grass square on a plate (a piece of turf about 10 by 10 cm, or grass seed sown about two weeks earlier on damp sand mixed with compost in a small tray), and one plain sand hill beside it for comparison.
- One small watering can with a rose per group (all the same), one measuring cup, and a ruler or stick to hold the can at the same height every time.
- The class results chart (columns: hill, protection, kept its shape?, sand in the cup: a little, some or a lot).
- Three real-solution picture cards (author's descriptions): a row of trees planted along the edge of a field; grass and bushes growing on a steep bank; a long, high earth bank beside a river.
- Towels, a mop, a bucket for used sand, hand-washing sinks.
- For blind or low-vision children: hills to feel before and after (after the water has stopped); the collecting cups to feel how full they are; each picture card described aloud; real objects (a stick, a stone, the cloth, a piece of grass).

Steps

✎ Opening (5 min)

1. "In lesson 3 the water carried sand off our hill. People who live on hills and by rivers have the same problem. Today we are engineers: we will design ways to protect a hill and compare them."

2. "To compare fairly, what must be the same for every hill?" Agree together: same hill (made with the same hill cup), same sand, same water (one measuring cup), same watering can, poured from the same height. "Only the protection changes."

✎ Main activity (25 min)

1. **Make three hills (5 min).** Each group fills the hill cup with damp sand, presses it down, and turns it out onto each plate like a sandcastle: three hills the same size.
2. **Choose and add protections (5 min).** One hill gets **no protection**, so we can compare. The group chooses two protections for the other two hills: stones laid on the slope, a stick fence pushed in around the bottom or across the slope, or the cloth laid over the hill. (Across the class, try to test each one.)
3. **Pour (7 min).** For each hill in turn: one measuring cup of water in the can; the can held at the top of the ruler standing beside the hill; pour slowly through the rose until the can is empty. Everyone watches.
4. **Collect and compare (5 min).** For each hill, scoop the loose sand that washed onto the plate into a clear cup and line the three cups up. Look at each hill: did it keep its shape? Fill in the class results chart with "a little", "some" or "a lot".
5. **The grass square (3 min, adult).** The adult pours one measuring cup the same way onto the grass square and onto the plain sand hill beside it. "What did the roots do?" (Held the soil; less washed away.) Say honestly: "This one is not a perfectly fair test, because the grass square is soil and roots, not our sand. But it gives us a clue."

✓ Discussion questions (5 min, with answers)

1. "Which protection kept the most sand on the hill? How do you know?" (Each group's own result. Evidence: less sand in the cup, the hill kept its shape.)
2. "Why did we keep one hill with no protection?" (To compare; to see if the protection made any difference.)
3. "Did every group get the same result?" (Maybe not. Different groups may have poured differently, or built the fence differently. That is why engineers test more than once.)
4. Show the three real-solution cards. "Which of our designs is most like each one?" (Row of trees: a bit like the stick fence; it slows the wind across a field. Grass and bushes on a bank: like the grass square; roots hold the soil. Earth bank beside a river: like a wall or fence; it holds back the water when the river is high. Accept other good matches.)

✓ Closing check (5 min, with answers)

Each child answers one of these, by saying, signing, pointing or drawing:

- "Which protection worked better in your group, and how do you know?" (Their result, with evidence from the cups or the hill shape.)
- "What did we keep the same?" (The water, the can, the height, the hill size.)
- Pointing to a real-solution card: "What does this protect?" (The field from wind; the bank or slope from rain; the land beside the river from flooding.)

Then begin the one-to-one assessment (see Assessment in the unit overview).

Vocabulary

protect, design, engineer, compare, fair, the same, windbreak, bank, roots, result

Differentiation

- Support: compare only two hills (no protection and stones); the child says "more sand" or "less sand" for each cup.
- Extension: design a new protection from the materials (for example stones and sticks together), test it the same way, and say whether it beat the others.
- A partner can pour while a child directs. Children who cannot see the water flow feel each hill before and after, and compare how full the cups are.

⚠ Safety

- Washed play sand only, kept damp; no throwing; wash hands afterwards.
- Check for grass and soil allergies before the grass square; the adult handles it and children can wear gloves. Wash hands afterwards.
- Lolly sticks are pushed in, not thrown; stones must be too large to swallow.
- Mop spills at once; wet floors are slippery.

Teacher notes and misconceptions

- Children may say "the cloth worked best, so it is the best for real hills". A cloth over a real hill would stop plants growing. The test tells us which worked best on our sand hill, today; real engineers think about more than one thing.
- Results will vary between groups. That is expected and is a good reason to compare and test designs more than once.
- The Windbreak article on Wikipedia describes rows of trees or shrubs that "provide shelter from the wind and to protect soil from erosion", and the Levee article describes a bank beside a river (a dike in American English) that is "often intended to protect against flooding".

Grade 2 Science: Habitats, Seeds and Helpers (5 lessons, about 3 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 every safety note against your school's rules.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 3. Builds on grade 1 science: What do plants need?, grade 2 science term 2: Land and water, fast and slow, grade 2 language and literacy term 3: Writing for a reason and the science progression

Big idea

A habitat is a place where living things find what they need. Different places near school, and different places around the world, have different kinds of living things, and some places have many more kinds than others. Plants need light and water to grow well, and we can find this out with a test where we change only one thing. Plants cannot walk, so many of them get help from animals: some seeds have hooks that catch on fur, some seeds are inside fruit that animals eat, and bees and other animals carry pollen from flower to flower. We can build models that work like these animal helpers.

This is the third science unit of grade 2 (term 3). In grade 1 the class tested four bean pots; here the children help plan the test themselves, with three pots for each choice, and say what they keep the same. The grade 2 literacy unit Writing for a reason reads fact pages about what a seed needs and how seeds get about; this unit tests those ideas.

Outcomes

By the end of the unit most children can:

1. Look for living things in two places near school, keep a tally of how many different kinds they found in each, and say which place had more kinds.
2. Compare habitat picture cards and say that different places have different living things, and that some places have more kinds than others.
3. Help plan a plant test that changes only one thing (light or water), say what stays the same and what we will watch, and say why we use more than one pot for each choice.
4. Say from our results that cress seedlings need water to start growing, and light to grow green and strong.
5. Build and test a model seed that sticks to fur, and say how it is like an animal carrying a seed to a new place.
6. Use a model to show how a bee carries pollen from one flower to another.

Prior knowledge

- Grade 1 science term 3: a seed has a tiny plant inside; plants need water and light; plants in the dark grow tall, thin and pale.

- Kindergarten science: living things need food, water and air; animals and plants live in places that give them what they need.
- Grade 2 science term 2: fair comparisons where we keep the water, the can and the height the same.
- Grade 2 mathematics: tally marks and simple bar graphs.
- No reading is needed. Picture cards and the habitat pictures are described 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. Lesson 3 must come at least five school days before lesson 5, so that the cress has time to grow, and the watered pots need a short daily check (about 2 minutes) by an adult and a helper.

1. Who lives here?: a habitat hunt in two places near school (for example short mown grass and a flower bed or hedge edge); a tally of how many different kinds of living things each group finds; comparing the two places.
2. Many places to live: five habitat picture cards (a pond, a wood, a rock pool, a sandy desert and a paved car park); counting the kinds in each picture; making a class bar graph; why a place might have more kinds.
3. Planning a fair plant test: asking "Does cress need light?" and "Does cress need water?"; choosing what to change and what to keep the same; setting up three pots for each choice; predictions.
4. Seeds that hitch a ride: how animals carry seeds (hooks on fur, fruit that animals eat, nuts that squirrels hide); building model seeds and testing which ones a "fur coat" carries across the room; the story of how hook seeds gave someone the idea for hook-and-loop fasteners.
5. Pollen helpers and our results: looking at the cress results; a model bee carrying "pollen" (washable ink) from flower to flower; the end-of-unit check.

Materials (whole class unless noted)

- **Lesson 1:** for each group of 4-5, a hoop or a loop of rope about 1 m across, a clipboard with the tally sheet (one column for each place, with rows "plants" and "animals"), a pencil and a magnifying glass; two places near school chosen and checked by the teacher beforehand; sun hats and water bottles if it is sunny; a whistle or bell for gathering.
- **Lesson 2:** five A4 habitat picture cards (listed in Lesson 2), drawn or printed by the teacher; a large class bar graph with five columns; sticky squares; the groups' tally sheets from lesson 1.
- **Lesson 3:** a packet of cress seeds; twelve small clear plastic pots (for example yoghurt pots, washed), plus a few spares; cotton wool; a teaspoon; a jug of water; labels and a marker; one large cardboard box that closes (the "dark box"); a sunny windowsill or a bright table; the class plan chart ("We change... / We keep the same... / We will watch..."); a prediction chart with two columns ("I think..." and "We saw...").
- **Lesson 4:** three seed picture cards (a burdock burr caught in a dog's fur, a blackbird eating a berry, a squirrel burying an acorn); for each group, twelve paper balls about 2 cm across (scrunched scrap paper, the "seeds"), seven short strips of the hook side of a hook-and-loop fastener, eight short pipe cleaner pieces (about 4 cm, cut by an adult, with the cut ends folded over), masking tape, and a shallow tray; one fake-fur mitten or a fluffy sock for the adult's hand (the "fur coat"); a "new field" mat (a sheet or a hoop) about 3 m from the trays; a class results chart; one real hook-and-loop fastener to pass round.

- **Lesson 5:** the cress pots from lesson 3; a ruler; for each group, two paper flowers (each a paper plate with a paper cup centre), one with a yellow washable ink pad in its centre (the "pollen flower") and one with a plain white paper centre; one cotton-wool "bee" on a lolly stick per child (or one per pair); aprons; wipes; the end-of-unit check cards.
- For blind or low-vision children: tactile habitat cards (felt, sandpaper, smooth plastic and bark-like card for each habitat), a seed model they can feel before and after the fur test, a real burr-like fastener to feel, and a pot of cress to touch gently at the end (dry cotton wool versus soft green shoots).
- Hand-washing sinks, paper towels.

⚠ Safety and access

- **Outside (lesson 1).** Use only places the teacher has walked through first for hazards (broken glass, dog mess, nettles or other stinging or poisonous plants, fungi, holes). Agree the boundary and the gathering signal before going out. Hats, sun cream and water as your school requires.
- **Living things.** Look, do not touch. Children do not pick plants or lift stones or logs; if the teacher lifts a log or stone, they put it back gently the same way up. Nothing is taken back to class. If a bee or wasp comes close, stay still or walk slowly away; check care plans for sting allergies and take any prescribed medicine outside, as your school's rules require.
- **Allergies.** Check for grass, pollen, plant and fur allergies before lessons 1, 4 and 5. The "fur coat" is fake fur, worn only by the adult.
- **Seeds.** The adult holds the seed packet and sprinkles the cress seeds. Seeds never go in mouths, noses or ears, and nobody eats the cress grown in class. Wash hands after handling pots and cotton wool.
- **Nuts.** Lesson 4 shows a squirrel and an acorn only as a picture card. No real nuts or acorns come into class.
- **Ink (lesson 5).** Use a washable, non-toxic ink pad; aprons on; wipes ready.
- **Small parts.** Paper balls, pipe cleaners and fastener strips stay on the table; pipe cleaner ends are folded over by an adult so no sharp end shows.
- Children can answer by speaking, signing, pointing, using AAC, drawing, or with a partner who writes for them. Their own way counts.
- Children who are afraid of insects can be the group's tally-keeper or "spotter" from a few steps back.
- Deaf children: show every picture while it is described; face the class when reading aloud; agree a visual gathering signal (a raised hand or a flag) for outside. Blind and low-vision children: use the tactile cards and real objects in Materials; in lesson 1 they can count kinds of things they can touch safely (bark, grass, leaves the teacher has checked) and kinds of bird or insect sounds they hear. Colour is never the only clue: the pale cress is also shorter-leaved and floppy, and the ink "pollen" can be felt as slightly damp.
- Wheelchair users: choose habitat places with a firm, level path; a hoop can be placed at the edge of a path. A partner can do the fur test while the child directs.

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 cards, a seed model and two cress pots (answers in brackets):

1. Show the child their group's tally sheet from lesson 1. "Which place had more kinds of living things? How do you know?" (The place with more tally marks; "we counted more".) (Outcome 1.)
2. Show the pond card and the car park card from lesson 2. "Which picture has more kinds of living things? Why might a place have more kinds?" (The pond; any sensible reason such as "more water", "more plants to eat", "more places to hide".) (Outcome 2.)
3. "In our light test, what did we change? What did we keep the same? Why did we use three pots and not one?" (Light or dark; the same water, the same seeds, the same pots; so that one pot that goes wrong does not fool us.) (Outcome 3.)
4. Show one pot from the window and one pot from the dark box, then one watered pot and one dry pot (or photos). "What does cress need? How do you know?" (Light, because the dark box cress is pale and floppy; water, because the dry seeds did not grow.) (Outcome 4.)
5. Show a plain paper seed and a paper seed with hook strips. "Which seed would a dog carry to a new place? Why?" (The hook seed; the hooks catch on the fur, like a burr.) (Outcome 5.)
6. Give the child a cotton-wool bee and the two paper flowers. "Show me how the bee helps the flower." (Touches the pollen flower, then the white flower, and points to the yellow mark.) "What did the bee carry?" (Pollen.) (Outcome 6.)

Sources

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

- Next Generation Science Standards, grade 2, Interdependent Relationships in Ecosystems: https://www.nextgenscience.org/topic-arrangement/2interdependent-relationships-ecosystems
  - 2-LS2-1: "Plan and conduct an investigation to determine if plants need sunlight and water to grow." Assessment boundary: "Assessment is limited to testing one variable at a time."
  - 2-LS2-2: "Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants."
  - 2-LS4-1: "Make observations of plants and animals to compare the diversity of life in different habitats." Clarification statement: "Emphasis is on the diversity of living things in each of a variety of different habitats." Assessment boundary: "Assessment does not include specific animal and plant names in specific habitats."
- Wikipedia (lead paragraphs and the animal section of Seed dispersal, read 2026-11-11):
  - Habitat: "Fresh-water habitat types include marshes, streams, rivers, lakes, and ponds"; "The habitat of a species is not necessarily found in a geographical area, it can be the interior of a stem, a rotten log, a rock or a clump of moss".
  - Seed dispersal: "Seeds can be transported on the outside of vertebrate animals (mostly mammals)"; such plants "can have a variety of adaptations for dispersal, including adhesive mucus, and a variety of hooks, spines and barbs"; "Seed dispersal via ingestion and defecation by vertebrate animals (mostly birds and mammals), or endozoochory, is the dispersal mechanism for most tree species"; "Seed predators, which include many rodents (such as squirrels) and some birds (such as jays) may

also disperse seeds by hoarding the seeds in hidden caches ... if left uneaten will grow into new plants."
    - Burdock: "Burdock's clinging properties, in addition to providing an excellent mechanism for seed dispersal, led to the invention of velcro."
    - Hook-and-loop fastener: "The original hook-and-loop fastener was conceived in 1941 by Swiss engineer George de Mestral"; "He took a close look at the burs of burdock that kept sticking to his clothes and his dog's fur."
    - Pollination: "Pollinating agents can be animals such as insects, for example bees, beetles or butterflies; birds, and bats; water; wind"; "Pollinating animals travel from plant to plant carrying pollen on their bodies".
    - Cress: "a fast-growing, edible herb".
    - Etiolation: plants grown without light have "long, weak stems; smaller leaves due to longer internodes; and a pale yellow color".

Known gaps and cautions

- One other agent (Gemini 3.8 Flash, at e5ce5d4) text-checked this unit on 2026-11-11 and reported no errors. A second agent (Gemini 4 Carbon, at 625c0f9) text-checked it the same day against the NGSS and Wikipedia sources and reported one catch: lesson 4 did not give each group enough hook strips and pipe cleaner pieces for every round, since fixed. A third agent (Gemini 4 Argon, at 961572c, after the fix) text-checked timings, counts, quotes and links and reported no errors. Those are text checks by AI agents, not a teacher review or classroom test.
- The lesson order, the habitat picture cards and their counts, the seed and bee models, the plant test plan and the assessment items are the author's own choices, not taken from a source.
- The habitat picture cards are made-up pictures. Their counts say how many kinds are drawn in our pictures, not how many live in real ponds, woods or deserts. Real deserts and car parks can have more living things than the pictures show.
- Following the 2-LS4-1 assessment boundary, children are never assessed on plant or animal names; they count "different kinds" by how they look.
- Grade 1 term 3 science already tested what plants need. This unit repeats the question on purpose, but the children plan the test, use three pots for each choice and test one change at a time. Some children may remember the answer; the teacher can say "Let's see if a fairer test agrees."
- Cress usually sprouts within a few days in a warm room, but a cold room can slow it. Plant spare pots. Three pots for each choice is still a small test, not proof; the dark box may also be warmer or cooler than the windowsill.
- The fur test and the bee model are models: they show one way an animal carries seeds or pollen, not everything that happens. Real pollination also needs the pollen to reach the right part of the flower, which is left for later grades in the science progression.
- Seeds carried inside animals are mentioned only as "the seed drops out somewhere else", in a picture card, not tested.
- The habitat hunt depends on the school grounds and the season (the year plan puts it in spring). In winter or in a school with no green space, use a planted pot or tray in class and the lesson 2 cards.
- Timings are untested guesses. Going outside with a full class of about 25 seven-year-olds takes time; lesson 1 may need extra adults or a longer slot.
- No images yet.

Lesson 1: Who lives here?

Unit overview - Next: Many places to live

Back to the grade 2 year plan

Goal

Children look for living things in two different places near school, keep a tally of how many different kinds of plants and animals they find in each, and compare the two places.

Length

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

Materials

- For each group of 4-5: a hoop or a loop of rope about 1 m across, a clipboard with the tally sheet, a pencil and a magnifying glass.
- The tally sheet: two columns, "Place A" and "Place B", and two rows, "plants" and "animals". Children make one tally mark for each new kind they find, and may draw a tiny picture of each kind beside the tally.
- Two places near school, chosen and walked through by the teacher beforehand. Good pairs are very different, for example short mown grass and a flower bed, a hedge edge or an unmown corner. A paved yard with a few weeds in the cracks also works as one of the two places.
- A whistle or bell, or a raised flag for the gathering signal.
- Sun hats and water bottles if it is sunny.
- For blind or low-vision children: a partner who describes what they see, and safe things to touch that the teacher has checked (bark, grass, a leaf still on its plant).

Steps

✎ Opening (5 min)

Show the class the two places on the school map or by pointing from the door. Say: "A **habitat** is a place where a living thing finds what it needs: food, water, shelter and space. Today we are habitat detectives. We will not find out the names of things. We will count how many **different kinds** of living things live in each place."

Model the tally on the board: "If I see one ant, I make one mark for ants. If I see ten more ants, I do not make more marks, because they are the same kind. If I see a beetle, that is a new kind, so I make a new mark." Agree the rules: look, do not touch; do not pick; stay inside the boundary; come back at the signal.

✎ Main activity (25 min)

- **Place A (10 min).** Each group puts its hoop down where the teacher shows. Children look inside the hoop, then around it, using the magnifying glass, and make one tally mark for each new kind of plant and each new kind of animal. Different-looking leaves count as different kinds of plant. Remind them to look low: under leaves, in cracks, on stems.
- **Move (3 min).** Signal, gather, walk together to place B.
- **Place B (10 min).** The same: hoop down, look, tally.
- **Back together (2 min).** Gather in the shade or go back to class.

The teacher may lift one stone or log in each place for the class to look under, then put it back gently the same way up.

✓ Discussion questions (5 min, with answers)

- "Which place had more kinds of living things?" (Usually the flower bed, hedge or unmown corner; any answer that matches the group's tally.)
- "How do you know?" (We made more tally marks there.)
- "Why do you think one place had more kinds?" (More plants, more places to hide, more food, damper soil, fewer feet walking on it; any sensible reason.)
- "Did every group find the same number? Why not?" (No; groups looked in different spots, and some animals moved away or hid.)

✓ Closing check (5 min, with answers)

Each child shows with fingers, or points on the tally sheet:

1. "How many different kinds did your group find in place A?" (Their own count.)
2. "In place B?" (Their own count.)
3. "Which place had more kinds?" (The place with the bigger number.)

Vocabulary

habitat, living thing, kind, tally, compare, more, fewer

Differentiation

- **More help:** count only plants, or only animals; an adult points out where to look.
- **More challenge:** count how many of one kind they can see (for example "about 10 ants") as well as how many kinds; or add a third place.
- Children who are afraid of insects can be the group's tally-keeper or spotter, standing a few steps back.

⚠ Safety

- The teacher walks both places first for hazards (glass, dog mess, nettles or other stinging or poisonous plants, fungi, holes).
- Look, do not touch; no picking; no lifting stones or logs (adult only); wash hands when back in class.
- Bees and wasps: stay still or walk slowly away. Check care plans for sting allergies.
- Sun hats, sun cream and water as your school requires. Keep a clear gathering signal that every child can see or hear.

Teacher notes and misconceptions

- Some children think only animals count as "living things". Point out that grass, weeds and trees are living things too.
- Children may count the same kind twice (two snails = two kinds). Model it again: same kind, one mark.
- A place with lots of one kind (a lawn full of grass) can still have few kinds. That difference is the point of the lesson.
- The numbers are the class's own observations on one day, not a measure of the whole place; animals hide, move and come out at other times.
- If you cannot go outside, use photos of two places near school taken by an adult, count kinds in the photos together, then move straight to lesson 2.

Lesson 2: Many places to live

Unit overview - Previous: Who lives here? - Next: Planning a fair plant test

Back to the grade 2 year plan

Goal

Children compare five habitat pictures, count how many different kinds of living things are drawn in each, show the counts on a class bar graph, and say why some places might have more kinds than others.

Length

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

Materials

- Five A4 habitat picture cards (list below), drawn or printed by the teacher. Each kind is drawn once or more, but children count kinds, not animals.
- A large class bar graph with five columns (pond, wood, rock pool, desert, car park) and sticky squares.
- The groups' tally sheets from lesson 1.
- For blind or low-vision children: tactile versions of the cards, with one small raised shape or texture for each kind, and each card described aloud.

The five habitat picture cards (the author's own pictures)

The names in brackets are for the teacher only. Children are not asked to learn or say them.

- **Card 1, "Duck's pond in Little Hill" (8 kinds):** (a duck, a frog, a dragonfly, a water lily, reeds, a pond snail, a small fish, grass on the bank).
- **Card 2, "Little Hill wood" (9 kinds):** (a tall tree, a fern, moss on a log, bluebells, ivy, a squirrel, an owl, a beetle, a woodlouse).
- **Card 3, "A rock pool by the sea" (6 kinds):** (a crab, seaweed, a limpet, a starfish, a small fish, a sea anemone).
- **Card 4, "A sandy desert" (4 kinds):** (a cactus, a small bush, a lizard, a beetle).
- **Card 5, "The car park behind the market" (3 kinds):** (a pigeon, a weed growing in a crack, an ant).

Steps

✎ Opening (5 min)

Look again at the lesson 1 tally sheets. "Last time, one place had more kinds than the other. Today we visit five more places, in pictures. Some are near Little Hill and some are far away."

✎ Main activity (25 min)

- **Look and count (15 min).** Groups of 4-5 get one card each, then swap after 3 minutes until every group has seen every card (or show each card on a screen for the whole class). For each card, children point to each different kind of living thing and count them together. Remind them: "Same kind, count once."
- **Bar graph (10 min).** Each group sticks one square per kind for the card they counted last, then the class checks every column together. The teacher fixes any column that does not match the agreed count.

✓ Discussion questions (5 min, with answers)

- "Which picture has the most kinds?" (The wood, 9.) "The fewest?" (The car park, 3.)
- "How many more kinds are in the pond picture than in the desert picture?" (8 - 4 = 4 more.)
- "Why might the wood or the pond have more kinds than the car park?" (More plants for food, more water, more places to hide and live; the car park is mostly hard ground.)
- "Are these the real numbers for every pond and every desert?" (No; these are our pictures. Real places can have many more living things, some too small to see.)

✓ Closing check (5 min, with answers)

Point to the bar graph:

1. "Which column is tallest?" (The wood.)
2. "Which has more kinds, the rock pool or the desert?" (The rock pool.)
3. "Point to the place most like our place B from last lesson." (Any sensible choice with a reason.)

Vocabulary

habitat, kind, pond, wood, desert, rock pool, bar graph, most, fewest

Differentiation

- **More help:** count with a counter on each kind; use only three cards.
- **More challenge:** compare two columns with "how many more"; draw a sixth card for another kind of place (for example a park or a field), with the kinds they think they might find.
- Children who find counting busy pictures hard can use the tactile or a larger, clearer copy of each card.

⚠ Safety

- No special hazards. If children talk about wild animals that can hurt people (for example in the desert), say that the animals in our pictures are not dangerous to look at in a picture, and that real wild animals should always be left alone.

Teacher notes and misconceptions

- The 2-LS4-1 assessment boundary says children are not assessed on specific plant and animal names. Use the names only if children ask.
- Children may think deserts have no life at all. The desert card shows that some plants and animals do live there.
- Some children think a car park is not a habitat. Point out that the pigeon, the weed and the ant find what they need there.
- These are made-up pictures, so their numbers show only what is drawn.

Lesson 3: Planning a fair plant test

Unit overview - Previous: Many places to live - Next: Seeds that hitch a ride

Back to the grade 2 year plan

Goal

Children help plan two plant tests, each changing only one thing (light or water), say what stays the same and what they will watch, and set up three pots for each choice.

Length

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

Materials

- A packet of cress seeds (held by the adult).
- Twelve small clear plastic pots (for example washed yoghurt pots), plus a few spares; cotton wool, a teaspoon, a jug of water.
- Labels and a marker.
- One large cardboard box that closes (the "dark box").
- A sunny windowsill or a bright table.
- The class plan chart, with three rows: "We change...", "We keep the same...", "We will watch...".
- The prediction chart, with two columns: "I think..." and "We saw..." (the second column is filled in during lesson 5).
- For blind or low-vision children: a pot of dry cotton wool and a pot of damp cotton wool to feel; the seeds described as "tiny, like grains of sand".

Steps

✎ Opening (5 min)

Remind the class of the grade 1 bean pots: "In grade 1 we found that plants need water and light. Today we plan a better test, with **cress**, a small plant that grows fast. We ask two questions: Does cress need **light**? Does cress need **water**?"

✎ Main activity (25 min)

- **Plan the light test together (8 min).** Ask: "What will we change?" (Light or dark: some pots on the windowsill, some in the dark box.) "What must stay the same?" (The same pots, the same cotton wool, the same amount of seeds, the same water each day, the same room.) "What will we watch?" (Do the seeds grow? How tall? What colour?) Write the answers on the plan chart.
- **Plan the water test (5 min).** Children say it themselves: "We change... (water or no water). We keep the same... (pots, seeds, cotton wool, all on the windowsill). We watch... (do the seeds grow?)."

- **Why three pots? (2 min).** "What if one pot gets knocked over, or its seeds are bad? With three pots, one pot that goes wrong does not fool us."
- **Set up (10 min).** In groups, children push cotton wool into the pots and label them: "light 1, 2, 3", "dark 1, 2, 3", "water 1, 2, 3", "no water 1, 2, 3". The adult wets the cotton wool in the nine pots that get water (four teaspoons each) and sprinkles a small pinch of seeds evenly onto every pot. The three "no water" pots get dry cotton wool and seeds only. Put the "light" and both water-test sets on the windowsill and the "dark" set in the closed box in the same room.

Daily check (about 2 minutes, by an adult and a helper): give each of the nine watered pots four teaspoons of water so the cotton wool stays damp; give the "no water" pots none. Open the dark box only for the check, then close it.

✓ Discussion questions (5 min, with answers)

- "In the light test, which pots get water?" (All of them, the same amount.) "Why?" (So only the light changes.)
- "In the water test, why are all the pots on the windowsill?" (So only the water changes.)
- "What would go wrong if the dark pots got no water?" (We would not know if light or water made the difference.)

✓ Closing check (5 min, with answers)

Each child puts a sticker or a mark on the prediction chart:

1. "What will the dark box cress look like?" (Any prediction; there is no wrong prediction.)
2. "Will the no-water seeds grow?" (Any prediction.)
3. "Tell your partner one thing we keep the same." (Pots, seeds, cotton wool, room, amount of water.)

Vocabulary

cress, test, change, keep the same, predict, light, dark, damp

Differentiation

- **More help:** plan only the light test; use picture cards for "change" and "keep the same".
- **More challenge:** suggest a third test (for example warm and cold) and say what would stay the same; it is not set up here.
- A child who cannot handle pots can label, count the cotton wool pieces or be the "checker" who reads the plan chart back.

⚠ Safety

- The adult holds the seed packet and sprinkles the seeds. Seeds never go in mouths, noses or ears.
- Nobody eats the cress grown in class.

- Wash hands after handling pots and cotton wool. Wipe up spills at once.

Teacher notes and misconceptions

- Seeds can start to grow in the dark, because they do not need light to sprout; what changes is how the seedlings grow. Dark-grown seedlings are usually tall, thin, floppy and pale yellow (see Etiolation in the unit Sources). Expect children to be surprised that the dark seeds grew at all.
- Some children think more water is always better. Four teaspoons a day keeps the cotton wool damp, not flooded.
- Cress usually sprouts within a few days in a warm room; a cold room is slower. Plant one or two spare pots of each kind in case some fail.
- Three pots for each choice is still a small test, not proof. The dark box may also be a little warmer or cooler than the windowsill.

Lesson 4: Seeds that hitch a ride

Unit overview - Previous: Planning a fair plant test - Next: Pollen helpers and our results

Back to the grade 2 year plan

Goal

Children learn three ways animals help seeds get to new places, then build model seeds and test which ones a "fur coat" carries across the room, so that their model works like an animal carrying a seed.

Length

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

Materials

- Three seed picture cards (the author's own pictures):
  - **Card A:** a burr with tiny hooks caught in a dog's fur.
  - **Card B:** a blackbird eating a berry; a small picture beside it of a seed on the ground far away.
  - **Card C:** a squirrel burying an acorn; a small picture beside it of a young oak growing in the same spot later.
- For each group of 4-5: twelve paper balls about 2 cm across (scrunched scrap paper, the "seeds"), seven short strips of the hook side of a hook-and-loop fastener, eight short pipe cleaner pieces (about 4 cm, cut by an adult, with the cut ends folded over), masking tape and a shallow tray. That is enough for three hook strip seeds, three pipe cleaner seeds, three seeds of the group's own design and one improved seed.
- One fake-fur mitten or a fluffy sock for the adult's hand (the "fur coat").
- A "new field" mat (a sheet or a hoop) about 3 m from the trays.
- A class results chart with four rows: "plain", "hook strip", "pipe cleaner hooks", "our own idea".
- One real hook-and-loop fastener to pass round.
- For blind or low-vision children: a burr-like fastener strip and a piece of fake fur to feel; their own seed models to feel before and after the test.

Steps

✎ Opening (5 min)

Quick look at the cress pots (2 minutes): "Has anything happened yet?" Do not explain the results yet.

Then: "Plants cannot walk. So how do their seeds get to a new place where there is room to grow?" Show the three cards and read them:

- Card A: "Some seeds have tiny **hooks**. They catch on an animal's fur. When the animal walks away, the seed goes too, and later it falls off."

- Card B: "Some seeds are inside fruit. A bird or another animal eats the fruit, and the seed drops out somewhere else."
- Card C: "Some animals, like squirrels, hide nuts to eat later. If they forget one, it can grow into a new tree."

✎ Main activity (25 min)

- **Make the seeds (8 min).** Each group makes three of each kind on its tray: three plain paper balls; three with a hook strip taped round them; three with pipe cleaner pieces taped on and bent into hooks; and three of their own design using the same materials.
- **Test (12 min).** The adult with the "fur coat" visits each tray in turn and does the same thing every time: brushes the fur once, gently, across the tray; walks to the "new field" mat; and gives one gentle shake over it. The group counts how many of each kind landed on the mat, and how many are still stuck to the fur (the adult picks those off over the mat and they count as carried). Record on the results chart.
- **Improve (5 min).** Groups change one of their plain seeds to make it stick better, and the adult tests it once more.

Pass round the real hook-and-loop fastener: "About 85 years ago, a man called George de Mestral looked closely at burrs stuck to his clothes and his dog's fur. He saw tiny hooks and used the idea to make this fastener."

✓ Discussion questions (5 min, with answers)

- "Which seeds did the fur carry best?" (Usually the hook strip or pipe cleaner seeds.) "Why?" (The hooks catch on the fur.)
- "Which seeds stayed behind?" (Usually the plain ones.) "What does a plant get from a seed that travels?" (A new place to grow, with room and light.)
- "What did we keep the same in our test?" (One brush, the same mitten, the same walk, one shake.)
- "How is our model like a real animal? How is it different?" (Like: the fur carries hooked seeds to a new place. Different: a real animal walks further, and the seed falls off at a time we cannot choose.)

✓ Closing check (5 min, with answers)

1. Hold up a plain seed and a hook seed. "Which would a dog carry?" (The hook seed.)
2. "Name one other way an animal helps a seed get somewhere new." (Eats the fruit and the seed drops out somewhere else; hides a nut and forgets it.)
3. "What gave someone the idea for this fastener?" (Burrs with hooks.)

Vocabulary

seed, hook, fur, burr, carry, model, new place

Differentiation

- **More help:** test only plain and hook strip seeds; count with counters.
- **More challenge:** draw and label a design for a seed that a bird would carry inside a fruit, or one that sticks to feathers.
- Children with weak hand grip can direct a partner who tapes the hooks on.

⚠ Safety

- No real burrs, nuts or acorns in class (nut allergies and choking).
- Paper balls, fastener strips and pipe cleaners stay on the table; pipe cleaner ends are folded over by an adult.
- The fur mitten is fake fur, worn only by the adult; check for children who dislike the feel of fur and let them watch instead.

Teacher notes and misconceptions

- "Seeds only travel by wind" is a common idea. This lesson adds animals; wind and water were covered in the grade 2 literacy fact page "How Seeds Get About".
- Children may think animals carry seeds on purpose. The dog does not mean to carry the burr; the squirrel means to eat the nut later.
- The "85 years ago" is rounded from 1941 (see the unit Sources); say "a long time ago" if your class has not met large numbers.
- The model test is one comparison on one day, not proof. Fur, speed and how hard the adult shakes all change the results, so the adult keeps those the same.

Lesson 5: Pollen helpers and our results

Unit overview - Previous: Seeds that hitch a ride

Back to the grade 2 year plan

Goal

Children look at the results of the cress tests and say what cress needs, then use a model bee to show how an animal carries pollen from one flower to another.

Length

About 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach this lesson at least five school days after lesson 3.

Materials

- The twelve cress pots from lesson 3 (and any spares), a ruler, the plan chart and the prediction chart.
- For each group of 4-5: two paper flowers, each a paper plate with a paper cup centre. One has a yellow washable ink pad in its cup (the "pollen flower"); the other has a plain white paper circle in its cup.
- One cotton-wool "bee" on a lolly stick per child (or one per pair).
- Aprons and wipes.
- The end-of-unit check cards (see Assessment in the unit overview).
- For blind or low-vision children: the cress pots to touch gently (dry cotton wool, soft green shoots, floppy pale shoots); the ink "pollen" can be felt as slightly damp on the white paper.

Steps

✎ Opening (5 min)

Bring out all twelve pots and the dark box. Open the box last, so everyone sees the dark cress at the same moment. "Look at the plan chart. What did we change? What did we keep the same?"

✎ Main activity (25 min)

- **Our results (10 min).** Compare the sets, three pots at a time:
  - Light and dark: "What colour is each set? Which is taller? Which is stronger?" (The light set is usually green and upright; the dark set usually pale yellow, taller, thin and floppy.) An adult measures the tallest shoot in one pot of each set with the ruler.
  - Water and no water: "Did the dry seeds grow?" (Usually not; they look the same as on the first day.)
  - Fill in "We saw..." on the prediction chart. "Did all three pots in a set do the same? If one was different, what might have happened?"

- **Bee helpers (15 min).** Read: "Flowers make a fine dust called **pollen**. Bees and other animals visit flowers for food, and pollen sticks to their bodies. When they visit the next flower, some pollen rubs off. Pollen moving from flower to flower helps many plants make seeds." Each child makes their bee "visit" the pollen flower (dab the cotton wool on the ink pad), then "fly" to the white flower and land on it. Look: the yellow has moved. Groups try three more visits and count how many yellow marks the white flower gets.

✓ Discussion questions (5 min, with answers)

- "What does cress need to grow green and strong?" (Light.) "To start growing?" (Water.) "How do we know?" (Our results: the dark cress was pale and floppy; the dry seeds did not grow.)
- "Why was it a good idea to change only one thing in each test?" (So we know what made the difference.)
- "What did the bee carry? Where from, and where to?" (Pollen, from one flower to another.)
- "How is our bee like a real bee? How is it different?" (Like: pollen sticks to it and rubs off on the next flower. Different: a real bee is looking for food and visits many flowers; real pollen is dust, not ink.)

✓ Closing check (5 min, with answers)

1. "Tell your partner one thing cress needs, and how we know." (Light or water, with a result.)
2. "Show me with your bee how a bee helps a flower." (From the pollen flower to the white flower.)
3. "Name one way an animal helps a seed and one way an animal helps a flower." (Carries a seed on its fur, or eats fruit, or hides a nut; carries pollen.)

Then begin the one-to-one checks (see Assessment in the unit overview).

Vocabulary

result, pale, upright, floppy, pollen, flower, bee, carry

Differentiation

- **More help:** compare only light and dark; an adult guides the bee's hand movement if needed.
- **More challenge:** add a third flower with a blue ink pad, and see which colours end up where after several bee visits.
- A child who cannot hold a lolly stick can use a cotton-wool mitten or point to where the bee should go while a partner moves it.

⚠ Safety

- Washable, non-toxic ink only; aprons on; wipe hands before touching the cress pots.
- Nobody eats the cress. Afterwards the adult disposes of it, or lets it grow on as a class plant.
- Check for pollen allergies if you bring in real flowers; this lesson uses paper flowers only.

Teacher notes and misconceptions

- Children may say plants "eat soil". Our cress grew on cotton wool with only water and light, which is a good talking point (they still use stored food from the seed at first).
- Some children think bees visit flowers to help them. Bees visit for food; the pollen moving is a side effect that helps the plant.
- Pollen must reach the right part of the right kind of flower to make seeds. That detail is left for later grades.
- If the results do not match (for example a dark pot stayed short), talk about it honestly: "One pot was different. That is why we used three."

Grade 2 Society: People, Jobs and Choices (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 10 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 one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 1. Builds on grade 1: Rules, fairness and community jobs and the society progression

Big idea

A community works because many people play a part, not only the leaders. People make goods and give services, and each one needs skills and knowledge that someone had to learn. Things in a shop have prices, and some goods are made nearby while others come from far away. There is never enough of everything, so people have to choose, and every choice has a good side (a benefit) and something you give up (a cost).

This is the first society unit of grade 2 (term 1). In grade 1 the children sorted Little Hill job cards into goods and services and named a tool and a skill for each job. Here they add who else helps a community, how skills are learned, prices, scarcity and choosing.

Outcomes

By the end of the unit most children can:

1. Explain, using a made-up Little Hill story, how people who are not leaders (a child, a neighbour, a shopkeeper, a volunteer) help a community.
2. Say what someone needs to know or be good at to make one good or give one service, and one way they could have learned it.
3. Read and compare prices on made-up market price cards (up to 20 Little Hill coins), and say whether a good was made in Little Hill or came from somewhere else.
4. Explain, with the class shop, that when there is not enough of something people have to decide who gets it or what to buy, and suggest one fair way to decide.
5. Name one benefit and one cost of a choice made by a story character.

Prior knowledge

- Grade 1 society term 1: rules with "so that..." reasons; three kinds of fair (equal shares, taking turns, giving what someone needs); goods and services; a tool and a skill for each job.
- Grade 1 maths: counting and comparing to 100; adding within 20. Grade 2 maths term 1 runs alongside, so prices stay at 20 coins or less and every sum stays within 20.
- No reading is needed. Every card has a picture; words on cards are for the adult.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week.

1. Everyone has a part: the Little Hill park clean-up story; who did what, and what would have happened without them.
2. Skills for goods and services: what a job needs you to know or be good at, how people learn it; the class makes one good and gives one service.
3. Prices at the Little Hill market: reading and comparing price cards; made in Little Hill or came from elsewhere.
4. Not enough to go round: the class shop has fewer kites than people who want one; ways to decide; you cannot buy everything with 10 coins.
5. Choosing, and what you give up: benefits and costs of story characters' choices; class shop round; private check.

Materials (whole class unless noted)

- Large picture story cards for "The Park Clean-Up" (6 cards; text in lesson 1).
- Per pair: 6 helper cards from the story: Mayor Hen, Duck (a child), Mouse (a neighbour), Goat (the shopkeeper), Bear (a volunteer), Remy (the bin collector).
- Per pair: the 8 grade 1 job cards (baker, bus driver, nurse, librarian, farmer, bin collector, builder, hairdresser) plus 4 new ones: potter, cook, vet, mechanic.
- Per pair: a "how did they learn it?" mat with four pictures: watching someone, practising, a book, a teacher or course.
- For the class-made good and service (lesson 2): strips of card about 5 cm by 20 cm, crayons, a hole punch (adult only) and wool for bookmarks; a tray of mixed classroom pencils and crayons to sort back into pots.
- Per pair: 10 market price cards (made-up goods and prices; list in lesson 3), each with a small picture of either Little Hill or a lorry/ship.
- Per pair: a "made here / came from elsewhere" sorting mat.
- Per child: 10 "Little Hill coins" (counters or card circles, all worth 1 coin; not real money) in a small pot or bag.
- Class shop (lessons 4 and 5): a table, the 10 market price cards from lesson 3 propped up as shop labels, and paper or card stand-ins for each good (kite, book, apple, bread, wool, jar of honey, pencil, ball, banana, cup). Only 3 kite stand-ins.
- Per pair: a benefit / cost mat with two columns (picture: a smiling face, "what I get"; picture: an empty hand, "what I give up").
- Story choice cards (lesson 5; 4 cards; text in lesson 5).
- Whiteboards and pens, or paper and pencils.
- Sticky notes or name pegs for the closing checks.

⚠ Safety and access

- Not real money. Children never bring money from home and are never asked what their family buys, earns or cannot afford. Every shopping choice is made with the same 10 pretend coins, or on behalf of a story character.
- Scarcity is taught with kites and story goods, not food children need. If a real food is used as a stand-in (for example a real apple for display), nobody eats it; check allergies anyway.

- The hole punch is used by an adult. Scissors, if used for the bookmarks, are child-safe.
- Jobs: show people of different genders, ages and appearances on every card. Avoid "this is a job for boys/girls". Never ask children about the jobs of people at home.
- Access: every card has a picture; children can answer by pointing, sorting, signing, using an AAC device or eye-pointing, and their own way counts. Large-print and tactile versions of the price cards (raised numbers made with glue or stickers) help low-vision and blind children. Coins can be real counters so they can be felt and counted. In the shop, the table is at a height a wheelchair user can reach, and a partner can carry goods on request.
- Colour is never the only way to tell a card apart: "made here" and "came from elsewhere" each have their own picture.

Assessment

There is no test. The closing checks give a quick picture each lesson. During lesson 5, take about 3 minutes with each child, one at a time (spread over the week while others work in the shop), with these cards in front of them:

1. Show the Mouse card from the clean-up story. "Mouse isn't the mayor. How did Mouse help Little Hill?" (Any part from the story, for example lent rakes and gloves.) - outcome 1.
2. Show the potter card. "What does a potter need to know or be good at?" (For example shaping clay, using the kiln safely.) "How could they have learned it?" (Watching, practising, a teacher, a book.) - outcome 2.
3. Show the honey (6 coins) and banana (3 coins) price cards. "Which costs more?" (Honey.) "Which came from somewhere else?" (Banana; it has the ship picture.) - outcome 3.
4. "The shop has 2 balls and 5 children want one. What could they do?" (Any sensible way: take turns, share a game, pick names, wait for more.) - outcome 4.
5. Show story choice card 2 (Goat buys the book). "What did Goat get? What did Goat give up?" (Got the book; gave up the kite, or the 8 coins.) - outcome 5.

Record "yes / with help / not yet" per outcome. This is a check, not a test; accept any sensible answer in the child's own words.

Sources

The C3 framework was read in the archived PDF (pages with the K-2 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:

- D2.Civ.2.K-2: "Explain how all people, not just official leaders, play important roles in a community." (Lesson 1.)
- D2.Eco.1.K-2: "Explain how scarcity necessitates decision making." (Lesson 4.)
- D2.Eco.2.K-2: "Identify the benefits and costs of making various personal decisions." (Lesson 5; "personal decisions" are made with pretend coins or for story characters, see Safety.)
- D2.Eco.3.K-2: "Describe the skills and knowledge required to produce certain goods and services." (Lesson 2.)
- D2.Eco.4.K-2: "Describe the goods and services that people in the local community produce and those that are produced in other communities." (Lesson 3.)

- D2.Eco.5.K-2: "Identify prices of products in a local market." (Lesson 3.)

The C3 framework is a framework, not a set of lessons; the stories, Little Hill, characters, goods and prices are the author's own examples, not from a source.

Known gaps and cautions

- Gemini 4 Argon text-checked this unit at c181ab1 on 2026-11-10 and reported no errors (see PEERCHECKS.md). That is a text check by an AI agent, not a teacher review or classroom test.
- Little Hill, its people and every price are made up. Prices are in "Little Hill coins", all worth 1, so the unit does not depend on any country's money; real coins and notes are left for grade 2 maths term 3.
- "Benefits and costs" is taught only as "what I get / what I give up". The wider idea of opportunity cost is left for later grades.
- "Made here / came from elsewhere" uses one clear picture per card. Real goods are often made from parts from many places; this is mentioned to the class once in lesson 3 but not taught.
- Sorting who gets a scarce kite can stir real feelings about fairness. The lesson uses story characters first and the class shop second, and nobody's real wishes or belongings are discussed.
- The society progression lists "swapping and buying" for grade 2; this unit teaches buying with pretend coins only. Swapping (trading one good for another) is not taught here.
- The kinds of jobs and who does them differ between places; change the job cards to fit your area.

Lesson 1: Everyone has a part

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children explain, using a made-up story, how people who are not leaders help a community, and what would happen if they did not.

Materials

- 6 large picture story cards for "The Park Clean-Up" (text below).
- Per pair: 6 helper cards: Mayor Hen, Duck (a child), Mouse (a neighbour), Goat (the shopkeeper), Bear (a volunteer), Remy (the bin collector).
- Whiteboards and pens, or paper and pencils.
- Sticky notes or name pegs for the closing check.

Steps

✎ Opening (5 min)

Remind the class of grade 1: "In Little Hill we met a baker, a bus driver, a nurse... Who is in charge of a town?" Take ideas (a mayor, a council, a leader). "Today we find out whether the leader can do everything alone."

✎ Main activity (25 min)

1. **The story (8 min).** Read "The Park Clean-Up" (the author's own story, not from a source), showing each card:
2. After a big storm, the Little Hill park is full of branches and rubbish. The swing is broken. Nobody can play.
3. Duck walks past on the way to school and sees the broken swing. Duck tells Mayor Hen.
4. Mayor Hen says, "The town will mend the swing. But we need help to clear the park." She puts a notice on the board: "Clean-up, Saturday morning."
5. Mouse, who lives next to the park, lends rakes and gloves. Goat, who runs the shop, gives bin bags.
6. On Saturday, Bear and lots of neighbours come. They rake, pick up and fill the bags. Remy, the bin collector, takes the full bags away in the bin lorry.
7. By lunchtime the park is clear, the swing is mended, and everyone plays.
8. **Who did what (10 min).** Pairs lay out the 6 helper cards and, for each one, say what that person did. Walk round and ask: "Which of these people is a leader?" (Mayor Hen.) "Which are not?" (All the others.)
9. **Take one away (7 min).** Turn one helper card face down. "What if Duck hadn't told anyone?" (Nobody might have known the swing was broken.) "What if Remy hadn't

come?" (The full bags would still be in the park.) Pairs try two more cards and tell the class.

✓ Discussion questions (5 min, with answers)

1. "Did Mayor Hen clean the park by herself?" (No. She asked for help and the town mended the swing; many other people did the clearing.)
2. "Duck is a child. Was Duck's part important?" (Yes; Duck noticed the problem and told someone, so it got fixed.)
3. "Remy was doing a job. Bear was helping for free. Are both important?" (Yes. Some people help as their job, some as volunteers, which means helping without being paid.)

✓ Closing check (5 min, with answers)

Each child picks one helper card who is not Mayor Hen and tells a partner (or the adult) what that person did and what would happen without them. Mark with a sticky note or peg who could do it. (Any matching answer from the story.)

Vocabulary

community, leader, mayor, volunteer, notice, help

Differentiation

- Support: use 3 helper cards only (Duck, Mouse, Remy); the adult retells each one's part with the picture.
- Extension: draw a new helper card for the story (for example someone who fixed the swing) and say what they did.
- Children can answer by pointing, signing, AAC or acting out the part; their own way counts.

⚠ Safety

- Keep the story about Little Hill. Do not ask children what their families do for the community, or who they know.

Teacher notes and misconceptions

- Some children think the leader does all the work, or that only paid jobs count. The "take one away" step is there to show every part matters.
- "Volunteer" may be new; keep the meaning simple: "helping without being paid".

Lesson 2: Skills for goods and services

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

About 40 minutes.

Goal

Children say what someone needs to know or be good at to make a good or give a service, and one way they could have learned it. They make one good and give one service themselves.

Materials

- Per pair: the 8 grade 1 job cards (baker, bus driver, nurse, librarian, farmer, bin collector, builder, hairdresser) plus 4 new ones: potter, cook, vet, mechanic.
- Per pair: a "how did they learn it?" mat with four pictures: watching someone, practising, a book, a teacher or course.
- Strips of card about 5 cm by 20 cm (one per child), crayons, a hole punch (adult only) and short lengths of wool, for bookmarks.
- A tray of mixed classroom pencils and crayons, and the class's labelled pots, for the service.
- Whiteboards and pens, or paper and pencils.
- Sticky notes or name pegs for the closing check.

Steps

✎ Opening (5 min)

Hold up the baker card. "Last year we said a baker makes goods. Which goods?" (Bread, cakes.) "What does a baker need to know to make bread?" (How much flour and water, how long to bake it.) "Were they born knowing that?" (No; they learned it.)

✎ Main activity (25 min)

1. **Skills and knowledge (10 min).** Pairs take the 4 new job cards. For each one, say "goods or service?" and one thing that person needs to know or be good at. Model the potter: "A potter makes cups and bowls, so goods. A potter needs to know how to shape clay and how to use the kiln (a very hot oven) safely." Then pairs do cook, vet and mechanic. (Cook: goods, meals; knows recipes, cooks safely. Vet: service, looks after sick animals; knows about animals' bodies. Mechanic: service, fixes cars and bikes; knows how engines and brakes work.)
2. **How did they learn it? (5 min).** Pairs put each of the 4 cards on the picture that shows one way that person could have learned. Any picture is right if they can say why; most jobs use more than one.
3. **We make a good, we give a service (10 min).** Half the class makes a bookmark: draw a pattern on a card strip; the adult punches a hole and the child ties on wool. The other half gives a service: sorting the tray of mixed pencils and crayons back into the

right labelled pots. Swap after 5 minutes. Ask: "Which one made a thing you can hold?" (The bookmark.) "What did you need to be good at to sort the pots?" (Knowing which goes where, being careful.)

✓ Discussion questions (5 min, with answers)

1. "Is a mechanic's work goods or a service?" (A service: they fix things for people.)
2. "Can someone learn a job in more than one way?" (Yes; for example by watching, practising and having a teacher.)
3. "What did you learn to do today that you could get better at with practice?" (Any answer, for example tying the wool or sorting quickly.)

✓ Closing check (5 min, with answers)

Show the vet card. Each child tells a partner or the adult one thing a vet needs to know or be good at. (For example how to look after animals, how to tell an animal is ill, being gentle.) Mark who could do it.

Vocabulary

goods, services, skill, knowledge, learn, practise, potter, kiln, vet, mechanic

Differentiation

- Support: use only the potter and vet cards; the adult names one skill and the child points to the matching "how did they learn it?" picture.
- Extension: choose a grade 1 job card and list two skills and one piece of knowledge it needs.
- Children can make the bookmark with chunky crayons, stickers or a partner's help; any pattern counts.

⚠ Safety

- The hole punch is used by the adult. Wool lengths are short (about 20 cm).
- Do not ask children which jobs people at home do.

Teacher notes and misconceptions

- "Skill" (something you can do) and "knowledge" (something you know) overlap a lot at this age; accept either.
- Some children think people are born good at jobs. Point back to "how did they learn it?" each time.

Lesson 3: Prices at the Little Hill market

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

About 40 minutes.

Goal

Children read and compare prices on made-up market price cards, and sort goods into "made in Little Hill" and "came from somewhere else".

Materials

- Per pair: 10 market price cards. Each shows a picture of the good, its price in Little Hill coins, and a small picture: the Little Hill hill for "made here", or a lorry or ship for "came from elsewhere". The goods and prices (the author's own examples, not from a source):

Good	Price	Where from
apple	2 coins	made here (Little Hill orchard)
bread	4 coins	made here (the baker)
wool	5 coins	made here (sheep on the hill)
cup	5 coins	made here (the potter)
honey	6 coins	made here (the beekeeper)
pencil	1 coin	came from elsewhere (lorry)
banana	3 coins	came from elsewhere (ship)
ball	7 coins	came from elsewhere (lorry)
kite	8 coins	came from elsewhere (lorry)
book	8 coins	came from elsewhere (lorry)

- Per pair: a "made here / came from elsewhere" sorting mat (picture of the hill on one side, a lorry and a ship on the other).
- Per child: 10 Little Hill coins (counters or card circles, all worth 1; not real money) in a small pot or bag.
- Whiteboards and pens, or paper and pencils.
- Sticky notes or name pegs for the closing check.

Steps

✎ Opening (5 min)

"In Little Hill there is a market every Saturday. Everything has a price: how many coins you give to get it." Show the apple card. "How many coins?" (2.) Show the kite. (8.) "Which costs more?" (The kite.)

✎ Main activity (25 min)

1. **Read the prices (8 min).** Pairs spread out the 10 price cards and put them in a line from cheapest to dearest. (Pencil 1, apple 2, banana 3, bread 4, wool and cup 5, honey 6, ball 7, kite and book 8.) Ask: "Which two cost the same?" (Wool and cup; kite and book.)
2. **Pay the price (7 min).** The adult calls out a good; each child counts that many coins from their pot onto the table, then puts them back. Try bread (4), honey (6), ball (7). Then "Apple and banana together?" (5 coins.)
3. **Made here or elsewhere (10 min).** Pairs sort the cards onto the mat using the small pictures. (Made here: apple, bread, wool, cup, honey. Elsewhere: pencil, banana, ball, kite, book.) Ask: "Who in Little Hill made the cup?" (The potter, from lesson 2.) "Why does the banana come by ship?" (Bananas grow in warm places, as we said in grade 1, and Little Hill is not warm enough.) Mention once: "Lots of real things are made from parts from many places; our cards just show one picture each."

✓ Discussion questions (5 min, with answers)

1. "Which good made in Little Hill costs the most?" (Honey, 6 coins.)
2. "Can you buy the ball with 5 coins?" (No; it costs 7, so you need 2 more.)
3. "Why might some goods come from somewhere else?" (They can't be grown or made here, or another place makes them; any sensible answer.)

✓ Closing check (5 min, with answers)

Show the bread and wool cards. Each child points to the one that costs more (wool) and says whether bread was made in Little Hill (yes; the hill picture). Mark who could do both.

Vocabulary

price, coins, market, costs more, costs less, cheapest, made here, came from elsewhere

Differentiation

- Support: use 5 cards only (pencil, apple, bread, honey, banana); count coins with an adult.
- Extension: choose two goods that cost exactly 10 coins together (for example bread and honey, or kite and apple), and find another pair.
- Large-print or tactile price cards with raised numbers, and counters that can be felt, for low-vision and blind children; children can show an answer by pointing, signing, AAC or pushing coins.

⚠ Safety

- Coins are counters, never real money. Do not ask what things cost at home or what families buy.

Teacher notes and misconceptions

- Some children think a bigger thing must cost more. The kite (8) and the book (8) cost the same although they are different sizes; the pencil is small and cheap but the cup is small and costs 5. Ask "How do you know?" and point at the number.
- All coins are worth 1 here. Real coins with different values come in grade 2 maths term 3.

Lesson 4: Not enough to go round

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

About 40 minutes.

Goal

Children explain that when there is not enough of something, people have to decide who gets it or what to buy, and they suggest a fair way to decide.

Materials

- 5 helper cards from lesson 1: Duck, Mouse, Goat, Bear, Remy.
- Class shop: a table, the 10 market price cards from lesson 3 propped up as shop labels, and paper or card stand-ins for each good (kite, book, apple, bread, wool, jar of honey, pencil, ball, banana, cup). Only 3 kite stand-ins; several of each other good.
- Per child: 10 Little Hill coins (not real money) in a small pot or bag.
- Whiteboards and pens, or paper and pencils.
- Sticky notes or name pegs for the closing check.

Steps

✎ Opening (5 min)

Put 3 kite stand-ins on the table. Lay out 5 helper cards. "It's a windy day. Duck, Mouse, Goat, Bear and Remy all want a kite. How many kites are there?" (3.) "Is that enough?" (No; 2 friends would have none.) "When there isn't enough of something for everyone who wants it, we say it is scarce."

✎ Main activity (25 min)

1. **How could they decide? (10 min).** Pairs talk, then share ideas. Write or draw each idea. Likely ideas: first come, first served; pick names from a hat; take turns flying; share one kite between two; wait until the shop gets more; whoever pays more. For each one ask: "Is that fair? Which kind of fair from grade 1 is it?" (Taking turns, equal shares, or giving to whoever needs it most.) There is no one right answer; the point is that somebody has to decide.
2. **Our class decides (5 min).** The class has more children than kites. Agree one way to decide who may take a kite stand-in in the shop today (for example taking turns over lessons 4 and 5). Write it on the board.
3. **10 coins (10 min).** Each child has 10 coins. In small groups at the shop, each child chooses goods and pays the price on the label (with the class's kite rule). Before they start: "Could you buy the kite and the book?" (No; 8 and 8 is 16, more than 10.) After shopping, each child counts the coins left and puts the goods back.

✓ Discussion questions (5 min, with answers)

1. "Why did we need a rule for the kites but not for the pencils?" (There were enough pencils for everyone; there were not enough kites.)
2. "With 10 coins, could anybody buy everything in the shop?" (No; the goods cost much more than 10 coins together, so everyone had to choose.)
3. "What if the shop had 30 kites?" (Then nobody would need to decide who gets one.)

✓ Closing check (5 min, with answers)

"The library has 1 copy of a new book and 4 children want to read it. What could they do?" Each child tells a partner or the adult one way to decide. (Any sensible way: take turns, read it together, pick names, wait for another copy.) Mark who gave a way.

Vocabulary

scarce, not enough, decide, choose, fair, take turns, first come first served

Differentiation

- Support: act out the kite problem with 3 kites and 5 children; the adult offers two ways to decide and the child picks one.
- Extension: write or draw a rule for a scarce thing in the classroom (for example the one class computer or a favourite book).
- Children can choose goods by pointing, signing, AAC or with a partner who carries them; the shop table is at a height a wheelchair user can reach.

⚠ Safety

- The goods are paper or card stand-ins; nothing is eaten.
- Some children feel strongly about not getting a kite. Remind the class of the rule they agreed and that kite turns continue in lesson 5. Nobody's real belongings or wishes are discussed.

Teacher notes and misconceptions

- "Paying more" is a real way that markets decide who gets scarce things. If children suggest it, note that it is one way and ask whether it is fair to someone with fewer coins; do not push a single answer.
- Scarcity is not only about money: time, space and turns on the computer can be scarce too.

Lesson 5: Choosing, and what you give up

Unit overview - Previous: Lesson 4

About 40 minutes, plus about 3 minutes per child for the private check (spread over the week).

Goal

Children name one benefit (what you get) and one cost (what you give up) of a choice made by a story character, and make their own choice in the class shop with pretend coins.

Materials

- 4 story choice cards (text below; the author's own examples, not from a source).
- Per pair: a benefit / cost mat with two columns (picture: a smiling face, "what I get"; picture: an empty hand, "what I give up").
- Class shop from lesson 4: table, the 10 price cards as labels, paper or card stand-ins for each good, 3 kite stand-ins, and the class's kite rule.
- Per child: 10 Little Hill coins (not real money) in a small pot or bag.
- For the private check: the Mouse helper card (lesson 1), the potter job card (lesson 2), the honey and banana price cards (lesson 3), and story choice card 2.
- Whiteboards and pens, or paper and pencils.
- Sticky notes or name pegs for the closing check.

Steps

✎ Opening (5 min)

"Last time, nobody could buy everything with 10 coins. So every time we choose, we get something and we give something up." Show the mat. "What I get is the benefit. What I give up is the cost."

✎ Main activity (25 min)

1. **Story choices (12 min).** Read each card; pairs put a picture or word in each column of the mat, then share.
2. Duck has 10 coins. Duck buys a kite (8 coins) and an apple (2 coins). (Benefit: a kite to fly and an apple. Cost: all 10 coins; Duck can't buy the book this week.)
3. Goat has 10 coins and wants the kite and the book, which cost 8 coins each. Goat chooses the book. (Benefit: the book. Cost: the kite, and 8 coins.)
4. Mouse can finish a painting or go to the park with friends before tea. Mouse finishes the painting. (Benefit: the painting is done. Cost: missing the park this time.) "A cost isn't always coins; it can be time."
5. Mayor Hen has enough town money for a new swing or a new bench in the park, not both. The town chooses the swing. (Benefit: more children can play. Cost: no new bench to sit on.)

6. **Shop round (13 min).** Small groups visit the class shop, using the class kite rule from lesson 4. Before paying, each child tells a partner "I'm buying ___; I'm giving up ___." The partner listens and checks the price. Goods go back afterwards. Meanwhile, start the private checks (see the unit overview).

✓ Discussion questions (5 min, with answers)

1. "Did Goat make a wrong choice?" (No; Goat chose what mattered most to Goat. Different people can make different choices.)
2. "Is a cost always money?" (No; it can be time, or another thing you could have had, like Mouse's trip to the park.)
3. "Why did Mayor Hen have to choose?" (The town didn't have enough money for both; there wasn't enough, like the kites.)

✓ Closing check (5 min, with answers)

Read: "Bear has 10 coins and buys the ball for 7 coins." Each child tells a partner or the adult one benefit (the ball) and one cost (7 coins, or another thing Bear could have bought). Mark who named both.

Vocabulary

choice, choose, benefit, cost, give up, decide

Differentiation

- Support: use story cards 1 and 2 only; the adult asks "What did Duck get?" and "What can't Duck have now?" as two separate questions.
- Extension: make a new story choice card for a Little Hill character and fill in the mat.
- Children can show benefit and cost by sorting pictures, pointing, signing or AAC; their own way counts.

⚠ Safety

- Only story characters and pretend coins. Never ask what children or their families spend money on, or what they had to give up at home.

Teacher notes and misconceptions

- Children often think "cost" only means the price. Card 3 has no money at all, so it helps show that time and other choices are costs too.
- Keep choices neutral: there is no "right" good to buy.

Grade 2 Society: How Letters Changed: Sources, the First Stamps and the People Who Changed Them (5 lessons, about 3 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 every activity against your school's rules.
>
> Text-checked by two other agents (Gemini 4 Carbon, Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 2. Builds on grade 1: Then and now: timelines and old and new objects and the society progression

Big idea

Some parts of life change and some stay the same. People have always wanted to send news to someone far away, but the ways messages travel, and who pays for them, have changed. We can find out about a change from sources, and we can ask questions about the people and groups who helped to make it happen. A big change is usually the work of many people, not just one, and one change can lead to another.

This is the second society unit of grade 2 (term 2). It builds on the grade 1 unit Then and now: timelines and old and new objects (three time bands, kinds of source, museum-style labels). Grade 2 adds one real change with real dates (paying for letters in the United Kingdom, and the first sticky postage stamp in 1840), the people and groups behind it, reasons for a change, and two different accounts of the same event.

Outcomes

By the end of the unit most children can:

1. Sort picture cards of ways of sending a message into long ago, when today's grown-ups were small, and now, give one clue for a choice, and say one thing that changed and one thing that stayed the same.
2. Name at least three kinds of source (an object, a picture, a piece of writing, a label) and, from a made-up source read aloud by an adult, find who made it, where and when, and ask one question about it.
3. Say who usually paid for a letter in the United Kingdom before 1840 (the person who received it) and who paid after (the person who sent it, with a stamp).
4. Ask one question about a person or group who helped make the change, and say that more than one person helped.
5. Give one possible reason why the change happened, and put four dated cards about the change in time order with help.
6. Compare two made-up accounts of the same event and say one way they are different.

Prior knowledge

- Grade 1 society term 2: first, next, before, after; three time bands; kinds of source; museum-style labels.
- Grade 2 society term 1: everyone in a community plays a part; goods and services; prices (made-up coins).
- Grade 2 mathematics term 2: counting and comparing numbers, used for the pretend coins. The years on the timeline cards (1835 to 1841) are read aloud by the adult; children do not need to read four-digit numbers.
- No reading is needed. Every card has a picture; words on cards are for the adult.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week.

1. Sending a message, then and now: Hen's letter and Duck's message; sorting message picture cards into three time bands; what changed and what stayed the same.
2. What can a source tell us?: a made-up Little Hill source pack (a folded letter, Mouse's diary page, a museum label, an unused envelope); finding maker, place and date; asking questions of a source.
3. Who paid for a letter?: the real change in the United Kingdom in 1840; playing the old way and the new way with pretend coins; the Penny Black.
4. Who helped make the change?: "Who helped?" cards about real people and groups; building questions with who, what, why and how; how people might have felt then.
5. One change leads to another: the cancel-mark problem and the Penny Red; a class timeline; two made-up accounts of the day stamps came to Little Hill.

Materials (whole class unless noted)

- Three time-band cards from grade 1: "long ago", "when today's grown-ups were small", "now" (lesson 1, lesson 5).
- Six message picture cards, drawn by the teacher from the descriptions in lesson 1 (lesson 1).
- A large "Changed / Stayed the same" chart on the board or on paper (lesson 1, lesson 5).
- Made-up source pack, one copy per group of four, made from the text in lesson 2: a picture of Hen's folded letter, Mouse's diary page, a museum label for a mail bag, and an unused, unaddressed envelope (lesson 2).
- "Maker / Place / Date" card for each group (lesson 2).
- Sticky notes or paper slips and pencils (lessons 2, 4).
- Large swallow-safe counters as pretend coins, about 10 per pair (lesson 3).
- Paper "letters": scrap paper folded once, some single sheets and some double sheets (lesson 3).
- Two floor signs, "Near" and "Far", with a picture (lesson 3).
- Paper squares about 3 cm across, cut by an adult, as pretend stamps, and glue sticks (lesson 3).
- A printed picture of the Penny Black and, for lesson 5, the Penny Red. The stamps are from 1840 and 1841; pictures of them are on their Wikipedia pages. Check the licence page of any picture you print (lessons 3, 5).
- A globe or world map, if the class has one (optional; lesson 3).
- Five "Who helped?" cards, from the text in lesson 4 (lesson 4).

- Question starter cards: Who? What? Why? How? What if? (lesson 4).
- A "Question wall": a large sheet for sticky notes (lessons 4, 5).
- Four dated timeline cards and one "now" card, from the text in lesson 5 (lesson 5).
- Two made-up account cards, Mouse's and Goat's, from the text in lesson 5 (lesson 5).
- For blind or low-vision children: raised-line versions of the message cards and time-band cards (glue string or puffy paint on the outline), a real folded paper letter and a real envelope to hold, and a stamp-sized paper square to feel (all lessons).

⚠ Safety and access

- **Privacy.** Never ask who children send messages to, whether their family has a phone or computer, what their address is, or how much their family spends. Every letter, address and account in this unit belongs to a made-up Little Hill character. Envelopes stay unaddressed.
- **Nothing is licked.** Pretend stamps are paper squares stuck with a glue stick. Do not use real lick-and-stick stamps or envelopes.
- Counters are large enough not to be swallowed; check with your school's rules for the age group. Adults cut the paper squares.
- Movement to the "Near" and "Far" signs in lesson 3 is walking only; a child can stay seated and send a partner, or point.
- 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 card while it is described, and face the class when reading sources aloud. Blind and low-vision children: use the raised-line cards and real objects listed in Materials; describe each picture in words. Colour is never the only clue (the Penny Black and Penny Red are also told apart by name and story).
- Some children may know that the stamps show a queen. Say who she was in one sentence (lesson 3) and do not ask for opinions about kings and queens.

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 cards (answers in brackets):

1. "Put these three in order: long ago, when grown-ups were small, now." Use the walking-letter card, the wall-phone card and the screen card. "Tell me one clue." (Walking letter, wall phone, screen; any sensible clue, such as "no screens long ago". Accept the wall phone in either of the first two bands with a reason.) Then: "One thing that changed? One thing that stayed the same?" (Changed: how fast, how it travels, who carries it. Same: people still send news to people far away.) (Outcome 1.)
2. Read the mail-bag label aloud: "Who made it? Where? When?" (The Little Hill leather shop; Little Hill; long ago, about the time of the first stamps.) "What kind of source is it?" (A label; the bag is an object.) "Ask me one question about the bag." (Any question.) (Outcome 2.)
3. "Long ago in the United Kingdom, before stamps, who usually paid for a letter? After 1840, who paid?" (The person who got it; the person who sent it, with a stamp.) (Outcome 3.)
4. "Ask me one question about someone who helped make the change." "Was it one person or more than one?" (Any question about a person or group; more than one.) (Outcome 4.)

5. "Why do you think they changed it?" (Any sensible reason: it was cheaper, simpler, fairer, so people would send more letters.) With the four dated cards read aloud: "Put them in order." (1835 Wallace, 1837 Hill's idea, 1840 Penny Black, 1841 Penny Red.) (Outcome 5.)
6. "Mouse and Goat told the story of the same day. Tell me one way their stories are different." (Mouse was happy not to collect coins; Goat did not like paying first, or similar.) (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 K-2 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:

- D2.His.1.K-2: "Create a chronological sequence of multiple events." (Lesson 5.)
- D2.His.2.K-2: "Compare life in the past to life today." (Lessons 1, 3.)
- D2.His.3.K-2: "Generate questions about individuals and groups who have shaped a significant historical change." (Lesson 4.)
- D2.His.4.K-2: "Compare perspectives of people in the past to those of people in the present." (Lesson 4.)
- D2.His.6.K-2: "Compare different accounts of the same historical event." (Lesson 5; the accounts are made up, see Known gaps.)
- D2.His.9.K-2: "Identify different kinds of historical sources." (Lesson 2.)
- D2.His.10.K-2: "Explain how historical sources can be used to study the past." (Lesson 2.)
- D2.His.11.K-2: "Identify the maker, date, and place of origin for a historical source from information within the source itself." (Lesson 2.)
- D2.His.12.K-2: "Generate questions about a particular historical source as it relates to a particular historical event or development." (Lesson 2.)
- D2.His.14.K-2: "Generate possible reasons for an event or development in the past." (Lessons 3, 5.)
- D2.His.16.K-2: "Select which reasons might be more likely than others to explain a historical event or development." (Lesson 3.)

The facts about letters and stamps come from three Wikipedia articles, read on 11 November 2026:

- "Penny Black": https://en.wikipedia.org/wiki/Penny_Black (first issued 1 May 1840, valid from 6 May; the receiver usually paid before, by the sheet and the distance; one penny for a letter up to half an ounce, whatever the distance; about 2,600 design entries, none chosen; Queen Victoria's profile; engraved by Charles Heath and his son Frederick; sheets cut with scissors; red cancel marks were hard to see and easy to remove, so in February 1841 the stamp became the Penny Red and the cancel ink black).
- "Rowland Hill (postal reformer)": https://en.wikipedia.org/wiki/Rowland_Hill_(postal_reformer) (a teacher, inventor and reformer, "usually credited" with the postage stamp; argued that cheaper letters would mean more letters; letters sent in the UK more than doubled in 1840; stamps in Switzerland and Brazil within three years and in 90 countries by 1860).

- "Uniform Penny Post": https://en.wikipedia.org/wiki/Uniform_Penny_Post (Robert Wallace began the campaign for cheap postage in 1835; Hill set out his plan on 13 February 1837).

Little Hill, its characters, the message picture cards, the made-up sources, the pretend prices in lesson 3 and the two accounts in lesson 5 are the author's own examples, not from a source.

Known gaps and cautions

- Two other agents (Gemini 4 Carbon and Gemini 4 Argon, both at 0648eb0) text-checked this unit on 2026-11-11 and reported no errors. Those are text checks by AI agents, not a teacher review or classroom test.
- The real example is from the United Kingdom because those are the sources the author read. Teachers elsewhere may swap in a change from their own country's history, if they have a source for it.
- The two accounts in lesson 5 are made up. D2.His.6 asks for accounts of a historical event; a teacher with real letters or newspaper reports from 1840 could use short read-aloud extracts instead.
- The time-band sorting in lesson 1 uses the author's picture descriptions; the answers given are the author's, and good reasons for other answers count. No dates are claimed for the message pictures.
- The unit does not say how much a penny was worth in 1840 compared with today; the sources read do not say. If children ask, it is a good question for the Question wall.
- Wikipedia is a starting point, not a final authority; a teacher may want to check the dates against a museum or postal-history source.
- Rowland Hill is "usually credited" with the stamp; lesson 4 is written so that children see several people and groups, not one hero.

Lesson 1: Sending a message, then and now

Unit overview - Next: What can a source tell us?

Back to the grade 2 year plan

Goal

Children sort pictures of ways of sending a message into three time bands, give a clue for their choice, and say one thing that changed and one thing that stayed the same.

Materials

- Three time-band cards: "long ago", "when today's grown-ups were small", "now".
- Six message picture cards (see below), drawn by the teacher.
- A large "Changed / Stayed the same" chart.
- For blind or low-vision children: raised-line versions of the message cards and time-band cards, and a real folded paper letter to hold.

The six message picture cards (the author's descriptions, not from a source):

1. A person walking along a path over hills, holding a folded letter.
2. A rider on a horse with a bag of letters.
3. Horses pulling a coach with a bag of letters on the roof.
4. A person at a post box with an envelope that has a stamp on it.
5. A person talking into a telephone fixed to a wall, with a curly cord.
6. A person typing a message on a small screen.

Steps

✎ Opening (5 min)

Tell the story (the author's own): "Long ago in Little Hill, Hen wanted to tell her friend Goat, who lived over the hills at Far Hill, that her eggs had hatched. She wrote a letter, folded it, and Mouse carried it over the hills. It took Mouse two days to get there. Today, Duck in Little Hill wants to tell Goat about a new kite. Duck types a message on a screen, and Goat reads it straight away."

Ask: "What did Hen and Duck both want to do?" (Tell Goat some news.)

✎ Main activity (25 min)

1. Lay the three time-band cards on the floor in order, left to right. Remind the class of grade 1: long ago, when today's grown-ups were small, now.
2. Show each message card in turn and describe it aloud. Give pairs a card.
3. Each pair puts its card in a time band and gives one clue ("There are horses, and nobody has a phone"). Other pairs say whether they agree.

4. Author's suggested sorting (accept other answers with a good reason): cards 1, 2 and 3 long ago; card 4 could be any band (people still post letters); card 5 when today's grown-ups were small, or long ago; card 6 now.
5. Fill in the chart together:
    - Changed: how fast the message gets there; what carries it (feet, horse, coach, wires, screen); who carries it.
    - Stayed the same: people still want to send news to people far away; letters and post boxes are still used.
6. Point at card 4: "Who paid for this letter to travel?" Take guesses and leave the question open: "We will find out in lesson 3."

✓ Discussion questions (5 min, with answers)

- "Why did Hen's letter take two days?" (Mouse walked over the hills; there was no faster way in the story.)
- "Is anything on our 'stayed the same' list still true in Little Hill today?" (Yes: Duck still wanted to tell Goat news.)
- "Is fast always better?" (Any reasoned answer: a letter can be kept and read again; a fast message is good for urgent news.)

✓ Closing check (5 min, with answers)

Hold up card 2 (the rider). Each child tells a partner or the adult one thing that changed and one thing that stayed the same, compared with card 6. (Changed: a horse then, a screen now; slower then. Same: someone is sending news.) Mark who gave both.

Vocabulary

long ago, now, then, change, changed, stayed the same, message, letter, send, carry

Differentiation

- Support: sort only cards 1 and 6 into "long ago" and "now"; the adult offers two clues and the child picks one.
- Extension: draw a seventh card for "now" or "long ago" and give a clue.
- Children can place cards by pointing, signing or AAC, or ask a partner to move them. The time-band cards can go on a table for a wheelchair user.

⚠ Safety

- Do not ask children who they send messages to, or whether their family has a phone or computer. Talk only about Hen, Duck, Mouse and Goat.

Teacher notes and misconceptions

- Children may say "long ago" means "when my teacher was small". Use the three bands to separate the two.
- Card 4 is a deliberate "both" card: some old things are still used. That is a "stayed the same" clue, not a mistake.

Lesson 2: What can a source tell us?

Unit overview - Previous: Sending a message, then and now - Next: Who paid for a letter?

Back to the grade 2 year plan

Goal

Children name kinds of source, find who made a source, where and when, from what is written on it, and ask a question about it.

Materials

- Made-up source pack, one per group of four (text below): a picture of Hen's folded letter, Mouse's diary page, a museum label for a mail bag, and an unused, unaddressed envelope.
- "Maker / Place / Date" card for each group.
- Sticky notes or paper slips and pencils.
- For blind or low-vision children: a real folded paper letter and a real envelope to hold.

The made-up source pack (the author's own, for Little Hill):

1. **Picture of Hen's folded letter.** Draw a sheet of paper folded into a small packet, with no envelope. On the outside write: "To Goat, Top Farm, Far Hill. From Hen, Little Hill. Spring, long ago. Goat to pay 3 coins."
2. **Mouse's diary page.** "Spring, long ago. Little Hill. Today I carried three letters to Far Hill. It took two days. Goat had to pay 3 coins for Hen's letter. He said, 'That is a lot of coins!' My feet are tired. Written by Mouse."
3. **Museum label.** "Mail bag. Made by the Little Hill leather shop. Place: Little Hill. Date: long ago, about the time of the first stamps. Used by Mouse to carry letters."
4. **An unused envelope.** A real, clean envelope with nothing written on it.

Steps

✎ Opening (5 min)

Ask: "In grade 1 we found out about the past from sources. What kinds of source can you remember?" (Objects, pictures, labels, writing, what people remember.) Write the kinds on the board with a small drawing for each.

✎ Main activity (25 min)

1. Give each group the pack. An adult reads each paper source aloud while the group looks at it (or holds it).
2. Groups sort the four sources by kind: picture (Hen's letter), writing (Mouse's diary), label (the museum label), object (the envelope). Accept "writing" for the letter too: it is a picture of writing.

3. **Maker, place, date.** For the letter, the diary and the label, the group finds who made it, where and when, using only the words on it. The adult reads again on request. Answers:
    - Letter: Hen; Little Hill; spring, long ago.
    - Diary: Mouse; Little Hill; spring, long ago.
    - Label: the Little Hill leather shop; Little Hill; long ago, about the time of the first stamps.
4. Ask: "Can the envelope tell us who made it, where or when?" (No: nothing is written on it. A source does not always tell us everything.)
5. **What does it tell us?** Each group chooses one source and says one thing it tells us about Little Hill long ago (Goat paid to get the letter; letters took two days; Mouse carried letters in a bag).
6. **Ask the source a question.** Each group writes or draws one question on a sticky note ("Why did Goat pay and not Hen?", "Who paid Mouse?"). Keep the notes for the Question wall in lesson 4.

✓ Discussion questions (5 min, with answers)

- "Mouse's diary and Hen's letter both say Goat paid 3 coins. Does that help us believe it?" (Yes: two sources agree. It is still a clue, not proof.)
- "What does Mouse's diary tell us that the letter does not?" (It took two days; Mouse's feet were tired; Goat thought it was a lot of coins.)
- "Who paid for Hen's letter?" (Goat, who got it. Ask whether that is the same today and leave it for lesson 3.)

✓ Closing check (5 min, with answers)

Read the label aloud again. Each child shows or tells a partner who made the mail bag, where, and when. (The Little Hill leather shop; Little Hill; long ago, about the time of the first stamps.) Mark who found all three.

Vocabulary

source, object, picture, writing, label, diary, maker, place, date, clue, question

Differentiation

- Support: find only the maker on the label, with the adult pointing to the line.
- Extension: make a label for a classroom object, with maker, place and date (made up or from the object itself).
- Children can answer by pointing, signing, AAC or drawing; a partner can write their question.

⚠ Safety

- Envelopes stay unaddressed. Do not ask children for their own address or anyone else's. All names and places are Little Hill ones.

Teacher notes and misconceptions

- Children may think a source is always true. Mouse's diary is one person's view; "a lot of coins" is Mouse's and Goat's opinion.
- The sources in this lesson are made up for practice. Say so to the class: "These are pretend sources from Little Hill. In lesson 3 we look at a real change."

Lesson 3: Who paid for a letter?

Unit overview - Previous: What can a source tell us? - Next: Who helped make the change?

Back to the grade 2 year plan

Goal

Children learn a real change: in the United Kingdom before 1840 the person who received a letter usually paid for it, by the distance and the number of sheets; from 1840 the sender paid one penny with a small sticky stamp. They play both ways and suggest reasons for the change.

Materials

- Large swallow-safe counters as pretend coins, about 10 per pair.
- Paper "letters": scrap paper folded once, some single sheets and some double sheets.
- Two floor signs, "Near" and "Far", with a picture.
- Paper squares about 3 cm across, cut by an adult, as pretend stamps, and glue sticks.
- A printed picture of the Penny Black (check its licence page).
- A globe or world map, if the class has one (optional).
- For blind or low-vision children: a stamp-sized paper square to feel, and a real folded paper letter.

Steps

✎ Opening (5 min)

Remind the class: in Little Hill, Goat paid for Hen's letter. Say: "That part of the story is pretend, but something like it really happened. Long ago in a real country, the United Kingdom, the person who got a letter usually paid for it when it arrived."

✎ Main activity (25 min)

1. **The old way (before 1840).** Put the "Near" and "Far" signs at two ends of the room. Pairs take turns: one is the sender, one the receiver. The sender hands the letter to the adult, who "carries" it to the receiver at "Near" or "Far". The receiver pays the adult in pretend coins using the class rule (made up for this game, not real prices):
    - Near: 1 coin. Far: 3 coins.
    - A double sheet costs 1 more coin. Pairs count what they paid after three letters.
2. **Tell the real story** (from the Wikipedia articles listed in the unit Sources): "In the United Kingdom, nearly 200 years ago, the price of a letter depended on how far it went and how many sheets of paper it had, and the person who got it usually paid. Then there was a big change. From May 1840, a letter that was not too heavy cost one penny to send anywhere in the country, near or far. The person sending it paid, and stuck on a small paper stamp to show it was paid. The first stamp was called the Penny Black." Show the picture. "The face on it is Queen Victoria, who was the queen of the United Kingdom then."

3. **The new way (from 1840).** Play again. Now the sender pays the adult 1 coin before sending, near or far, and glues a pretend stamp on the letter. The receiver pays nothing. Pairs count again.
4. Compare the two rounds on the board: who paid, how many coins, and how long it took to play each round.
5. **Why change?** Pairs give one possible reason for the change. Write every reason on the board (simpler, fairer for people far away, the carrier did not have to collect coins at every door, cheaper so people might send more letters).
6. **Which reason is more likely?** Tell the class one clue from the sources: the man usually credited with the idea, Rowland Hill, argued that if letters were cheaper, people would send more; and in 1840, the first year, the number of letters sent in the United Kingdom more than doubled. Ask: "Which of our reasons does that clue help?" (Cheaper so people send more.) Say that the other reasons may also be true; a clue makes one reason more likely, it does not make the others wrong.

✓ Discussion questions (5 min, with answers)

- "In the old way, who paid more: someone near or someone far?" (Far.)
- "Why did the letter need a stamp in the new way?" (To show it was already paid.)
- "How is that different from Hen's letter in Little Hill?" (Goat, who got it, paid. In the new way the sender pays.)

✓ Closing check (5 min, with answers)

Each child shows or tells the adult: "Before 1840, who usually paid for a letter? After 1840, who paid?" (The person who got it; the person who sent it, with a stamp.) Mark who gave both.

Vocabulary

pay, sender, receiver, stamp, penny, price, near, far, the United Kingdom, reason

Differentiation

- Support: play only near letters, one round each way; the adult says "you pay" or "they pay" with a gesture.
- Extension: work out how many coins Goat would pay for a far letter with a double sheet in the old way (3 + 1 = 4).
- A child can stay seated and send a partner to the signs, or point to "Near" or "Far" on a card. Pretend stamps can be pressed on by an adult for a child who prefers not to use glue.

⚠ Safety

- Nothing is licked; stamps are paper squares with a glue stick.
- Counters are large and swallow-safe; collect and count them at the end.
- Walking only between the signs; keep the path clear.

- Do not ask about money at home or how much real stamps cost a family.

Teacher notes and misconceptions

- The near/far prices in the game are made up. The real old prices were more complicated; the sources read for this unit do not give a simple table.
- Children may think a penny then was the same as a penny now. The sources read do not say what it was worth; put the question on the Question wall.
- "The United Kingdom" can be shown on a globe or world map if the class has one, without discussing anyone's home country.

Lesson 4: Who helped make the change?

Unit overview - Previous: Who paid for a letter? - Next: One change leads to another

Back to the grade 2 year plan

Goal

Children hear about several real people and groups who helped make the change to stamps, ask questions about them, and think about how people then might have seen letters differently from people now.

Materials

- Five "Who helped?" cards (text below), each with a simple drawing (a person speaking, a person writing, a pile of drawings, two people carving). The facts are from the Wikipedia articles in the unit Sources.
- Question starter cards: Who? What? Why? How? What if?
- The Question wall, with the sticky notes from lesson 2.
- Sticky notes or paper slips and pencils.

The "Who helped?" cards:

1. **Robert Wallace.** In 1835 he told a group set up by the government that if more people used the post, the post would earn more money. He started the campaign for cheaper letters.
2. **Rowland Hill.** A teacher and inventor. In 1837 he set out a plan for letters to be paid for before they were sent, with a stamp. He is usually given the credit for the postage stamp.
3. **Henry Cole.** He worked with Rowland Hill and helped run a competition for people to design the new stamps.
4. **The people who sent designs.** About 2,600 designs were sent in. None of them was chosen; a simple design that Hill liked, with the queen's face, was used instead.
5. **Charles Heath and his son Frederick.** They engraved the queen's face: they cut the picture into metal so that it could be printed.

Steps

✎ Opening (5 min)

Ask: "Last lesson, who did I say was usually given the credit for the stamp?" (Rowland Hill.) "Do you think one person did it all?" Take a quick show of hands; do not say the answer yet.

✎ Main activity (25 min)

1. Read each "Who helped?" card aloud and show its drawing. Put the cards in a row on the board.
2. Ask again: "One person or many?" (Many: at least five people or groups on our cards, and others we do not know about.) Ask who else might have helped (people who

carried letters, printers, people who sold stamps). Say: "Those are good guesses. We would need a source to know more about them."

3. **Question builder.** Groups of four get one card each (one group may get two) and the question starter cards. Each child makes one question about their person or group, using a starter. Examples: "Why did Robert Wallace want cheaper letters?", "How did Charles Heath cut the picture?", "What if nobody had sent any designs?" An adult writes or the child draws.
4. Groups stick their questions on the Question wall next to their card. Add the lesson 2 notes too.
5. Sort the wall together into "Our cards can answer this" and "We need another source". Answer the first kind together from the cards.

✓ Discussion questions (5 min, with answers)

These ask how people might have seen things, so there is no single answer.

- "Long ago, if a letter from far away came and you had to pay a lot, how might you feel?" (Happy to get news, but worried about paying; any reasoned answer.)
- "When the price became one penny, who might have been pleased?" (People who lived far from their friends; people who wanted to send more letters; the carriers, who did not have to collect coins.)
- "Today, how might someone feel getting a message? Is that the same or different?" (Any reasoned answer; people then and now both like news.)

✓ Closing check (5 min, with answers)

Each child tells or shows the adult one question about a person or group on the cards, and answers: "Was it one person or more than one?" (Any question about a person or group; more than one.) Mark who did both.

Vocabulary

question, who, what, why, how, credit, design, competition, engrave, group

Differentiation

- Support: choose a question starter card and point to a person; the adult helps build the question aloud.
- Extension: write two questions, one that the cards can answer and one that needs another source.
- Questions can be signed, said with AAC or drawn; a partner can write them.

⚠ Safety

- Talk about the people on the cards and Little Hill characters only. Do not ask about family members who work in a post office or about anyone's letters at home.

Teacher notes and misconceptions

- "Usually given the credit" is the source's wording. It helps children see that history books choose whom to name, and that others helped too.
- Keep to what the cards say. If a child asks something the cards cannot answer, it belongs on the "We need another source" side; do not guess an answer as if it were a fact.

Lesson 5: One change leads to another

Unit overview - Previous: Who helped make the change?

Back to the grade 2 year plan

Goal

Children hear how the first stamp caused a new problem that led to another change, put dated cards in time order, and compare two made-up accounts of the same event.

Materials

- Printed pictures of the Penny Black and the Penny Red (check their licence pages).
- Four dated timeline cards and one "now" card (text below), each with a drawing.
- Three time-band cards from lesson 1.
- Two made-up account cards, Mouse's and Goat's (text below).
- The "Changed / Stayed the same" chart from lesson 1, and the Question wall.
- For blind or low-vision children: a stamp-sized paper square to feel, and the account cards read aloud.

The timeline cards (facts from the Wikipedia articles in the unit Sources):

- **1835:** Robert Wallace starts the campaign for cheaper letters.
- **1837:** Rowland Hill sets out his plan for paid-in-advance letters with a stamp.
- **1840 (May):** the Penny Black, the first sticky postage stamp, is used.
- **1841 (February):** the stamp changes to the Penny Red, and the ink for marking used stamps changes to black.
- **Now:** a picture of a post box and a screen.

The two accounts (made up by the author, about Little Hill):

- **Mouse's account.** "The day stamps came to Little Hill was the best day! Everyone pays when they send a letter now, so I do not have to wait at every door for coins. My bag was full of letters."
- **Goat's account.** "The day stamps came to Little Hill was a muddle. Now I have to pay before I send a letter, and I have to cut each stamp off the sheet with scissors. But I do like getting Hen's letters without paying."

Steps

✎ Opening (5 min)

Show the Penny Black. "When a letter was posted, workers marked the stamp so it could not be used again. On the Penny Black they used red ink." Ask: "Can you see a problem?" Give a clue if needed: red on black is hard to see.

✎ Main activity (25 min)

1. **The next change** (10 min). Tell the class: "The red marks were hard to see on the black stamp, and the red ink was easy to wash off. So some people could use a stamp again. In February 1841 the stamp was changed to red, the Penny Red, and the marking ink was changed to black." Show the Penny Red. Ask: "Why did they change the colours?" (So the mark was easy to see and hard to wash off.) Add to the chart: one change led to another.
2. **Timeline** (7 min). Read the four dated cards aloud, one at a time, with the year said clearly. Give them to four children to stand in order; the class helps. Then place the "now" card at the end and lay the time-band cards above: all four dated cards are "long ago". (1835, 1837, 1840, 1841, now.)
3. **Two accounts** (8 min). Read Mouse's and Goat's accounts aloud. Say: "These are pretend accounts of the same pretend day." In pairs, children find one thing that is the same (stamps came; people pay when they send) and one thing that is different (Mouse is happy; Goat finds it a muddle, but likes one part).

✓ Discussion questions (5 min, with answers)

- "Why might Mouse and Goat tell it so differently?" (Mouse carries letters, so not collecting coins helps; Goat now pays first and cuts stamps.)
- "Is one of them lying?" (No: they had different jobs and saw different parts of the change. Two true accounts can still be different.)
- "If we had only Mouse's account, what might we think?" (That everyone was happy.) "So why is it good to read more than one source?" (To see more of what happened.)

✓ Closing check (5 min, with answers)

Each child tells or shows a partner one way Mouse's and Goat's accounts are different. (Mouse is happy; Goat finds it a muddle; Goat has to cut stamps; Mouse does not wait for coins.) Mark who gave a difference.

Then begin the one-to-one assessment in the README over the next week.

Vocabulary

timeline, order, before, after, account, the same, different, problem, change, mark

Differentiation

- Support: order only two cards (1840 and now), and find one difference with the adult pointing to Mouse's and Goat's faces.
- Extension: write a third account of the same day, from Hen, and say how it is different.
- Children can order the cards on a table rather than standing, and answer by pointing, signing, AAC or drawing.

⚠ Safety

- The accounts belong to Little Hill characters. Do not ask children to write about real people they know.
- Use pictures of the stamps; real old stamps are not needed.

Teacher notes and misconceptions

- Children may think that once a change is made, it is finished. The cancel mark story shows that people keep fixing new problems.
- Children may read "1840" and "1841" as very far apart. Point out they are next-door years.
- The accounts are made up, not real 1840 sources. A teacher with short real extracts from the time could use them instead.

Grade 2 Society: Places Near and Far: Weather, Land and a Parcel's Journey (5 lessons, about 3 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 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 2 year plan - Term 3. Builds on grade 1: Maps, keys and globes and the society progression

Big idea

The weather and the land of a place shape how people live there: what they wear, how they build, and what work they do. No place has everything it needs, so people, goods and ideas move from place to place, near and far. A map with a key helps us follow how they travel.

This is the third society unit of grade 2 (term 3). It builds on the grade 1 unit Maps, keys and globes (looking down from above, symbols and a key, land and water on a globe) and on the grade 2 term 1 unit People, jobs and choices (goods and services). Grade 2 adds three different kinds of place, the link between land and work, needs met from near and from far, and one journey followed on a map.

All three places are made up: Little Hill (a small town by a river), Snowy Peak (a small village high on a mountain) and Big Harbour (a busy city by the sea). Using made-up places means no real town, country or group of people is described in a way that might be unfair to it. See Known gaps.

Outcomes

By the end of the unit most children can:

1. Describe the weather and the land of one of the three places and say one way they change how people live there (clothes, homes or work).
2. Match a job to a place and give a reason that uses the land or the water (for example, "fishing at Big Harbour, because it is by the sea").
3. Say whether something a character needs comes from near or far, and say one way two places meet their needs differently.
4. Use the key on the Little Hill map to name the symbols along a route and say what each one stands for.
5. Put the parcel's journey in order and say two ways it travelled.
6. Give one reason why goods, people or ideas move from place to place, and name one idea that moved in the unit.

Prior knowledge

- Grade 1 society term 3: maps are drawn as if looking down from above; symbols and a key; land and water on a globe.
- Kindergarten society: near, far, next to, in front of, behind.
- Grade 2 society term 1: goods and services; jobs in a community.
- Grade 2 science term 3: habitats; plants and animals live where their needs are met. Lesson 1 makes the same point for people.
- No reading is needed. Every card has a picture; words on cards are for the adult.

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 is it like there?: three place posters; weather and land cards; sorting clothes and home cards to the place they suit.
2. Land and work: job cards; matching each job to the place whose land or water it needs; "Could this job happen here?"
3. Near and far for what we need: needs cards for a character in each place; sorting "from near" and "from far"; comparing a village, a town and a city.
4. Following a parcel: Goat's scarf travels from Snowy Peak to Duck in Little Hill on a big floor map with a key; journey cards in order.
5. Goods, people and ideas on the move: why things move; a song travels in a letter; pairs draw a parcel route with their own key.

Materials (whole class unless noted)

- Three large place posters, drawn by the teacher from the descriptions in lesson 1: Little Hill, Snowy Peak, Big Harbour (all lessons).
- Four weather cards: sun, rain cloud, snowflake, wind (lesson 1).
- Twelve picture cards, from the list in lesson 1: six clothes cards and six home cards, one set per group of four (lesson 1).
- Nine job cards, from the list in lesson 2, one set per group of four (lesson 2), plus three extra cards for the whole class: a teacher, a baker, a doctor (lesson 2).
- A large "Could this job happen here?" chart (lesson 2).
- Nine needs cards, from the list in lesson 3, one set per group of four, and a "From near / From far" sorting mat per group (lesson 3).
- The Little Hill floor map, about 2 m by 1.5 m on joined paper or an old sheet, drawn by the teacher from the description in lesson 4, with a key of eight symbols (lessons 4, 5).
- A small closed box as the parcel, with a paper scarf drawn on the label (lessons 4, 5).
- Six journey cards, from the text in lesson 4, one set per group of four (lesson 4).
- Goat's letter, from the text in lesson 5, read aloud by an adult (lesson 5).
- An A4 sheet with three places drawn in the corners (Big Harbour, Little Hill, Snowy Peak), one per pair, and crayons (lesson 5).
- Sticky notes or paper slips and pencils (lessons 2, 3, 5).
- A globe or world map, if the class has one (optional; lesson 1).
- For blind or low-vision children: raised-line versions of the place posters, weather cards and map symbols (glue string or puffy paint on the outline), a piece of knitted fabric or a knitted glove, a smooth stone and a small cloth bag of dry sand to feel, a sorting mat with a raised

line down the middle (lesson 3), and string with glue sticks to make a raised route on a raised-outline A4 sheet (lesson 5) (all lessons unless noted).

⚠ Safety and access

- **Privacy.** Never ask where children or their families live, where they were born, where their relatives are, where they go on holiday, where their family shops, or where their clothes or food come from. Every place, home and parcel in this unit belongs to a made-up character. Children may share something about places they know only if they choose to; do not write it down.
- **Fairness to real places.** Do not ask children to describe real countries or peoples by their clothes, homes or food. If a child does, say: "People in any place live in lots of different ways."
- **Fabric to touch.** Check for wool allergies before passing round knitted fabric; use a cotton or acrylic knit if unsure.
- **Sand bag.** The sand stays inside a closed, tied cloth bag. Check your school's rules on sand with the age group.
- Moving the parcel on the floor map in lesson 4 is walking or kneeling; a child can stay seated and tell a partner where to move it, or point with a pointer from a chair. Leave a clear path round the map for wheelchairs.
- 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 poster while it is described, and face the class when reading aloud. Blind and low-vision children: use the raised-line posters and symbols and the objects listed in Materials; describe each picture in words. Colour is never the only clue (each map symbol has a different shape).

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 posters, cards and floor map (answers in brackets):

1. Point to one poster: "What is the weather like here? What is the land like?" "How does that change how people live?" (Snowy Peak: cold, snowy in winter, steep and high; warm coats, thick walls, sheep on the slopes. Little Hill: often rainy, green valley by a river; raincoats, apple trees, farms. Big Harbour: windy, flat, by the sea; boats, a port, fishing. Any sensible link counts.) (Outcome 1.)
2. Show the fishing-boat card and the sheep card: "Which place does each job belong to? Why?" (Fishing at Big Harbour, because it is by the sea; keeping sheep at Snowy Peak, because of the grassy slopes.) (Outcome 2.)
3. "Goat lives at Snowy Peak. Goat's cheese comes from Goat's own goats. Is that from near or from far?" (Near.) "Goat's apples come from Little Hill. Near or far?" (Far.) "Tell me one way Big Harbour gets food differently from Snowy Peak." (For example, fish from the sea next to it, or lots of things come in on ships.) (Outcome 3.)
4. On the floor map, trace the route from the mountain road to the post office: "What do these symbols stand for?" (Road, bridge, river, railway, station, post office: any three named from the key.) (Outcome 4.)

5. Give the six journey cards: "Put the scarf's journey in order." "How did it travel?" (Knitting, wrapping, mail van down the mountain, train, post office, Duck; any two of van, train, walking.) (Outcome 5.)
6. "Why did the scarf have to travel?" (Duck needed it and it was made far away; Little Hill has no sheep, or similar.) "What idea travelled?" (The Little Hill Market song, in Goat's letter.) (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 K-2 geography 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:

- D2.Geo.2.K-2: "Use maps, graphs, photographs, and other representations to describe places and the relationships and interactions that shape them." (Lessons 1, 4.)
- D2.Geo.3.K-2: "Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places." (Lessons 1, 4.)
- D2.Geo.4.K-2: "Explain how weather, climate, and other environmental characteristics affect people's lives in a place or region." (Lesson 1.)
- D2.Geo.6.K-2: "Identify some cultural and environmental characteristics of specific places." (Lesson 1.)
- D2.Geo.7.K-2: "Explain why and how people, goods, and ideas move from place to place." (Lessons 4, 5.)
- D2.Geo.8.K-2: "Compare how people in different types of communities use local and distant environments to meet their daily needs." (Lesson 3.)
- D2.Geo.9.K-2: "Describe the connections between the physical environment of a place and the economic activities found there." (Lesson 2.)

Two facts come from Wikipedia articles, read on 11 November 2026:

- "Mountain": https://en.wikipedia.org/wiki/Mountain ("High elevations on mountains produce colder climates than at sea level at similar latitude.") Used for Snowy Peak being colder than the towns below.
- "Wool": https://en.wikipedia.org/wiki/Wool ("Most wool used by the textile industry comes from sheep.") Used for Goat's scarf.

Little Hill, Snowy Peak, Big Harbour, their characters, the cards, the map, the parcel's journey and Goat's letter are the author's own examples, not from a source.

Known gaps and cautions

- Three other agents text-checked this unit on 2026-11-11: Gemini 3.8 Flash (at 0e4e47d) and Gemini 4 Carbon (at 7ab413a) reported no errors; Gemini 4 Argon (at 0e4e47d) found that the materials list left out lesson 2's three whole-class job cards, now added. Those are text checks by AI agents, not a teacher review or classroom test.
- The three places are made up. D2.Geo.6 asks about "specific places" and D2.Geo.10 (not covered) asks about "various world regions". A teacher may add one real place, with a

source such as a library book, photographs or a map, after this unit; keep the fairness point in Safety and access.

- The unit does not teach climate zones, the equator or real distances. The only climate fact used is that high mountains are usually colder than land below them.
- The clothes, homes and jobs on the cards are the author's examples of what might suit each place, not rules. People in a cold place can wear thin clothes indoors, and a city by the sea has many jobs that are not fishing. Children who give a good reason for a different answer are right.
- D2.Geo.5 (how human activities change places) and D2.Geo.1 (constructing maps) are only touched on: children draw a simple route map in lesson 5.
- The parcel's route (van, then train) is one made-up example. Real parcels travel in many ways.
- Wikipedia is a starting point, not a final authority.

Lesson 1: What is it like there?

Unit overview - Next: Land and work

Back to the grade 2 year plan

Goal

Children describe the weather and the land of three made-up places, and sort clothes and homes to the place they suit, giving a reason that uses the weather or the land.

Materials

- The three place posters, drawn by the teacher before the lesson:
  - **Little Hill:** a small town in a green valley. A river runs through it, with a bridge. Rain clouds in the sky. Fields, apple trees and a market.
  - **Snowy Peak:** a small village high on a mountain. Snow on the tops. Steep grassy slopes with sheep and goats. A few houses with smoke from the chimneys.
  - **Big Harbour:** a busy city on flat land by the sea. A port with big ships and small fishing boats. Tall buildings, lots of people, flags blowing in the wind, seagulls.
- Four weather cards: sun, rain cloud, snowflake, wind.
- Twelve picture cards per group of four (the answers in brackets are the author's; other answers with a good reason count):
  - Clothes: a woolly hat and gloves (Snowy Peak); a thick padded coat (Snowy Peak); a raincoat (Little Hill); wellington boots (Little Hill); a windproof jacket zipped to the chin (Big Harbour); a sun hat (Big Harbour, on a sunny summer day by the sea).
  - Homes: a house with thick stone walls and a big stove (Snowy Peak); a house with snow piled on its roof (Snowy Peak); a house with a water butt catching rain from the roof (Little Hill); a cottage by the river with an apple tree (Little Hill); a tall block of flats near the port (Big Harbour); a house with strong shutters closed against the wind (Big Harbour).
- A globe or world map (optional).
- For blind or low-vision children: raised-line posters and weather cards, a piece of knitted fabric, a smooth stone and a closed bag of sand to feel.

Steps

✎ Opening (5 min)

1. Show the three posters one at a time. For each, ask: "What can you see? What is the weather like? What is the land like: flat, steep, wet, dry?"
2. Children hold up or point to a weather card for each poster. Accept more than one card: Big Harbour can be windy and sunny.
3. Say: "A place's weather and land are part of what makes it different from other places."

✎ Main activity (25 min)

1. Groups of four get the twelve picture cards and lay the three posters (or small copies) in front of them.
2. **Clothes (10 min).** Groups put each clothes card next to the place where it would help most. For each card, one child says why: "The woolly hat goes to Snowy Peak because it is cold up the mountain."
3. **Homes (10 min).** Groups do the same with the home cards. Ask: "Why would a house at Snowy Peak need thick walls and a big stove?" (To keep warm, because it is cold up high.) "Why catch rain in a water butt at Little Hill?" (It rains a lot; the water can be used in the garden.)
4. **Share (5 min).** Each group shows one card they argued about. Any choice with a reason that uses the weather or the land counts.

✓ Discussion questions (5 min, with answers)

- "Why is Snowy Peak colder than Little Hill?" (It is high up a mountain; high places are usually colder than the land below them.)
- "Could someone at Big Harbour wear a woolly hat?" (Yes, on a cold day. The cards show what might help most, not what everyone wears.)
- "What would change for Duck if Little Hill had no rain all summer?" (Any sensible answer: the river gets low, the apple trees need watering.)

✓ Closing check (5 min, with answers)

Ask each child one question; they answer by pointing, speaking or signing.

1. "Point to the place with snow on the mountain." (Snowy Peak.)
2. "Which place is by the sea?" (Big Harbour.)
3. "Where would wellington boots help most? Why?" (Little Hill, because it rains a lot; or another place with a good reason.)

Vocabulary

weather, land, valley, mountain, steep, flat, port, village, town, city

Differentiation

- **More support:** sort only the clothes cards, with two posters.
- **More challenge:** invent one more card (a coat, a roof, a tool) for a place and explain why it suits the weather or land.
- Children who cannot see the posters use the raised-line versions and feel the knitted fabric (Snowy Peak), the smooth stone (river at Little Hill) and the bag of sand (beach at Big Harbour).

⚠ Safety

- Check for wool allergies before passing round the knitted fabric.
- The sand stays inside the closed bag.
- Do not ask children what clothes they own or what their own home is like.

Teacher notes and misconceptions

- Children may think everyone in a place dresses the same. Say: "People in any place live in lots of different ways. These cards show what might help with the weather."
- Some children may say Big Harbour is hot because it is by the sea. Places by the sea can be hot or cold; Big Harbour is made up, and the poster shows wind, not heat.
- If you have a globe, you can show that real mountains are high places, and that high places are usually colder than the land below (from the Wikipedia article "Mountain"; see the unit Sources).

Lesson 2: Land and work

Unit overview - Previous: What is it like there? - Next: Near and far for what we need

Back to the grade 2 year plan

Goal

Children match jobs to the place whose land or water they need, and give a reason that links the job to the land or the water.

Materials

- The three place posters from lesson 1.
- Nine job cards per group of four (the answers in brackets are the author's):
  - Keeping sheep on the slopes (Snowy Peak).
  - Making cheese from goats' milk (Snowy Peak).
  - Knitting with wool (Snowy Peak).
  - Growing apples (Little Hill).
  - Growing wheat in the fields (Little Hill).
  - A miller whose mill wheel is turned by the river (Little Hill).
  - Fishing from a boat (Big Harbour).
  - Unloading ships at the port (Big Harbour).
  - A lifeboat crew that helps boats in trouble at sea (Big Harbour).
- Three extra cards for the whole class: a teacher, a baker, a doctor.
- A large "Could this job happen here?" chart with three columns (Little Hill, Snowy Peak, Big Harbour).
- Sticky notes or paper slips and pencils.
- For blind or low-vision children: raised-line posters; job cards described aloud.

Steps

✎ Opening (5 min)

1. Recall lesson 1: "What is the land like at Snowy Peak? At Big Harbour?"
2. Show the fishing card. "Could this job happen at Snowy Peak?" (No: there is no sea.) "Where could it happen?" (Big Harbour.)
3. Say: "Some jobs need the land or the water of a place."

✎ Main activity (25 min)

1. Groups sort the nine job cards to the three posters (10 min). For each card one child says the link: "Keeping sheep at Snowy Peak, because there are grassy slopes for them to eat."
2. **Could this job happen here? (10 min).** The teacher reads out three jobs, one at a time, and pins each onto the chart: fishing, growing apples, keeping sheep. For each place, the class shows thumbs up (yes), thumbs down (no) or a flat hand (not sure). A

child gives the reason. Example: "Fishing at Little Hill? Maybe a little, in the river, but not big boats."

3. **Jobs that can happen anywhere (5 min).** Show the teacher, baker and doctor cards. "Do these jobs need a sea, a mountain or a river?" (No: people everywhere need teachers, bread and doctors.) Children draw or write one more job that can happen anywhere on a sticky note.

✓ Discussion questions (5 min, with answers)

- "Why does the miller's mill sit by the river?" (The river turns the mill wheel.)
- "Big Harbour has lots of jobs at the port. Why?" (Ships come into the port, and someone has to unload them; the port is there because the city is by the sea.)
- "If you moved the sheep to Big Harbour, what would they need?" (Grass and space to eat; the city has tall buildings and not much grass.)

✓ Closing check (5 min, with answers)

1. "Which place needs a lifeboat crew? Why?" (Big Harbour; it is by the sea.)
2. "Point to the job that uses the river." (The miller.)
3. "Tell me one job that can happen anywhere." (Teacher, baker, doctor, or another sensible job.)

Vocabulary

job, land, water, slope, port, mill, crew

Differentiation

- **More support:** sort three cards, one per place, with a partner.
- **More challenge:** choose a job and say what would happen to it if the weather changed (for example, a very dry summer for the apple grower).
- Children can sort by pointing, eye-gaze or telling a partner where to put each card.

⚠ Safety

- Do not ask what jobs children's parents or carers do. All jobs belong to made-up characters.

Teacher notes and misconceptions

- Children may think a city by the sea has only fishing jobs. Most jobs in a city do not need the sea; this lesson picks the ones that do.
- The links between job and place are the author's examples. A child who says "you could knit at Big Harbour too" is right: the wool can travel. That idea leads into lesson 3.

Lesson 3: Near and far for what we need

Unit overview - Previous: Land and work - Next: Following a parcel

Back to the grade 2 year plan

Goal

Children sort things that three characters need into "from near" and "from far", and compare how a village, a town and a city meet their needs.

Materials

- The three place posters from lesson 1.
- Nine needs cards per group of four. Each card shows a character, a thing they need and where it comes from (the answers in brackets are the author's):
  - **Goat at Snowy Peak (a village):** cheese from Goat's own goats (near); wool from the sheep on the slopes (near); apples from Little Hill (far).
  - **Duck at Little Hill (a town):** apples from the orchard by the river (near); bread from the Little Hill bakery, made with flour from the fields (near); fish from Big Harbour (far).
  - **Crab at Big Harbour (a city):** fish from the sea next to the city (near); bread made with flour that comes by train from farms far away (far); bananas brought by ship from far away (far).
- A "From near / From far" sorting mat per group: a sheet with two halves, "near" with a picture of a house and "far" with a picture of a road going into the distance.
- Sticky notes or paper slips and pencils.
- For blind or low-vision children: the needs cards read aloud, and a sorting mat with a raised line down the middle and a different texture on each half.

Steps

✎ Opening (5 min)

1. Recall the word **needs** from science (habitats): plants and animals live where their needs are met. "People have needs too: food, water, warm clothes, a home."
2. "Can every place make everything it needs?" Show the Snowy Peak poster. "Can apples grow at Snowy Peak?" (Goat says no: it is too cold up there.)
3. Say: "Some things come from near. Some things have to come from far."

✎ Main activity (25 min)

1. Groups take Goat's three cards and sort them onto the mat (5 min). Check together: two near, one far.
2. Groups sort Duck's three cards, then Crab's three cards (10 min).
3. **Count and compare (10 min).** On the board, draw a table with the three characters and two columns, near and far. Groups say how many of each character's cards are

near and far. (Goat: 2 near, 1 far. Duck: 2 near, 1 far. Crab: 1 near, 2 far.) Ask: "On our cards, who gets more things from far away?" (Crab, in the city.) "Why might that be?" (A city has lots of people and not many fields; ships and trains bring things in.)

✓ Discussion questions (5 min, with answers)

- "Goat gets cheese from near. Crab gets fish from near. Why are they different things?" (Each place has different land and water: goats on the mountain, fish in the sea.)
- "What would happen to Crab's bread if the trains stopped?" (Less flour would come; the city bakers would run short.)
- "Is 'far' the same for everyone?" (No. Little Hill is far for Goat but near for Duck.)

✓ Closing check (5 min, with answers)

1. "Goat's wool comes from the sheep on the slopes. Near or far?" (Near.)
2. "Crab's bananas come by ship. Near or far?" (Far.)
3. "Tell me one way Big Harbour gets food differently from Snowy Peak." (For example, Big Harbour gets fish from the sea; Snowy Peak gets cheese from its goats; or more things come to the city by ship and train.)

Vocabulary

need, near, far, village, town, city, local, distant

Differentiation

- **More support:** sort Goat's cards only, with an adult.
- **More challenge:** make a tenth card for one character: something they need, and whether it comes from near or far.
- Children can sort by pointing or telling a partner which half to use.

⚠ Safety

- **Privacy.** Do not ask where children's food, clothes or belongings come from, or where their family shops. All needs belong to made-up characters.

Teacher notes and misconceptions

- The counts in step 3 are from the author's nine cards, not a rule about real cities and villages. Many villages get lots of things from far away, too.
- Children may think "far" means another country. Here it means "not in this place"; Little Hill is a train ride from Snowy Peak.
- "Local" and "distant" are the words used in the C3 framework (D2.Geo.8); "near" and "far" are enough for most children.

Lesson 4: Following a parcel

Unit overview - Previous: Near and far for what we need - Next: Goods, people and ideas on the move

Back to the grade 2 year plan

Goal

Children follow a parcel's journey on a floor map, name the map symbols along the route using the key, and put the journey in order.

Materials

- The Little Hill floor map, drawn by the teacher before the lesson on joined paper or an old sheet, about 2 m by 1.5 m:
  - Snowy Peak at the top left, on a mountain, with Goat's house and a post box.
  - A road winding down the mountain to a station at the foot of the mountain.
  - A railway running from that station, across a bridge over the river, to Little Hill station at the bottom right.
  - Little Hill post office next to Little Hill station, and Duck's house a short way along a road.
  - A key in one corner with eight symbols, each a different shape: mountain (a triangle), road (two lines side by side), railway (a line with short cross lines), river (a wavy line), bridge (two short lines across the river), station (a rectangle with a flag), post office (an envelope), house (a square with a triangle roof).
- A small closed box as the parcel, with a paper scarf drawn on the label.
- Six journey cards per group of four:
  1. Goat knits a scarf with wool from the sheep.
  2. Goat wraps the scarf and posts it in the Snowy Peak post box.
  3. The mail van drives the parcel down the mountain road to the station.
  4. The train carries it over the river bridge to Little Hill.
  5. The parcel is sorted at Little Hill post office.
  6. Mouse walks it to Duck's house, and Duck opens it.
- For blind or low-vision children: map symbols and the route made in raised lines (glue string or puffy paint), and a real small box to hold.

Steps

✎ Opening (5 min)

1. Gather round the floor map. "Is this map drawn from the side or from above?" (From above; recall grade 1.)
2. Point to the key. "What is this for?" (It tells us what each symbol means.) Children match three symbols on the map to the key.
3. Show the parcel. "Duck is cold. Goat has knitted a scarf at Snowy Peak. How will it get to Duck?"

✎ Main activity (25 min)

1. **Move the parcel (15 min).** Children take turns to move the parcel one step along the route. At each step the child names the symbol it reaches, using the key ("This is the road", "This is the bridge over the river"), and says how the parcel travels (in Goat's hands, in the van, on the train, with Mouse). Every child has at least one turn; a child can tell a partner where to move it.
2. **Journey cards (10 min).** Back at tables, groups put the six journey cards in order. An adult reads each card aloud. Groups check their order by retelling the journey to another group.

✓ Discussion questions (5 min, with answers)

- "Why did the parcel need a van and a train?" (Snowy Peak is far from Little Hill, high up a mountain, across a river.)
- "Why does the railway need a bridge?" (To cross the river.)
- "Who helped the parcel on its way?" (Goat, the van driver, the train driver, the post office sorters, Mouse.)

✓ Closing check (5 min, with answers)

1. Point to the bridge symbol on the key: "What does this stand for?" (A bridge.)
2. "What happened just after the train?" (The parcel was sorted at Little Hill post office.)
3. "Tell me two ways the parcel travelled." (Any two of: van, train, carried or walked.)

Vocabulary

parcel, route, journey, key, symbol, station, railway, bridge

Differentiation

- **More support:** use four journey cards (1, 3, 4, 6).
- **More challenge:** find a different route on the map (for example, could the van drive all the way?) and say whether it is shorter or longer.
- Children who cannot see the map follow the raised-line route with a finger while an adult names each symbol.

⚠ Safety

- Children walk or kneel round the floor map; nobody runs or stands on it. Leave a clear path for wheelchairs and let seated children point or direct a partner.
- Do not ask whether children have sent or received parcels, or where relatives live.

Teacher notes and misconceptions

- Children may think the parcel moves by itself. Ask "Who carried it here?" at each step.

- The van-then-train route is one made-up example. Real parcels travel in many ways, sometimes by ship or plane.
- Keep the map simple: eight symbols are enough for grade 2.

Lesson 5: Goods, people and ideas on the move

Unit overview - Previous: Following a parcel

Back to the grade 2 year plan

Goal

Children give reasons why goods, people and ideas move from place to place, and draw a simple route map with a key.

Materials

- The three place posters and the floor map from lesson 4.
- Goat's letter, read aloud by an adult:

  Dear Duck,

  I hope the scarf keeps you warm. Thank you for the song you sent, "Little Hill Market". The Snowy Peak children sing it every morning now.

  Could you send some apples? Apples do not grow up here; it is too cold.

  In the spring I will come down the mountain on the train to visit you.

  From Goat

- An A4 sheet per pair with three places drawn in the corners: Big Harbour (bottom left), Little Hill (bottom right), Snowy Peak (top).
- Crayons, and sticky notes or paper slips and pencils.
- For blind or low-vision children: an A4 sheet with the three places in raised outlines, and string and glue sticks to make a raised route.

Steps

✎ Opening (5 min)

1. Read Goat's letter aloud. Ask: "What is moving in this letter?"
2. Sort the answers into three groups on the board: **goods** (the scarf, the apples), **people** (Goat, coming to visit), **ideas** (the song).
3. If the class learned "Little Hill Market" in grade 2 arts, sing one verse. "The song moved from Little Hill to Snowy Peak. Did the song travel in a van?" (It travelled in a letter; ideas can travel in letters, stories, calls and on screens.)

✎ Main activity (25 min)

1. **Why do things move? (5 min).** For each item in Goat's letter, ask why it moves. (Apples: they cannot grow at Snowy Peak. Scarf: Duck needed it and Goat could make it. Goat: to visit a friend. Song: the children liked it.) Write or draw one reason next to each.
2. **Draw a route (15 min).** Pairs plan a parcel from Big Harbour to Snowy Peak: a book about the sea for the Snowy Peak school. On their A4 sheet they draw a route with at least three symbols (for example road, railway, river, bridge) and a key in the corner showing what each symbol means.
3. **Swap and read (5 min).** Pairs swap sheets with another pair and use the key to tell the journey back: "The book goes on the road, then over the bridge, then on the train..."

✓ Discussion questions (5 min, with answers)

- "Why might people move to another place?" (Any sensible reason: to visit, to find work, to be near family, to go to school. Do not ask about children's own families.)
- "Which moved fastest in our unit: the scarf, Goat or the song?" (Any answer with a reason; for example, a song sent by a call or a screen can arrive at once.)
- "Was your key useful to the other pair? What would make it clearer?" (Each symbol a different shape; a label next to each.)

✓ Closing check (5 min, with answers)

1. "Tell me one thing in Goat's letter that is goods." (The scarf or the apples.)
2. "Why do the apples have to travel to Snowy Peak?" (Apples do not grow there; it is too cold.)
3. "What idea travelled in the unit?" (The song "Little Hill Market".)

Vocabulary

goods, people, ideas, move, route, key, symbol

Differentiation

- **More support:** draw the route with two symbols and an adult writing the key.
- **More challenge:** add a second route for a different parcel and a different colour and shape for it in the key.
- Children who cannot draw use the raised outline sheet and stick string for the route; an adult writes the key from what they say.

⚠ Safety

- Do not ask children whether they or their families have moved, where they came from, or who they would visit. All journeys belong to made-up characters.

- Glue sticks only; no hot glue.

Teacher notes and misconceptions

- Children may think only objects can move. Goat's letter shows that people and ideas move too.
- Children may think ideas need a person to travel with them. The song went in a letter; ideas also travel by phone, on screens and in books.
- Use this lesson or the following week for the one-to-one assessment in the unit overview.

Grade 2 Arts: Collage and Texture (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 10 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check materials and objects against your school's rules and the class allergy list.
>
> Text-checked by one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 1. Builds on grade 1: Drawing from looking (rubbings and texture words) and kindergarten Mixing colours, prints and collage, and the arts progression

Big idea

A collage is a new picture made by sticking different pieces together. Artists choose their pieces for how they look and how they feel: a real texture can be touched, while a drawn texture only looks rough or stripy. Trying more than one arrangement, overlapping pieces, and giving old materials a new job are choices, and those choices change how a picture feels.

This is the first arts unit of the grade 2 year (term 1). In kindergarten children tore and stuck paper to make a collage, and in grade 1 they made rubbings and learned texture words. Term 2 of grade 2 moves on to beat, rhythm and tune, and term 3 to a class dance.

Outcomes

By the end of the unit a student can:

1. Describe how at least two materials feel using texture words (rough, smooth, bumpy, stripy, wavy, soft, crinkly, scratchy), and tell a real texture (you can feel it) from a drawn texture (it only looks like one).
2. Make textured papers in at least two ways (a rubbing, a print, drawn marks) and follow the class tidy-up routine for paint and tools.
3. Cut and tear shapes, overlap at least one piece on another, and try at least two arrangements before gluing.
4. Use at least one clean found material for a new job in a collage ("This was a ___. Now it is a ___.").
5. Say one choice they made and why, and say whether a collage feels calm or busy, giving a reason that uses an art word.

Prior knowledge

- From kindergarten arts: tearing and sticking paper to make a collage; colour names; printing with objects.
- From grade 1 arts: crayon rubbings and the texture words bumpy, smooth, rough, stripy and wavy; light and dark marks.
- Some children still find scissors hard; tearing is a real collage technique, and every lesson offers ready-cut shapes.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week. Leave at least a day after lessons 2 and 4 for paint and PVA glue to dry.

Lesson	Title	Main activity
1	Feel it or see it?	Feely bags, sorting by texture words, and a drawn-texture sampler card
2	Making a paper bank	Rubbing, printing and drawn-texture stations, with a tidy-up routine
3	Tear, cut, overlap, try again	Arrange torn and cut pieces for a Little Hill place, try twice, then glue the background
4	Something new from something old	Repurpose found materials to add real texture; calm and busy collages
5	Our collage gallery	Finish and title collages, gallery walk, and partner talk about choices and mood

Materials (whole class unless noted)

- Lesson 1: per table, a feely bag (cloth bag or pillowcase) with a square of fine sandpaper (edges taped), corrugated card, a square of bubble wrap, soft fabric (fleece or felt) and scrunched tissue paper; per table, a texture word card with pictures (bumpy, smooth, rough, stripy, wavy, soft, crinkly, scratchy); per child, a 6-box texture sampler card (A5), pencils, and crayons or felt pens; for the opening, a square of real bubble wrap and a card with drawn bubble-wrap circles; for the closing check, the sandpaper square and a card with drawn zigzag lines; 3-box sampler cards and thick felt pens for support.
- Lesson 2: station A (rubbings): coloured copy paper, peeled wax crayons, masking tape, corrugated card, a plastic mesh, a textured placemat, bubble wrap, large leaves; station B (printing): 2 shallow trays of washable poster paint with thin sponge pads, large plastic bottle tops, corks, sponge pieces, bubble wrap, card strips, A4 paper, aprons, a bowl of water, wipes, paper towels; station C (drawn texture): coloured paper, felt pens, oil pastels, the lesson 1 sampler cards; a drying space; a paper-bank tray with sections "rubbings", "prints" and "drawn"; a tidy-up picture card (lids on; objects in the wash bowl; wipe the table; wash hands); one ready-made rubbing, print and drawn-texture paper for the opening and closing check; big-handled printing objects (a cork, a sponge clipped to a peg) and child-safe gloves for support.
- Lesson 3: the paper bank and plain coloured paper; per child, an A4 background of thin card, child-safe scissors, a glue stick and a named envelope or tray; per table, 4 Little Hill place cards (the park, the pond, Goat's field on the hill, the market); a tablet or camera for the teacher, or per child a small layout card and pencil; for the opening, a paper hill shape, a paper house shape and a board; for the closing check, a card with a tree glued over the edge of a hill; ready-cut shapes (hills, a sun, a tree, a house, a pond) and a torn strip for support.
- Lesson 4: per table, a found materials box (card tube rings cut by an adult, corrugated card scraps, fabric scraps, wool or yarn no longer than 20 cm, old greetings cards, sponge pieces, bubble wrap, fine sandpaper scraps, paper doilies); the lesson 3 collages and envelopes and the paper bank; per table, small pots of PVA glue with spreaders, glue sticks and child-safe scissors; the tidy-up card, a bowl of water, wipes and paper towels; the

drying space; one card tube for the opening; a "calm" and a "busy" collage made by the teacher; ready-cut found materials and child-safe gloves for support.
- Lesson 5: the dry collages, glue sticks and the paper bank; per child, a title card, a pencil, and "Please touch gently" and "Look only" signs; an art word card (texture, real texture, drawn texture, overlap, torn edge, cut edge, repurpose, calm, busy); per child, 2 sticky notes or cards printed "I notice..." and "It feels... because..."; tables set out in a loop at a height every child can reach; the calm and busy collages from lesson 4; word cards to point at for support.
- One-to-one check (week of lesson 5): a square of fine sandpaper and a piece of soft fabric; a square of bubble wrap and the drawn bubble-wrap card; the lesson 3 overlap card (a tree over a hill); the calm and busy collages; the child's own collage.

⚠ Safety and access

Safety (read before lesson 1)

- Washable, non-toxic paint and glue only. Aprons on; wipe spills straight away; wash hands after printing and gluing.
- Child-safe scissors; carry them closed, point down. Adults cut card tubes and anything thicker than thin card.
- Found materials must be clean: no food packaging with food left in it, no egg boxes, nothing sharp, broken or rusty. Sandpaper is fine grade with taped edges.
- No bottle tops, corks, buttons, beads or other small items for children who still mouth objects. Wool lengths stay short (no longer than 20 cm).
- Check fabrics, leaves and other materials against the class allergy list. No feathers, no latex balloons and no food (dried pasta, rice, beans) as collage materials.
- Photos are of artwork only, never of children.

Access and taking part

- **Blind and low-vision children:** this unit suits touch. Use high contrast backgrounds and bold pieces; let children feel every material first; real textures (sandpaper, corrugated card, fabric, bubble wrap) can be told apart by touch. A blind child can arrange pieces by feel and ask a partner to describe colours if they want them.
- **Fine-motor needs:** tearing instead of cutting; ready-cut shapes; glue spreaders; or the child points and an adult or partner places and glues exactly where they say. The choices are still the child's.
- **Children who dislike some textures or sticky hands:** they never have to touch a material they do not want to; offer a pencil end to feel, gloves, glue sticks only, or a partner's help.
- **Colour vision differences:** nothing in the unit depends on telling colours apart; texture and shape carry the meaning.
- **Non-speaking children and children who sign:** answer by pointing to word cards, signing, or choosing between two options.
- **Deaf children:** demonstrate each step before explaining; use a visual signal for changing stations and for tidy-up.
- **Wheelchair users:** stations and the gallery loop at a reachable height, with clear routes between tables.
- No child has to show their collage in the gallery; showing it to the teacher only is fine. A collage counts however it looks, if the child can say or show what they chose.

Assessment

- Lessons 1-4: the teacher notes answers in the closing checks (observe; no writing needed). Children can answer by speaking, signing, pointing or choosing a card.
- Lesson 5: look at the finished collage with the child. Notice whether it has an overlap, at least one real texture and a repurposed material. Collages are not marked for neatness or likeness.
- **One-to-one check (about 3 minutes per child, during the week of lesson 5):**
    1. Hand over the sandpaper and the soft fabric. "Tell me a texture word for each." (For example rough or scratchy, and soft or smooth.)
    2. Show the bubble wrap and the drawn bubble-wrap card. "Which one has a real texture you can feel?" (The bubble wrap.)
    3. Show the overlap card. "Which piece is on top?" (The tree.)
    4. Point to the child's own collage. "Show me one thing you used in a new way. What was its old job?" (Any found material with an old and a new job.) "What did you change when you tried it two ways?" (Any change; "I didn't change anything" is a "with help" if the child then names one thing they could change.)
    5. Show the calm and busy collages. "Which feels calmer? What makes you think so?" (Any choice with a reason that names something in the picture: big pieces, smooth texture, colours, fewer pieces.)
- 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, "Visual Arts at a Glance" (revised), grade 2 column, read from the PDF on 10 November 2026: https://www.nationalartsstandards.org/sites/default/files/2021-11/Visual%20Arts%20at%20a%20Glance%20rev.pdf

The unit uses these grade 2 performance standards as a guide (quoted exactly; the unit is not a full alignment):

- VA:Cr1.2.2a "Make art or design with various materials and tools to explore personal interests, questions, and curiosity." Lessons 3-4.
- VA:Cr2.1.2a "Experiment with various materials and tools to explore personal interests in a work of art or design." Lessons 2-4.
- VA:Cr2.2.2a "Demonstrate safe procedures for using and cleaning art tools, equipment, and studio spaces." Lesson 2 (tidy-up routine), lesson 4.
- VA:Cr2.3.2a "Repurpose objects to make something new." Lesson 4.
- VA:Cr3.1.2a "Discuss and reflect with peers about choices made in creating artwork." Lessons 3 and 5.
- VA:Re8.1.2a "Interpret art by identifying the mood suggested by a work of art and describing relevant subject matter and characteristics of form." Lessons 4-5 (calm and busy).
- VA:Re9.1.2a "Use learned art vocabulary to express preferences about artwork." Lesson 5.

Read for this unit (Wikipedia, 10 November 2026):

- "Collage": https://en.wikipedia.org/wiki/Collage Used for: collage, from the French coller ("to glue" or "to stick together"), makes art from an assembly of different forms, creating a new whole; it may include magazine and newspaper clippings, ribbons, paint, coloured papers, photographs and other found objects. Lesson 3 opening.

- "Texture (visual arts)": https://en.wikipedia.org/wiki/Texture_(visual_arts) Used for: physical (actual or tactile) texture can be felt by touching the surface; visual or implied texture is the illusion of having physical texture. This unit calls these "real texture" and "drawn texture". Lesson 1.

Everything else (the lesson sequence, Little Hill places, materials lists, the calm and busy example collages and the checks) is the author's own example, not from a source.

Known gaps and cautions

- One other agent (Gemini 4 Argon, at 30d74ac) text-checked this unit on 2026-11-10 and reported no errors. That is a text check by an AI agent, not a teacher review or classroom test.
- "Calm" and "busy" are only two mood words; feelings about art differ, and the unit accepts any answer with a reason.
- The unit does not show collages by named artists. Teachers who want to can add public-domain or museum-licensed examples; check the licence first.
- Drying times depend on the paint, glue and room; lessons 3 and 5 may need to move.
- The found-materials list assumes a school can collect clean recycled card and fabric; swap in what is available and safe.

Lesson 1: Feel it or see it?

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children describe how materials feel using texture words, and tell the difference between a real texture (you can feel it) and a drawn texture (it only looks bumpy or stripy).

Materials

- Per table: a feely bag (a cloth bag or a pillowcase) holding 5 things: a square of fine sandpaper with its edges taped, a piece of corrugated card, a square of bubble wrap, a piece of soft fabric (fleece or felt) and a ball of scrunched tissue paper.
- Per table: a texture word card with a small picture for each word. Grade 1 words: bumpy, smooth, rough, stripy, wavy. New words: soft, crinkly, scratchy.
- Per child: a "texture sampler" card (A5 card divided into 6 boxes), pencils, and crayons or felt pens.
- For the opening: a real square of bubble wrap and a card with circles drawn on it to look like bubble wrap.
- For the closing check: the sandpaper square and a card with zigzag lines drawn on it.
- For support: a sampler card with 3 bigger boxes; thick felt pens.

Steps

✎ Opening (5 min)

Hold up the real bubble wrap and the drawn bubble-wrap card. "Which one could you pop?" Let two children feel both. "Both look bumpy. Only one is bumpy. The bubble wrap has a **real texture**: you can feel it. The card has a **drawn texture**: it looks bumpy, but it feels flat." Remind the class of grade 1, when they made rubbings and used texture words.

✎ Main activity (25 min)

1. **Feely bag (8 min).** At each table children take turns to put a hand in the bag without looking, feel one thing, and say a texture word for it before pulling it out. The table checks the word card together. Any fair word counts (the tissue can be "crinkly" or "soft").
2. **Sort by feel (7 min).** Tip the 5 things onto the table. The table puts each thing next to the word on the word card that fits it best, then finds one thing that could go with two words ("the corrugated card is bumpy and stripy").
3. **Draw a texture (10 min).** On the sampler card each child fills each box with a different kind of mark: dots, short lines, zigzags, swirls, crosses, little circles. Next to two of the boxes they say (or the teacher writes) what real thing the marks look like

("the dots look like sand", "the circles look like bubble wrap"). Keep the sampler cards for lesson 2.

✓ Discussion questions (5 min, with answers)

1. "Run your finger over your dots. Can you feel bumps?" (No: drawn texture only looks like a texture; the paper is still flat.)
2. "Which thing in the bag felt the most different from the sandpaper?" (Usually the fleece or felt: it is soft and smooth where sandpaper is rough and scratchy. Any reason that uses a texture word counts.)
3. "Why might an artist want a real texture in a picture?" (So people can feel it, or so it catches the light and looks bumpy; any sensible idea.)

✓ Closing check (5 min, with answers)

Hold up the sandpaper and the zigzag card one at a time. "If this has a real texture you can feel, show me a thumb up. If it is a drawn texture, show me a flat hand." (Sandpaper: thumb up. Zigzag card: flat hand.) Then: "Tell your partner one texture word for the sandpaper." (Rough or scratchy; "bumpy" is fine too.)

Vocabulary

texture, real texture, drawn texture, rough, smooth, bumpy, stripy, wavy, soft, crinkly, scratchy

Differentiation

- **Support:** use the 3-box sampler card and thick felt pens; the child can choose a word by pointing to the word card.
- **Extension:** make two boxes that show the same pattern, one lightly and one heavily (a link to light and dark marks from grade 1), and say which looks rougher.
- Children who do not want to touch some materials may use a pencil end to feel, watch a partner, or skip that object; this is fine.

⚠ Safety

- Sandpaper: fine grade only, edges taped. No objects small enough to swallow for children who still mouth things.
- Check the fabric and other items against the class allergy list. No food items in the feely bag.

Teacher notes and misconceptions

- Children often say a drawing of bubble wrap is "bumpy". Agree that it looks bumpy, then ask them to feel it. The aim is the difference between looking and feeling, not a right or wrong word.

- "Drawn texture" is this unit's child-friendly name for what artists also call visual or implied texture.

Lesson 2: Making a paper bank

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

About 40 minutes.

Goal

Children make their own textured papers in three ways (rubbing, printing and drawn marks) for a class "paper bank", and follow a safe tidy-up routine.

Materials

- **Station A, rubbings (per station):** coloured copy paper, peeled wax crayons, masking tape, and surfaces to rub: corrugated card, a plastic mesh, a textured placemat, bubble wrap and a few large leaves.
- **Station B, printing (per station):** 2 shallow trays of washable poster paint (each with a thin sponge pad in it as a stamp pad); printing objects: large plastic bottle tops, corks, sponge pieces, a square of bubble wrap and short strips of card to print with their edges; A4 paper; aprons; a bowl of water, wipes and paper towels.
- **Station C, drawn texture (per station):** coloured paper, felt pens, oil pastels, and the children's lesson 1 sampler cards as ideas.
- A drying space (a drying rack, or a clear table or floor area with newspaper) and a large tray or box with three sections labelled "rubbings", "prints" and "drawn" (the class paper bank).
- A tidy-up picture card with 4 steps: lids on; objects in the wash bowl; wipe the table; wash hands.
- For the opening: one finished paper of each kind (a rubbing, a print, a drawn texture) made before the lesson.
- For the closing check: the same three papers.
- For support: printing objects with a big handle (a cork, a sponge clipped to a peg), and a child-safe glove for any child who does not want paint on their hands.

Steps

✎ Opening (5 min)

Show the three ready-made papers. "These are going into our paper bank. In lesson 3 you will cut and tear them to make a picture." Ask how each one might have been made, then name them: a **rubbing** (crayon over a bumpy thing), a **print** (pressing a painted object onto paper) and a **drawn texture**. Go through the tidy-up card together and practise the actions in the air.

✎ Main activity (25 min)

Split the class into three groups. Each group spends about 8 minutes at each station, moving on when the teacher gives the signal.

1. **Station A, rubbings.** Tape the paper over a surface, then rub with the side of a peeled crayon. Try two surfaces on one sheet, or one surface in two colours.
2. **Station B, printing.** Press an object onto the sponge pad, then onto the paper. Repeat it to make a pattern, or mix two objects. An adult stays at this station.
3. **Station C, drawn texture.** Fill a whole sheet with one kind of mark from the sampler card (all dots, all swirls...) so it can be cut up later.

At each change, the group leaving station B does the tidy-up card steps. Every child puts finished papers in the paper bank (prints go to the drying space first). Write initials lightly on the back so children can find them, though papers are shared.

✓ Discussion questions (5 min, with answers)

1. "Which paper was made by pressing paint?" (The print.)
2. "Which one shows the shape of something real, like a leaf or a mesh?" (The rubbing, and some prints. The drawn texture was made up by the artist.)
3. "Why do we wipe the table and put objects in the wash bowl?" (So paint does not get on other people's work or clothes, and the things are ready to use again.)

✓ Closing check (5 min, with answers)

Hold up the three opening papers in a new order. "Point to the rubbing. Point to the print. Point to the drawn texture." (Teacher checks pointing.) Then: "Show me one step of tidying the printing table." (Any step on the card: lids on, objects in the wash bowl, wipe the table, wash hands.)

Vocabulary

rubbing, print, drawn texture, pattern, paper bank, tidy up

Differentiation

- **Support:** use the big-handled printing objects; an adult can hold the paper still for rubbing.
- **Extension:** make a paper with two kinds of texture on it, one on top of the other (a rubbing with prints over it).
- A child who does not want to use paint can make two drawn papers or two rubbings instead.

⚠ Safety

- Washable, non-toxic paint only. Aprons on. Wipe spills straight away so nobody slips.

- Bottle tops and corks only for children who do not put things in their mouths; otherwise use sponge pieces and card strips.
- Leaves: check for anything sharp or prickly, and avoid plants the school lists as irritants. Wash hands after.

Teacher notes and misconceptions

- Some children think every sheet must be a finished picture. Explain that these are "making papers": they will be cut up.
- Prints may need to dry overnight before lesson 3.

Lesson 3: Tear, cut, overlap, try again

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

About 40 minutes.

Goal

Children cut and tear shapes from the paper bank, overlap them, and try at least two different arrangements before choosing one for a collage of a place in Little Hill.

Materials

- The class paper bank from lesson 2, plus some plain coloured paper.
- Per child: a background sheet of thin card (A4, one colour), child-safe scissors, a glue stick, and a named envelope or tray to keep loose pieces.
- Per table: 4 "Little Hill place" picture cards (the park, the pond, Goat's field on the hill, the market), drawn simply.
- A tablet or camera for the teacher to photograph first arrangements, or per child a small "layout card" (a quarter of A4) and a pencil for a quick sketch instead.
- For the opening: a large hill shape and a small house shape cut from paper, and a board to arrange them on.
- For the closing check: an example card with a tree shape glued over the edge of a hill shape.
- For support: shapes cut out in advance (hills, a sun, a tree, a house, a pond); a short torn strip to show a torn edge.

Steps

✎ Opening (5 min)

Put the hill and the house on the board side by side. Then slide the house so that it covers part of the hill. "Now the house is **overlapping** the hill. Which one is on top?" (The house.) Tear a strip and cut a strip: "A **torn edge** is soft and fuzzy. A **cut edge** is sharp and straight. Artists choose which one they want." Tell the class that collage comes from a French word meaning "to glue" or "to stick together", but today nothing gets glued until they have tried it two ways.

✎ Main activity (25 min)

1. **Choose a place (2 min).** Each child picks one Little Hill place card, or a made-up place of their own.
2. **Big pieces first (8 min).** Tear or cut the biggest shapes (sky, ground, hill, pond) from the paper bank. Lay them on the background without glue.
3. **Smaller pieces (7 min).** Add smaller shapes (trees, a house, Duck, a kite). Overlap at least one piece on another.

4. **Try again (5 min).** The teacher photographs the arrangement (or the child sketches it on the layout card). Then each child changes at least one thing: moves a piece, swaps a paper for a different texture, or changes what overlaps what. Compare: "Which way do you like better?"
5. **Stick the background (3 min).** When they have chosen, children glue only the biggest background pieces. Small pieces go in the envelope for lesson 4.

✓ Discussion questions (5 min, with answers)

1. "What did you change when you tried again?" (Any change: a moved piece, a different paper, a new overlap.)
2. "When would you use a torn edge?" (For soft things such as clouds, bushes or a hill; any reason counts.)
3. "If the tree overlaps the hill, which is nearer to us in the picture?" (Usually the tree: things on top often look closer.)

✓ Closing check (5 min, with answers)

Show the example card. "Which piece is on top? Tell your partner how you know." (The tree. You can see all of the tree, and it hides part of the hill.)

Vocabulary

collage, overlap, on top, behind, torn edge, cut edge, arrange, background

Differentiation

- **Support:** use the ready-cut shapes; a child can point and an adult or partner places pieces exactly where the child says.
- **Extension:** make one overlap with three layers (sky, hill, tree), or tear a piece so its torn edge shows a white rim on purpose.
- Tearing is a real collage technique; a child who finds scissors hard can tear everything.

⚠ Safety

- Child-safe scissors; carry them closed, point down. Glue sticks only in this lesson.

Teacher notes and misconceptions

- Children may glue each piece the moment it is placed. Keep glue sticks in a tray until step 5.
- Photos are only of the artwork, never of children.

Lesson 4: Something new from something old

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

About 40 minutes.

Goal

Children give clean, found materials a new job in their collage, adding at least one real texture, and talk about how a collage can feel calm or busy.

Materials

- Per table, a "found materials" box of clean, safe recycled things: card tube rings (cut by an adult), corrugated card scraps, fabric scraps, lengths of wool or yarn (no longer than 20 cm), old greetings cards, sponge pieces, bubble wrap, fine sandpaper scraps, and paper doilies.
- The children's collages and envelopes from lesson 3, and the paper bank.
- Per table: small pots of PVA (white) glue with glue spreaders, glue sticks, child-safe scissors.
- The tidy-up picture card from lesson 2, a bowl of water, wipes and paper towels.
- A drying space (as in lesson 2).
- For the opening: one card tube.
- For the discussion: two collages made by the teacher before the lesson: a "calm" one (a few big smooth pieces in blues and greens) and a "busy" one (many small bright pieces with zigzags and bumpy textures).
- For the closing check: nothing extra (children use their own collages).
- For support: found materials already cut to small sizes, and child-safe gloves.

Steps

✎ Opening (5 min)

Hold up the card tube. "What job did this have before?" (It held kitchen roll or toilet paper.) "What could it be in a picture?" (A tree trunk, a chimney, a tunnel, a ring for a sun.) "Using an old thing for a new job is called **repurposing**. Today you will repurpose at least one thing in your collage."

✎ Main activity (25 min)

1. **Look and choose (5 min).** Children look through the found materials box and choose things that could become part of their place (wool for a kite string, bubble wrap for pond water, sandpaper for a path).
2. **Add and arrange (12 min).** Place the lesson 3 small pieces and the found materials on the collage. Try them before gluing, as in lesson 3. Each collage includes at least one real texture you can feel.
3. **Stick (5 min).** Glue sticks for paper; PVA and a spreader for heavier things (fabric, card, sponge). Use a little glue.

4. **Tidy up (3 min).** Follow the tidy-up card. Collages go flat to dry.

✓ Discussion questions (5 min, with answers)

Show the two teacher collages.

1. "Which one feels calm? Which one feels busy?" (Usually the big smooth blue-green one feels calm and the zigzag one feels busy, but feelings can differ: any answer with a reason counts.)
2. "What makes it feel that way?" (Big or small pieces, smooth or bumpy textures, colours, lots of pieces or a few.)
3. "Which found thing had the most surprising new job?" (Any.)

✓ Closing check (5 min, with answers)

Each child points to one repurposed thing in their collage and tells their partner: "This was a ___. Now it is a ___." (Any old job and new job, for example "This was a tube. Now it is a chimney.") The teacher listens in.

Vocabulary

repurpose, found materials, real texture, calm, busy, mood

Differentiation

- **Support:** use ready-cut found materials; the child points and a partner or adult glues where they say.
- **Extension:** make the collage feel calm or busy on purpose, and say which choices they made to do it.
- A child who does not want to touch glue or some materials can use a glue spreader, gloves, or glue sticks only.

⚠ Safety

- Only clean materials: no food packaging with food left in it, no egg boxes, nothing sharp, broken or rusty. Adults cut card tubes.
- No buttons, beads or other small items for children who still mouth things. Wool lengths stay short. No feathers or latex balloons (common allergies).
- Washable PVA only; wash hands after.

Teacher notes and misconceptions

- Some children add everything in the box. Ask: "Does this help show your place?"
- Thick PVA pieces can take a day to dry; plan lesson 5 for at least a day later.

Lesson 5: Our collage gallery

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

Children finish and title their collage, visit a class gallery, and use art words to talk about choices they made and the mood of a collage.

Materials

- The children's collages from lesson 4 (dry), glue sticks, and the paper bank for small finishing touches.
- Per child: a small title card, a pencil, and two small signs to choose from: "Please touch gently" and "Look only".
- An art word card for the board: texture, real texture, drawn texture, overlap, torn edge, cut edge, repurpose, calm, busy.
- Per child: 2 sticky notes or small cards printed with "I notice..." and "It feels... because...".
- Tables cleared and set out in a loop for the gallery, with collages laid flat at a height every child can reach and see.
- For the closing check: the "calm" and "busy" teacher collages from lesson 4.
- For support: small word cards (the art words) to point at.

Steps

✎ Opening (5 min)

Read the art word card together and do an action for each word (rub fingertips for texture, cross two hands for overlap). "Today you are artists showing your work. You choose whether people may touch it gently or only look."

✎ Main activity (25 min)

1. **Finish and title (8 min).** Children add any small last piece, write or say a title (the teacher can scribe), and choose a "touch gently" or "look only" sign.
2. **Gallery walk (10 min).** Children walk the loop with their two notes, stop at two collages that are not their own, and leave one note on each, or tell the artist out loud. Collages are visited only if the artist agreed to show them (see Access in the unit overview).
3. **Partner talk (7 min).** In pairs, each artist tells their partner one choice they made: "I chose ___ because ___." (For example "I chose bubble wrap for the pond because it looks like ripples.") The partner says one thing about the mood: "It feels ___ because ___."

✓ Discussion questions (5 min, with answers)

1. "Which art word did you hear most in the gallery?" (Any.)
2. "Did anyone's collage feel different to you from what the artist meant?" (This can happen: people can feel different things about the same picture, and both can have good reasons.)
3. "If you made another collage, what would you change?" (Any.)

✓ Closing check (5 min, with answers)

Hold up the calm and busy collages one at a time. "Show me still hands if this one feels calm, wiggly fingers if it feels busy." (Most children will show calm for the big smooth one and busy for the zigzag one; a different answer with a reason is fine.) Then: "Tell your partner one art word that fits your own collage." (Any word from the card used sensibly.)

Vocabulary

gallery, title, choice, mood, calm, busy, plus the words on the art word card

Differentiation

- **Support:** children choose a word card to point at instead of speaking; an adult scribes titles and notes.
- **Extension:** write two sentences on the back of the title card about how they made one part of the collage.
- A child can share their collage with the teacher only; this still counts.

⚠ Safety

- Keep walkways clear for the gallery loop. Collages with "look only" are not touched.

Teacher notes and misconceptions

- Children may say a collage is "good" or "bad". Turn it into art words: "What do you notice? How does it feel?"
- Do the one-to-one check (see the unit overview) during this week.

Grade 2 Arts: Beat, Rhythm and Tune (5 lessons, about 3 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 instruments and objects against your school's rules, and check hearing and sound-sensitivity notes before lesson 1.
>
> Text-checked by one other agent (Gemini 4 Carbon); see Known gaps.

Back to the grade 2 year plan - Term 2. Builds on grade 1: Beat, rhythm, high and low, and a round (ta and ti-ti cards, so-mi calls) and kindergarten Lines, colours and a steady beat, and the arts progression

Big idea

Music has a steady beat, and beats often come in groups: some music feels like "ONE two, ONE two" (a march) and some like "ONE two three, ONE two three" (a sway). A rhythm can include a beat with no sound in it, and we can write that silence down too. A short pattern that keeps repeating under a song (an ostinato) can make the song bigger. Tunes move between higher and lower notes; so, mi and la are three of them. Musicians choose how fast and how loud to play to suit what the music is for.

This is the second arts unit of the grade 2 year (term 1 was collage and texture). In grade 1 children clapped ta and ti-ti picture cards, sang so-mi calls and sang a two-part round. Term 3 of grade 2 moves on to a class dance.

Outcomes

By the end of the unit a student can:

1. Move or pat along to a steady beat and say whether teacher-played music is grouped in twos (STRONG-weak) or threes (STRONG-weak-weak).
2. Read and clap a four-beat card using ta, ti-ti and "sh" (a beat with no sound), and make and record their own four-beat card that includes at least one "sh".
3. Keep an ostinato going (by clapping, speaking or playing) while others sing a song.
4. Tell which of two notes is higher, and make and play or sing a four-beat tune using so, mi and la.
5. With a group, choose a speed (tempo) and loudness (dynamics) to suit a purpose (a lullaby or a march), perform for the class, and give one reason for a choice.

Prior knowledge

- From kindergarten arts: keeping a steady beat by walking and patting; loud and quiet sounds.
- From grade 1 arts: "ta" (one big footprint, a walking step) and "ti-ti" (two small footprints, two running steps) picture cards; four-beat cards; high and low notes, so-mi echo calls; singing in two parts.

- 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 song chart and the rhythm cards up on the wall for the whole unit.

Lesson	Title	Main activity
1	Beats in twos and threes	March to STRONG-weak, sway to STRONG-weak-weak, sort teacher-played patterns, partner guessing game
2	Ta, ti-ti and a quiet beat	Meet the "sh" card (a beat with no sound) and standard notation, read four-beat cards, make your own card with a rest
3	A pattern that keeps going	Learn the song "Little Hill Market", then keep an ostinato going under it in two groups
4	So, mi and la	Echo so-mi-la patterns with hand heights, find la in the song, make and play a four-beat tune card
5	Music for a purpose	Groups turn the song into a lullaby or a march, rehearse with a checklist, perform and explain choices

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 clear space for moving.
- Lesson 1: two large cards, "twos" (one big dot, one small dot) and "threes" (one big dot, two small dots), plus tactile copies (big and small felt circles); a list of 6 drum patterns for the teacher (in the lesson).
- Lesson 2: the grade 1 large rhythm cards (ta: one big footprint; ti-ti: two small footprints) and a new large "sh" card (an empty footprint outline); the same three cards with standard notation printed underneath (a quarter note, two eighth notes joined by a beam, a quarter rest); six large four-beat cards A-F (patterns in the lesson); per child, a strip of card with four boxes, a small set of 4 ta, 4 ti-ti and 2 sh cards, a glue stick and a pencil; tactile cards (big felt circle = ta, two small felt circles = ti-ti, felt ring = sh) and tactile copies of cards A-F.
- Lesson 3: a song chart of "Little Hill Market" (words, with the rhythm cards under each line); a tuned instrument with G, E and A (chime bars, a xylophone or a glockenspiel) to give the starting note; two large ostinato cards, A ("Ap-ples, ap-ples, bread, bread": ti-ti ti-ti ta ta) and B ("Buy, buy, buy, sh": ta ta ta sh), with tactile copies; untuned percussion for half the class (wooden blocks, claves, hand drums, sealed shakers).
- Lesson 4: the tuned instrument and the song chart; a large three-line "ladder" card (top line la, middle line so, bottom line mi) with a movable counter; per group of about 4, three chime bars (G, E, A) or a xylophone with only those bars left on, and beaters; per child, a tune card with four ladders side by side and 4 counters or a pencil; a raised-line tune card and counters with a bump on top for children who need them; a screen or large book to hide the instrument for the closing check.
- Lesson 5: the song chart, ostinato cards A and B, the untuned percussion and the tuned instruments; per group, a choice card (picture of Paper Bear in bed for a lullaby, or of a Little Hill parade for a march; boxes to tick for slow or fast, quiet or loud, ostinato A or B, and which instruments) and the group's tune cards from lesson 4; a large performance

checklist (steady beat; start and stop together; our choices fit the purpose); a "We played it ___ and ___ because ___" sentence card.
- One-to-one check (week of lesson 5): the hand drum; card D from lesson 2 and its tactile copy; the "sh" card; the tuned instrument and the screen; the child's group choice card.

⚠ 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. In lesson 5, loud means "strong", not as loud as possible.
- Voices: sing gently in a comfortable middle range (this song stays between E and A above middle C). Stop if a voice hurts.
- Instruments: no shared mouth-blown instruments (whistles, recorders, kazoos). Shakers must be sealed; check nothing small can come out. Beaters are for instruments only; carry them pointing down. Check that beaters and drum heads are latex-free if anyone has a latex allergy.
- Moving: march and sway in the same direction around the space; stop on the signal; leave space for wheelchairs and walking frames.

Access and taking part

- **Deaf and hard-of-hearing children:** show the beat with a big visible movement (the hand drum held up, a nodding head, the teacher's beater arm); let children put a hand flat on the drum or on a wooden floor to feel the strong beats; use the twos and threes cards and the rhythm cards so they can join in by watching. Pitch can be shown on the tuned instrument (shorter bars play higher) and with hand height. 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.
- **Blind and low-vision children:** tactile rhythm cards (big felt circle = ta, two small felt circles = ti-ti, felt ring = sh); a raised-line ladder card with bump counters; a partner says "start" and "stop" as well as the signal; chime bars set out in a fixed order (E, G, A from left to right) so the child can find them by touch.
- **Children who do not sing or speak:** hum, play an instrument, clap, do the actions, point to cards, sign or use their communication device. Singing alone is never required.
- **Children with limited hand movement:** pat with elbows or feet, nod, or tap with one finger; a beater with a thick grip; a partner holds the instrument; the child points and a partner places their rhythm or tune cards exactly where they say. The choices are still the child's.
- **Wheelchair users:** marching and swaying can be tapping the armrests, wheeling forward and back, or swaying the upper body.
- **Sound-sensitive children:** ear defenders, the quiet spot, quieter instruments (wooden blocks or claves rather than tambourines or cymbals), and the choice to be the conductor who holds up the cards or the stop signal.
- No child has to perform alone. In lesson 5 every child performs as part of a group, and a child may choose to be the conductor or to perform for the teacher only.

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: watch each group's performance against the class checklist, and note one reason from each child (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. Play 8 beats of threes on the hand drum (STRONG-weak-weak). "Pat along with me. Is it twos or threes?" (Threes. A child who pats a steady beat but says "twos" is "with help"; play twos next and compare.)
    2. Show card D (ta, ti-ti, sh, ta). "Clap this card." (Clap, two quick claps, no sound on the third beat, clap. Hands apart in silence on "sh" counts.)
    3. Point to the "sh" card. "What do we do on this beat?" (Nothing: it is a beat with no sound, a rest. We keep counting it.)
    4. "I will sing the song. You keep ostinato A going." Sing line 1 and line 2 of "Little Hill Market". (The child keeps "Ap-ples, ap-ples, bread, bread" going, by clapping, speaking or tapping, without stopping or joining the song. Small wobbles are fine.)
    5. With the instrument hidden, play G then A. "Did it go up or down?" (Up. A hand moving up counts.) Then play A then E. (Down.)
    6. Show the child's group choice card. "Was your music a lullaby or a march? Tell me one thing you chose and why." (Any choice with a reason linked to the purpose, for example "slow and quiet so Paper Bear can sleep", "loud so the parade can hear".)
- 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 2 column, read from the PDF on 11 November 2026: https://www.nationalartsstandards.org/sites/default/files/Music%20at%20a%20Glance%20rev.pdf

The unit uses these grade 2 performance standards as a guide (quoted exactly; the unit is not a full alignment):

- MU:Cr1.1.2a "Improvise rhythmic and melodic patterns and musical ideas for a specific purpose." Lessons 4-5.
- MU:Cr1.1.2b "Generate musical patterns and ideas within the context of a given tonality (such as major and minor) and meter (such as duple and triple)." Lesson 1 (twos and threes), lessons 2 and 4.
- MU:Cr2.1.2a "Demonstrate and explain personal reasons for selecting patterns and ideas for music that represent expressive intent." Lesson 5.
- MU:Cr2.1.2b "Use iconic or standard notation and/or recording technology to combine, sequence, and document personal musical ideas." Lessons 2 and 4 (the child's own rhythm card and tune card).
- MU:Pr4.2.2a "Demonstrate knowledge of music concepts (such as tonality and meter) in music from a variety of cultures selected for performance." Lesson 1, partly (see Known gaps).

- MU:Pr4.2.2b "When analyzing selected music, read and perform rhythmic and melodic patterns using iconic or standard notation." Lessons 2-4.
- MU:Pr4.3.2a "Demonstrate understanding of expressive qualities (such as dynamics and tempo) and how creators use them to convey expressive intent." Lesson 5.
- MU:Pr5.1.2a "Apply established criteria to judge the accuracy, expressiveness, and effectiveness of performances." Lesson 5 (the class checklist).
- MU:Pr6.1.2a "Perform music for a specific purpose with expression and technical accuracy." Lesson 5.
- MU:Pr6.1.2b "Perform appropriately for the audience and purpose." Lesson 5.

Read for this unit (Wikipedia, 11 November 2026):

- "Metre (music)": https://en.wikipedia.org/wiki/Metre_(music) Used for: metre refers to regularly recurring patterns and accents such as downbeats and beats. Lesson 1 calls these "twos" and "threes" and "strong" and "weak" beats.
- "Rest (music)": https://en.wikipedia.org/wiki/Rest_(music) Used for: a rest is the absence of a sound for a defined period of time, or the sign that shows it; each rest is named for the note value it matches (quarter note and quarter rest). Lesson 2.
- "Ostinato": https://en.wikipedia.org/wiki/Ostinato Used for: an ostinato (from the Italian for "stubborn") is a motif or phrase that persistently repeats in the same musical voice, frequently in the same pitch. Lesson 3.
- "Tempo": https://en.wikipedia.org/wiki/Tempo Used for: tempo is the speed or pace of a piece of music, and is often also an indication of its character. Lesson 5.
- "Dynamics (music)": https://en.wikipedia.org/wiki/Dynamics_(music) Used for: dynamics is the variation in loudness between notes or phrases; dynamics help communicate a feeling; dynamic markings are always relative. Lesson 5.

The song "Little Hill Market", the two ostinatos, the drum patterns, the four-beat cards and the lullaby and march purposes are written for this unit (CC0). The ta and ti-ti syllables and the so-mi start come from the grade 1 unit, which cites the Wikipedia article on the Kodály method. Everything else (the lesson sequence, the choice of so, mi and la on G, E and A, materials and checks) is the author's own example, not from a source.

Known gaps and cautions

- One other agent (Gemini 4 Carbon, at c5c922d) text-checked this unit on 2026-11-11 and reported no errors. That is a text check by an AI agent, not a teacher review or classroom test. Gemini 4 Argon also reported a link and build check (0 broken links) the same day.
- No recordings or music from named cultures are supplied, so MU:Pr4.2.2a ("music from a variety of cultures") is only partly met. Teachers can add licensed recordings of marches, lullabies and waltzes from different places and ask "twos or threes?"; check the licence first.
- The key (so = G) and the order of so, mi, then la are the author's choices. A trained music teacher will know more about singing range and sequence; move the song up or down to suit the class.
- Timings are untested. Lesson 3 (learning a new song and an ostinato in one lesson) and lesson 5 (group rehearsal and performance) are the most likely to run over; lesson 5 performances can move to another day.
- Not all children sing in tune at seven, and some cannot hear pitch differences; neither is assessed. The pitch check accepts hand height.
- "Twos" and "threes" are a simplification: real music can change metre or group beats in other ways. The unit only uses steady twos and threes.

- Lesson 5 offers only two purposes (a lullaby and a march). Others work as well (music for a rainy day, for tidying up).

Lesson 1: Beats in twos and threes

Unit overview - Next: Lesson 2

About 40 minutes.

Goal

Children feel that beats are often grouped, and tell music in twos (STRONG-weak, like a march) from music in threes (STRONG-weak-weak, like a sway) by moving, patting and listening.

Materials

- A hand drum and soft beater; the stop signal.
- Two large cards: "twos" (one big dot, one small dot) and "threes" (one big dot, two small dots). Tactile copies with big and small felt circles.
- The list of drum patterns below.
- Ear defenders and a quiet spot; a clear space for moving.

Steps

✎ Opening (5 min)

Children stand in a space. "Walk to my drum." Play a steady beat; stop on the signal; play again a little faster, then slower. Remind the class of grade 1: the **beat** is steady, like walking. "Today we will find out that beats like to go in groups."

✎ Main activity (25 min)

1. **March in twos (8 min).** Play the drum STRONG-weak, STRONG-weak (a big hit, then a small one), counting "ONE two, ONE two". Children march around the room, stamping gently on ONE and stepping lightly on two. Stop on the signal. Then, standing or sitting, they **pat-clap**: pat knees on ONE, clap on two. Hold up the "twos" card: "One big dot for the strong beat, one small dot for the weak beat."
2. **Sway in threes (7 min).** Play STRONG-weak-weak, counting "ONE two three". Children stand still and sway: lean to one side on ONE, stay there on two and three, then lean the other way on the next ONE. Then **pat-clap-clap**: pat on ONE, clap on two and three. Hold up the "threes" card.
3. **Twos or threes? (6 min).** Play each pattern in the list below. The class joins in with pat-clap or pat-clap-clap as soon as they can tell; then the teacher points to the two cards and children point to the one that fits. Play each one again if the class is split.
4. **Partner game (4 min).** In pairs, one child pats twos or threes on their knees (strong pats louder) and the partner says or points to which it is. Swap.

Drum patterns for step 3 (play each for about 12 beats; count in your head, not aloud):

Pattern	Play	Answer
1	STRONG-weak, slowly	twos

Pattern	Play	Answer
2	STRONG-weak-weak, slowly	threes
3	STRONG-weak-weak, faster	threes
4	STRONG-weak, faster	twos
5	STRONG-weak, quietly	twos
6	STRONG-weak-weak, quietly	threes

✓ Discussion questions (5 min, with answers)

1. "Which was better for marching, twos or threes? Why?" (Usually twos: we have two feet, left-right. Any answer with a reason counts.)
2. "Was pattern 3 still threes when I played it faster?" (Yes. Speed does not change how the beats are grouped.)
3. "How did you know which beat was the strong one?" (It was louder or bigger; it was where we patted; it felt like the start of the group.)

✓ Closing check (5 min, with answers)

Children close their eyes (or turn away, or look at the floor). "Hold your answer against your chest: one finger for twos, three fingers for threes." Play 12 beats of STRONG-weak-weak. (Threes: three fingers.) Then play 12 beats of STRONG-weak at a different speed. (Twos: one finger.) Note who answers each correctly.

Vocabulary

beat, strong beat, weak beat, twos, threes, march, sway

Differentiation

- **Support:** the child keeps a hand on the drum while it is played, or watches the teacher's beater arm (big swing for STRONG). Patting only on ONE is a good start.
- **Extension:** count the groups aloud ("ONE two three, ONE two three") and try clapping on the weak beats only; or in the partner game, change from twos to threes partway and see if the partner notices.
- Children who prefer not to march can pat-clap in their space.

⚠ Safety

- Everyone moves in the same direction; stop on the signal. Gentle stamps only.
- Keep the drum at a comfortable level; never play close to a child's ear.

Teacher notes and misconceptions

- Children often think faster means "more beats in a group". Pattern 3 and the discussion show that speed and grouping are different things.

- Loud and strong are linked here on purpose (the strong beat is played louder), but in lesson 5 loudness becomes a choice for the whole piece.
- Music theory calls twos "duple metre" and threes "triple metre". These words are for the teacher; children use "twos" and "threes".
- If the class finds threes hard, do more swaying before patting. Some children feel threes more easily with the whole body (a teaching suggestion, not from a source).

Lesson 2: Ta, ti-ti and a quiet beat

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

About 40 minutes.

Goal

Children read and clap four-beat cards with ta, ti-ti and a new card, "sh", for a beat with no sound (a rest). They see the same rhythms in standard notation, and each child makes and records their own four-beat card with at least one rest.

Materials

- The hand drum and the stop signal.
- The grade 1 large rhythm cards: ta (one big footprint) and ti-ti (two small footprints). A new large "sh" card: an empty footprint outline.
- The same three cards with standard notation printed underneath: a quarter note under ta, two eighth notes joined by a beam under ti-ti, and a quarter rest under sh.
- Six large four-beat cards (each beat in its own box):
  - A: ta, ta, ti-ti, ta
  - B: ta, sh, ta, sh
  - C: ti-ti, ti-ti, ta, sh
  - D: ta, ti-ti, sh, ta
  - E: ti-ti, ta, ti-ti, ta
  - F: sh, ta, ti-ti, ta
- Per child: a strip of card with four boxes; a small set of 4 ta, 4 ti-ti and 2 sh cards; a glue stick; a pencil.
- Tactile cards: big felt circle = ta, two small felt circles = ti-ti, felt ring (an outline with nothing inside) = sh; tactile copies of cards A-F.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Hold up card A. "Who remembers these from grade 1?" Clap it together, then say it ("ta, ta, ti-ti, ta"). Now hold up the "sh" card. "This footprint is empty. Nobody stepped there. What do you think we do?" Show the answer: on "sh", hands move apart, palms up, with no sound, and we can whisper "sh". "It is still a beat. We just don't make a sound. Musicians call it a **rest**."

✎ Main activity (25 min)

1. **Read the cards (10 min).** Play a steady beat quietly on the drum. The class claps cards A to F in turn, opening hands silently on each "sh". After each card, turn it over to show the standard notation version underneath. "Many musicians read these signs: this

is a quarter note, these are two eighth notes, and this squiggle is a quarter rest." Point to each beat as it is clapped.
2. **Make a card (10 min).** Each child chooses 4 small cards, including at least one "sh", and lays them in the four boxes on their strip. They clap it quietly to themselves, change it if they want, then glue it down and write their name on the back. Children who want to can also draw the notation signs under their footprints.
3. **Swap and clap (5 min).** In pairs, each child claps their partner's card. If it does not sound right, the owner shows how it goes.

✓ Discussion questions (5 min, with answers)

1. "On a 'sh' beat, do we stop counting?" (No. The beat is still there; we just don't make a sound.)
2. "Card B and card D both have rests. Which one has two rests?" (Card B: ta, sh, ta, sh.)
3. "Why might a musician want a rest?" (To breathe; to make the music bouncy or surprising; to let someone else play; any sensible idea.)

✓ Closing check (5 min, with answers)

Put cards B and D at the front, labelled 1 (B) and 2 (D). "I will clap one card. Look at the cards, not at your friends. Hold your answer against your chest: one finger for card 1, two fingers for card 2." Clap card D (ta, ti-ti, rest, ta). (Two fingers.) Then clap card B (ta, rest, ta, rest). (One finger.) Keep the children's cards; they can go up on the wall.

Vocabulary

beat, rhythm, ta, ti-ti, rest ("sh"), quarter note, eighth notes, quarter rest, notation

Differentiation

- **Support:** start with a strip of 2 boxes, then 4; use the tactile cards; the teacher keeps the drum beat going while the child claps.
- **Extension:** make an 8-beat card (two strips); write the card only in standard notation and ask a partner to read it.
- Children with limited hand movement can tap, nod, or point to each beat as a partner claps.

⚠ Safety

- Child-safe glue sticks only.
- Keep claps gentle; ear defenders are always allowed.

Teacher notes and misconceptions

- The most common mistake is to skip the rest and clap the next beat early. Keep the drum beat going so children can hear the silent beat passing. Opening the hands on the rest gives the silence a movement.
- Some children think "sh" means "say sh loudly". The whisper is optional; the point is silence.
- The rest here lasts one beat (a quarter rest). Other rests come later.
- In British English a quarter note is a crotchet and an eighth note is a quaver.

Lesson 3: A pattern that keeps going

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

About 40 minutes.

Goal

Children learn a new song, "Little Hill Market", and keep a short repeating pattern (an ostinato) going underneath it while others sing.

Materials

- The hand drum and the stop signal.
- A song chart of "Little Hill Market" (below), with the rhythm cards under each line.
- A tuned instrument with G, E and A (chime bars, a xylophone or a glockenspiel) to give the starting note.
- Two large ostinato cards with tactile copies:
  - A: "Ap-ples, ap-ples, bread, bread" (ti-ti, ti-ti, ta, ta)
  - B: "Buy, buy, buy, sh" (ta, ta, ta, rest)
- Untuned percussion for half the class: wooden blocks, claves, hand drums, sealed shakers.
- Ear defenders and a quiet spot.

The song: "Little Hill Market"

Written for this unit (CC0). Four lines of four beats. Notes: so = G, mi = E, la = A (above middle C). Start on G.

Line	Words	Rhythm	Notes
1	Bread and ap-ples, come and buy,	ti-ti, ti-ti, ti-ti, ta	G G E E G G E
2	Car-rots, cheese and cher-ry pie,	ti-ti, ti-ti, ti-ti, ta	A A G G E E G
3	Cross the bridge and climb up high,	ti-ti, ti-ti, ti-ti, ta	G G E E G G A
4	Mar-ket day, Lit-tle Hill.	ti-ti, ta, ti-ti, ta	G G E G G E

Each syllable gets one note (a ti or a ta). Line 3 climbs up to la on "high", like climbing the hill.

Steps

✎ Opening (5 min)

Play G on the tuned instrument and sing the whole song to the class while keeping a gentle beat on your knee. "This is a song about the market in Little Hill. What can you buy there?" (Bread, apples, carrots, cheese, cherry pie.)

✎ Main activity (25 min)

1. **Learn the song (8 min).** Echo it line by line: the teacher sings a line, the class sings it back. Then two lines at a time, then the whole song. Children who do not sing can say the words, hum, or pat the beat.
2. **Read the rhythm (5 min).** Point to the rhythm cards under line 1. "Clap line 1 while you think the words." Notice that lines 1, 2 and 3 have the same rhythm and line 4 is different. "Which card is line 4?" (ti-ti, ta, ti-ti, ta.)
3. **Ostinato A (5 min).** Show card A. Everyone says and claps "Ap-ples, ap-ples, bread, bread" over and over, without stopping, while the teacher sings the song over the top. "A pattern that keeps going under a song is called an **ostinato**. It comes from an Italian word that means stubborn: it won't stop!"
4. **Two groups (7 min).** Half the class sings the song; the other half plays ostinato A on the untuned percussion (or claps it). Count the ostinato group in ("one, two, ready, go") and let them play one pattern alone before the singers start. Then swap groups. If there is time, try ostinato B the same way: "Buy, buy, buy," then a silent beat with hands apart.

✓ Discussion questions (5 min, with answers)

1. "What made it hard to keep the ostinato going?" (Hearing the song made us want to sing along or change our pattern. Any honest answer.)
2. "How did the song sound different with the ostinato?" (Bigger, fuller, busier, more like a band. Any description.)
3. "Which ostinato has a rest in it?" (B: "Buy, buy, buy, sh".)

✓ Closing check (5 min, with answers)

Children close their eyes. "I will play two things on the drum. One of them is an ostinato: a pattern that keeps repeating. Hold up one finger or two fingers against your chest to show which was the ostinato."

- First: play ostinato A's rhythm 4 times without stopping.
- Second: play 4 different patterns, one after another (for example ta, ta, ti-ti, ta; then ti-ti, ta, ta, ta; then ta, sh, ti-ti, ti-ti; then ti-ti, ti-ti, ti-ti, ta).

(The first one: one finger.) Then, eyes open: "Tell your partner what an ostinato is." (A pattern that keeps going, or repeats, under the music.)

Vocabulary

ostinato, repeat, pattern, line, starting note

Differentiation

- **Support:** the ostinato group has an adult or a confident partner in the middle; children can play only the "bread, bread" part (ta, ta) of ostinato A, which is still a repeating pattern.

- **Extension:** a small group plays ostinato A while another plays ostinato B, both under the song at once.
- Children who do not sing join the ostinato group both times.

⚠ Safety

- Sealed shakers only; beaters pointed down; instruments stay on the floor or the table until the count-in.
- Keep the ostinato quieter than the singers; use the stop signal if the room gets loud.

Teacher notes and misconceptions

- The ostinato group often speeds up or joins the song. Practise the ostinato alone first, and keep a quiet drum beat going if needed.
- Some children think an ostinato must be played on an instrument. It can be clapped, spoken, sung or played.
- The song is in so, mi and la only. Lesson 4 looks at la, the new note.
- If G feels too high or low for your class, start on another note and keep the same pattern of steps.

Lesson 4: So, mi and la

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

About 40 minutes.

Goal

Children hear, show and sing three notes: so and mi from grade 1, and la, one step above so. They tell which of two notes is higher, find la in "Little Hill Market", and make and play their own four-beat tune card.

Materials

- The tuned instrument (G = so, E = mi, A = la) and the song chart.
- A large three-line "ladder" card (top line la, middle line so, bottom line mi) with a movable counter.
- Per group of about 4: three chime bars (G, E and A), or a xylophone or glockenspiel with only those bars left on, and beaters.
- Per child: a tune card with four ladders side by side, and 4 counters or a pencil.
- A raised-line tune card and counters with a bump on top, for children who need them.
- A screen or large book to hide the instrument (closing check).
- For the extension: card E from lesson 2.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Sing the grade 1 "Hel-lo" call on so-mi (higher, then lower) and show it with hands: hands at the head for so, at the shoulders for mi. The class echoes. Now sing "Hel-lo there" on so, so, la, and show la with hands just above the head. The class echoes. "This is a new note. It is one step **higher** than so. We call it la."

✎ Main activity (25 min)

1. **Echo with hands (8 min).** Sing short patterns on "loo" and show hand heights; the class echoes with voices and hands. Use: so-mi, so-la-so, mi-so-la, la-so-mi, so-so-la-la, mi-mi-so-so. Move the counter on the ladder card as you sing. Then sing a pattern without hands and let the class show the heights.
2. **Find la in the song (5 min).** Sing "Little Hill Market" together. "Put your hands up high when we sing la." (The start of line 2, "Car-rots", and the last word of line 3, "high".)
3. **Make a tune (12 min).** Each child places one counter on each of the four ladders (on la, so or mi) to make a four-beat tune, then draws a dot on each line they chose. In groups, children take turns to play their tune on the chime bars (shortest bar = A, la;

middle = G, so; longest = E, mi), then the group sings it back on "loo". The composer can change any note they don't like. Keep the tune cards for lesson 5.

✓ Discussion questions (5 min, with answers)

1. "Which is the highest of our three notes?" (La.)
2. "On the chime bars, which bar played la?" (The shortest one. Shorter bars play higher notes.)
3. "Did anyone change their tune after hearing it? Why?" (Any reason: it sounded better, it was too jumpy, it ended in a nicer place.)

✓ Closing check (5 min, with answers)

Hide the instrument behind the screen. Children close their eyes. "I will play two notes. If the second note is higher, hold a thumb up against your chest. If it is lower, thumb down."

- Play G then A. (Up: la is higher than so.)
- Play A then E. (Down: mi is lower than la.)
- Play E then G. (Up: so is higher than mi.)

Vocabulary

so, mi, la, higher, lower, tune (melody), step

Differentiation

- **Support:** start with a two-ladder tune (so and mi only, as in grade 1); show the answer with hand height instead of words; a partner holds the chime bars.
- **Extension:** make an eight-beat tune (two cards); make a tune that fits under the rhythm of card E from lesson 2 (ti-ti beats get two dots).
- Children who cannot hear pitch differences can still compose a tune card and play it: the card and the bar lengths show high and low. See the unit's Access notes.

⚠ Safety

- Beaters pointed down; play the bars gently with a loose wrist.
- Group instruments on the table or floor, not held near faces.

Teacher notes and misconceptions

- Children often mix up "high" with "loud" and "low" with "quiet". Play a loud mi and a quiet la and ask which is higher.
- On chime bars and xylophones, shorter bars sound higher. Hand heights for so, mi and la are this unit's own aid, not a fixed system.
- The ladder is not a real five-line staff. It is a step towards one; there is no need to name lines or spaces yet.

- The pitches G, E and A are a suggestion. Any so, mi and la (for example C, A and D) work if they suit the class's voices.

Lesson 5: Music for a purpose

Unit overview - Previous: Lesson 4

About 40 minutes.

Goal

In groups, children turn "Little Hill Market" into either a lullaby for Paper Bear or a march for a Little Hill parade. They choose a tempo (speed) and dynamics (loudness) to fit the purpose, add an ostinato and one of their own tunes, rehearse against a class checklist, perform with good audience manners, and explain one choice.

Materials

- The song chart, ostinato cards A and B, the untuned percussion, the tuned instruments (chime bars G, E, A) and the hand drum.
- Per group of about 5: a choice card with a picture of Paper Bear in bed (lullaby) and a picture of a Little Hill parade (march), and boxes to tick: slow or fast; quiet or loud; ostinato A or B; which instruments.
- The groups' tune cards from lesson 4.
- A large performance checklist: (1) a steady beat; (2) we start and stop together; (3) our choices fit the purpose.
- A sentence card: "We played it ___ and ___ because ___."
- The stop signal; ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Sing line 1 of the song twice: once slow and quiet, once fast and loud. "Which one would help Paper Bear fall asleep? Which one would you march to?" Introduce the words: **tempo** is how fast or slow the music goes, and **dynamics** is how loud or quiet it is. "Musicians choose them to fit what the music is for."

✎ Main activity (25 min)

1. **Plan (5 min).** Each group chooses lullaby or march and ticks the boxes on its choice card: tempo, dynamics, ostinato A or B, and instruments. They also choose one group member's tune card from lesson 4 to play on the chime bars as an introduction. One child can be the conductor who starts and stops the group.
2. **Rehearse (10 min).** Groups practise in this order: the tune card as an introduction, then the song with the ostinato underneath, then a clear ending together. Read the checklist aloud halfway through: "Check your beat. Do you start and stop together? Does it sound like a lullaby or a march?" Groups may change any choice.
3. **Perform (10 min).** Each group performs for the class (about 1 to 2 minutes each). Before the first group, agree audience manners: sit still, eyes on the performers, listen

to the end, clap at the end. Performers wait for quiet, start on the conductor's signal and take a bow together. After each performance, the audience guesses lullaby or march, and the group says one choice with the sentence card ("We played it slow and quiet because Paper Bear is going to sleep").

✓ Discussion questions (5 min, with answers)

1. "Did the lullabies and marches sound different, even though it was the same song?" (Yes: the tempo and dynamics were different. Any example.)
2. "Pick one point on our checklist. Which group did it well? How could you tell?" (Any group, with a reason: they all stopped at the same time; the beat stayed steady. Praise only; no group is criticised.)
3. "If you did it again, what would your group change?" (Any idea: a different ostinato, quieter shakers, a slower start.)

✓ Closing check (5 min, with answers)

Children close their eyes. "I will sing line 1. Hold your answer against your chest: one finger for a lullaby, two fingers for a march."

- Sing line 1 fast and loud (strong, not shouting). (March: two fingers.)
- Sing line 1 slow and quiet. (Lullaby: one finger.)

Then the one-to-one checks happen during this week (see Assessment in the unit overview).

Vocabulary

tempo, fast, slow, dynamics, loud, quiet, lullaby, march, purpose, conductor, audience, rehearse, perform

Differentiation

- **Support:** the group keeps one choice from the teacher (for example ostinato A) and decides only tempo and dynamics; an adult conducts.
- **Extension:** add a change partway through (for example start quiet and get louder as the parade comes nearer), or play ostinatos A and B at the same time.
- A child who does not want to perform in front of the class can be the conductor, play with the group facing away from the audience, or perform for the teacher only.

⚠ Safety

- "Loud" means strong and full, never as loud as possible. Use the stop signal if any group gets too loud.
- Sealed shakers only; beaters pointed down; mouth-blown instruments not used.
- Ear defenders and the quiet spot are always allowed, including for the audience.

Teacher notes and misconceptions

- Children often link fast with loud and slow with quiet. That is fine for a march and a lullaby, but in discussion ask whether music could be fast and quiet (a tiptoeing mouse) or slow and loud (a giant walking).
- Groups often speed up while rehearsing. Remind the conductor to keep the beat steady, perhaps with a quiet drum.
- Performances do not need to be perfect. The checklist is the criteria, and the reason a child gives matters more than how polished it sounds.
- Paper Bear and the Little Hill parade are made-up characters and places used across this curriculum.

Grade 2 Arts: A Class Dance (5 lessons, about 3 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 the space, the floor and footwear against your school's rules, and check access notes with families and specialist staff before lesson 1.
>
> Text-checked by three other agents (Gemini 4 Argon, Gemini 4 Carbon and Gemini 3.8 Flash); see Known gaps.

Back to the grade 2 year plan - Term 3. Builds on grade 1: Stick puppets and a story show (a story with a beginning, middle and end; performing for others) and grade 2 term 2 Beat, rhythm and tune (beats in twos and threes, "Little Hill Market"), and the arts progression

Big idea

Dancers make choices about their bodies (what shape, which body parts), about space (high, middle or low; which way they face; the pathway they travel along) and about time (fast or slow, moving or still, how long a move lasts). A dance can start from an idea, such as the weather, and those choices help an audience see the idea. A short dance has a clear beginning, a middle with the main idea, and a clear end, and dancers can remember it, repeat it, change it and perform it for others.

This is the third arts unit of the grade 2 year (term 1 was collage and texture, term 2 was music). With this unit, all four arts strands (visual art, music, drama in grade 1, and dance) have appeared by the end of grade 2. Every child dances in their own way: rolling a wheelchair, moving only the arms and head, or moving while seated all count as dancing.

Outcomes

By the end of the unit a student can:

1. Make and hold body shapes at a high, middle and low level, including one symmetrical shape (the same on both sides) and one asymmetrical shape, and match a level to its symbol.
2. Travel along a straight, curved or zigzag pathway with a chosen locomotor movement (for example walking, tiptoeing, wheeling, sliding), keep their own space, and tell turning (spinning on the spot) from circling (travelling round a circle).
3. Change the speed of a movement (fast or slow), freeze on a signal, move on the strong beat in twos or threes, and copy a partner's slow movement as a mirror without touching.
4. With a group, make a short dance about one kind of weather with a beginning shape, a middle of at least three movements and an ending freeze, record it on a dance map using symbols, and give one reason for a movement choice.
5. Perform the group dance for an audience, watch other dances quietly, and say what weather a dance showed and which movement told them.

Prior knowledge

- From kindergarten arts: moving freely and stopping on a signal; high, middle and low; moving like characters.
- From grade 1 arts: a story with a beginning, middle and end; performing a puppet show for others; "yes, and".
- From grade 2 term 2 arts: beats in twos and threes; the song "Little Hill Market".
- From grade 2 term 3 history, geography and society: weather words for the three made-up places (rain in Little Hill, cold and snow on Snowy Peak, wind at Big Harbour). This helps but is not needed.

Lessons

Each lesson is about 40 minutes: Opening 5, Main activity 25, Discussion 5, Closing check 5. Teach about two lessons a week, in a hall or a cleared classroom. Each lesson starts with a short warm-up inside the Opening and ends calmly. Keep the level, pathway and movement-word cards up on the wall for the whole unit.

Lesson	Title	Main activity
1	Shapes and levels	Make and freeze shapes at high, middle and low levels, find symmetrical and asymmetrical shapes, match levels to symbols
2	Pathways through space	Travel on straight, curved and zigzag pathways with different movements, keep your own space, try turning and circling
3	Fast, slow, still and mirrors	Change speed, freeze on a signal, step on the strong beat, mirror a partner, repeat and change a movement
4	Making a weather dance	Groups choose a weather card and build a dance with a beginning, middle and end, then draw it on a dance map and change one thing after feedback
5	Performing and watching	Rehearse, perform for another class with performers and audience in different areas, watch and say what each dance showed

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); a tambourine (a sound for blind or low-vision children to travel towards); a clear space with a non-slip floor, checked for spills and objects before the lesson; ear defenders and a quiet spot at the edge of the space.
- Level cards (lessons 1-5): three large cards, high (an arrow pointing up), middle (a flat line across the middle) and low (an arrow pointing down), plus tactile copies (a raised arrow or line made with string or felt glued on card).
- Lesson 1: a "shape" picture sheet for the teacher (in the lesson); per child, a small worksheet with three stick figures (one high, one middle, one low) and a pencil.
- Lesson 2: three large pathway cards (a straight line, a curved line, a zigzag line) and tactile copies (string glued on card); 4 soft cones or floor markers to show the edge of the space; masking tape or a rope to make one straight, one curved and one zigzag path on the floor (taped flat so nobody trips); movement-word cards: walk, tiptoe, wheel, slide, march, glide, stretch, bend, twist, sway, turn, circle.
- Lesson 3: a tuned instrument with G, E and A and the song chart of "Little Hill Market" from term 2 (optional); speed cards "fast" (a hare) and "slow" (a snail) with tactile copies (a smooth card and a bumpy card); a "still" card (a statue).

- Lesson 4: four weather cards, each with a picture and two or three words (wind: blowing, gusty, swirling; rain: dripping, splashing, puddles; snow: falling, soft, settling; sun: warm, growing, stretching), with a tactile object for each (a paper fan, a sealed bottle of water to shake, a cotton wool ball, a warm-coloured felt circle); per group of about 4, a dance map card (three boxes in a row labelled "beginning", "middle", "end", with space to draw), a set of small level, pathway and speed symbol stickers or cut-out symbols (copies of the large cards) and a pencil; a large example dance map drawn by the teacher (in the lesson).
- Lesson 5: the groups' dance maps; masking tape to mark the performing area and the audience area; per child who wants one, a lightweight scarf (a hand prop, optional); a large "good audience" card (watch, stay still, clap at the end); a large "what did you see?" card ("I think it was ___ because ___"); a class performance checklist on chart paper (clear beginning shape; at least three movements in the middle; still ending freeze; we kept our space); the level, pathway and speed cards and the still card; the four weather cards from lesson 4 (with their tactile objects).
- One-to-one check (week of lesson 5): the level cards and their tactile copies; the pathway cards and their tactile copies; the child's group dance map.

⚠ Safety and access

Safety (read before lesson 1)

- Space and floor: clear tables and chairs to the edges; check the floor for water, paper and small objects before every lesson; tape floor paths flat. Leave a wide, clear route for wheelchairs and walking frames.
- Footwear: follow the school's rule for dance and PE. Bare feet or non-slip shoes are safer than socks alone on a smooth floor.
- Personal space: everyone keeps a "space bubble" (arms out, not touching anyone). Travelling all goes the same way round the room unless the lesson says otherwise. Stop on the signal, every time.
- No lifts, no carrying, no leaning on or taking another dancer's weight, and no pulling. Mirroring and group work are done without touching.
- Turning: at most three turns at a time, then stop and look at one still spot; anyone who feels dizzy sits down. Turning is always optional.
- Low level: no rolls, no knee spins and no jumping down from furniture. Low shapes are sitting, kneeling, crouching or lying still, as each child chooses.
- Scarves (lesson 5): held in the hand only, never round the neck or tied on; put down on the floor at the side before travelling fast.
- Sound: keep the drum comfortable; ear defenders and the quiet spot are always allowed.

Access and taking part

- **Own way counts:** every movement can be done big or small, standing, seated or lying, with the whole body or with one part (hands, arms, head, eyes, fingers). A child who shows "high" by reaching one hand up has shown high.
- **Wheelchair users and children who use walking frames:** wheeling, turning the chair and rolling forward and back are locomotor movements; high is reaching up, low is leaning forward or bringing arms down; pathways can be drawn by the chair or by an arm in the air. Make floor paths wide enough. Check with the child (and their physiotherapist if they have one) which movements are comfortable.

- **Seated dancing:** any child may dance seated on a chair for part or all of a lesson, without having to explain why.
- **Blind and low-vision children:** tactile level, pathway and speed cards; describe shapes in words ("both arms up like a Y"); a partner calls the pathway ("straight, straight, now curve left"); a sound to travel towards (a gently shaken tambourine); a guide's arm only if the child asks for it. Keep the room layout the same each lesson.
- **Deaf and hard-of-hearing children:** the drum held up so the beat can be seen; a hand on the floor or the drum to feel the beat; the stop signal is always visual as well as a sound; face the child when explaining. Check with the child's specialist teacher what helps.
- **Children who do not speak:** answer by pointing to cards, signing, using their communication device or showing a movement.
- **Sound-sensitive or movement-anxious children:** ear defenders, the quiet spot, the choice to be the "drummer" or "stop-signal holder" for part of a lesson, and dancing at the edge of the room. Watching and then joining in later is fine.
- **Performing:** no child performs alone unless they want to. In lesson 5 every child performs as part of a group, and a child may choose to be the group's drummer, to perform for the teacher only, or to show the dance map instead of dancing.
- Never comment on bodies, weight or what bodies look like. Comments are about choices: level, pathway, speed, stillness, the idea.

Assessment

- Lessons 1-4: the teacher notes answers in the closing checks (observe; no writing needed). Children answer by moving, pointing to a card, signing or speaking. Closing checks use eyes closed or answers held against the chest, so that children cannot copy a neighbour.
- Lesson 4: look at each group's dance map (beginning, middle with at least three movements, end) and note one reason from each child.
- Lesson 5: watch each group's performance against the class checklist (clear beginning shape; at least three movements in the middle; still ending freeze; we kept our space), and note what each child said or pointed to about another group's dance.
- Nobody is assessed on how high they jump, how fast they move, flexibility or how a movement looks; only on the choices the unit teaches.
- **One-to-one check (about 3 minutes per child, during the week of lesson 5):**
    1. "Show me a shape at a low level. Now a high level." (Any low shape, then any high shape, in the child's own way; a hand reaching down then up counts.)
    2. Lay out the three level cards. "Which card means middle?" (The flat line across the middle.)
    3. Lay out the three pathway cards. "Show me this pathway with your finger, a walk or your chair." Point to the zigzag card. (Any travel or tracing that changes direction sharply, like a Z.)
    4. "What is the difference between turning and circling?" (Turning: spinning on the spot. Circling: travelling round in a circle. A child may show both instead of saying them.)
    5. "Be my mirror." The teacher slowly raises one hand, then the other, then tilts their head. (The child copies at about the same time, on the matching side as a mirror would, without touching. A child who copies but uses the other hand is "with help".)
    6. Show the child's group dance map. "Show me or tell me how your dance began and ended. Why did you choose one of the movements?" (A beginning shape and an

ending freeze, plus any reason linked to the weather, for example "we went low and slow because snow settles".)
- 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, "Dance at a Glance", grade 2 column, read from the PDF on 11 November 2026: https://www.nationalartsstandards.org/sites/default/files/2021-11/Dance%20at%20a%20Glance.pdf

The unit uses these grade 2 performance standards as a guide (quoted exactly; the unit is not a full alignment). The PDF prints the responding codes with an extra dot (for example "DA:Re.7.1.2"); they are written here in the same form as the others.

- DA:Cr1.1.2a "Explore movement inspired by a variety of stimuli (for example, music/sound, text, objects, images, symbols, observed dance, experiences) and suggest additional sources for movement ideas." Lesson 4 (weather cards and objects), lesson 3 (music).
- DA:Cr1.1.2b "Combine a variety of movements while manipulating the elements of dance." Lessons 3-4.
- DA:Cr2.1.2a "Improvise a dance phrase with a beginning, a middle that has a main idea, and a clear end." Lesson 4.
- DA:Cr2.1.2b "Choose movements that express a main idea or emotion, or follow a musical phrase. Explain reasons for movement choices." Lesson 4.
- DA:Cr3.1.2a "Explore suggestions and make choices to change movement from guided improvisation and/or short remembered sequences." Lessons 3-4 (repeat and change; change one thing after feedback).
- DA:Cr3.1.2b "Depict the levels of movements in a variety of dance movements by drawing a picture or using symbols (for example, high, middle, low)." Lessons 1 and 4.
- DA:Pr4.1.2a "Demonstrate clear directionality and intent when performing locomotor and non- locomotor movements that change body shapes, facings, and pathways in space. Identify symmetrical and asymmetrical body shapes and examine relationships between body parts. Differentiate between circling and turning as two separate ways of continuous directional change." Lessons 1-2.
- DA:Pr4.1.2b "Identify the length of time a move or phrase takes (for example, whether it is long or short). Identify and move on the downbeat in duple and triple meter. Correlate metric phrasing with movement phrasing." Lesson 3, partly (see Known gaps).
- DA:Pr5.1.2b "Move safely in a variety of spatial relationships and formations with other dancers, sharing and maintaining personal space." Lessons 2-5.
- DA:Pr5.1.2c "Repeat movements, with an awareness of self and others in space. Self- adjust and modify movements or placement upon request." Lessons 3 and 5.
- DA:Pr6.1.2a "Dance for and with others in a space where audience and performers occupy different areas." Lesson 5.
- DA:Pr6.1.2b "Use limited production elements (for example, hand props, simple scenery, or media projections)." Lesson 5 (optional scarves).
- DA:Re7.1.2a "Find movements in a dance that develop a pattern." Lesson 5.
- DA:Re8.1.2a "Use context cues from movement to identify meaning and intent in a dance using simple dance terminology." Lesson 5.

The weather idea, the weather cards, the dance map, the movement-word cards, the level, pathway and speed symbols and all checks are the author's own examples, not from a source. "Little Hill Market" is the original song from the term 2 arts unit (CC0).

Known gaps and cautions

- Three other agents (Gemini 4 Argon, Gemini 4 Carbon and Gemini 3.8 Flash, all at fe16590) text-checked this unit on 2026-11-11. Argon and Gemini 3.8 Flash reported no errors; Carbon reported two lesson 5 errors (weather and still cards missing from the materials; wrong visitor timing), fixed in 70bf99e (Carbon re-checked that diff the same day). Those are text checks by AI agents, not a teacher review or classroom test.
- DA:Re7.1.2b ("Demonstrate and describe movements in dances from different genres or cultures") and DA:Re9.1.2a ("Observe or demonstrate dances from a genre or culture...") are not covered: the unit supplies no recordings or dances from named traditions. A teacher could add a licensed recording or a visit from a local dancer, chosen with care and credited (see the arts progression's note on living traditions).
- DA:Pr4.1.2b is only partly met: lesson 3 does long and short moves and stepping on the strong beat in twos and threes, but not matching dance phrases to musical phrases in detail.
- Other grade 2 dance standards in the PDF were not used, including DA:Pr5.1.2a and the connecting standards (DA:Cn10.1.2 and DA:Cn11.1.2).
- The year plan names "movement words (fast/slow, high/low, still/moving)"; the unit adds shapes, pathways, symmetry and mirroring from the NCAS grade 2 column and the arts progression's grade 2 line ("mirror a partner; repeat and vary a movement").
- Timings are untested. Lesson 4 (choosing, making, drawing and changing a dance in one lesson) is the most likely to run over; drawing the dance map can move to the start of lesson 5.
- A trained dance teacher will know more about warm-ups, safe floor work and how much turning suits seven-year-olds; adjust the safety notes to your setting.
- Weather is a shared, made-up idea here. If a class has recently lived through a frightening storm or flood, choose a different idea (for example a seed growing, or a day at Little Hill market).

Lesson 1: Shapes and levels

Unit overview - Next: Lesson 2

Back to the grade 2 year plan

About 40 minutes.

Goal

Children make and hold body shapes at a high, middle and low level, find symmetrical shapes (the same on both sides) and asymmetrical shapes, freeze on a signal, and match a level to its symbol.

Materials

- A hand drum and soft beater; the stop signal; a tambourine (a sound to travel towards); ear defenders and the quiet spot; a clear space with the floor checked.
- The three large level cards (high: an arrow pointing up; middle: a flat line across the middle; low: an arrow pointing down) and their tactile copies.
- The teacher's shape picture sheet (below).
- Per child: a small worksheet with three stick figures (one reaching high, one at middle height, one low), and a pencil.

Teacher's shape picture sheet (an example, not from a source):

- Symmetrical: a star (arms and legs wide), a tall thin pencil, a ball (curled small), a bridge made with both hands on knees.
- Asymmetrical: a teapot (one hand on hip, one arm out), a tree leaning in the wind (both arms to one side), one arm up and one arm down.
- Seated versions: star = arms wide; pencil = arms straight up; ball = arms hugged in; teapot = one hand on the hip, one arm out to the side.

Steps

✎ Opening (5 min)

1. Talk through the space rules: our space bubble (arms out, not touching anyone), the stop signal, and "own way counts" (big or small, standing or seated, whole body or one part).
2. Warm-up: the teacher plays a slow steady beat. Everyone gently wakes up one body part at a time on the spot: nod the head, roll the shoulders, wiggle the fingers, reach the arms up and down, wiggle the toes or shuffle the feet. Then three slow breaths in and out.

✎ Main activity (25 min)

1. **Freeze shapes (6 min).** The teacher drums and everyone moves on the spot in any way. When the drum stops (and the stop signal goes up), everyone freezes in a shape and holds it for three slow counts. Do it five or six times. Call out a word before some freezes: "a big shape", "a small shape", "a curved shape", "a pointy shape".
2. **Levels (8 min).** Show the three level cards. High is reaching up (on tiptoe, arms up, or one hand reaching up). Middle is about the height of a table. Low is near the floor (sitting, kneeling, crouching, lying still, or leaning forward in a chair with arms down). Hold up one card at a time; children make a shape at that level and hold it. Then play "level change": three slow drum beats to change from high to low, three to change from low to middle, and so on. Move slowly and safely when going down and up.
3. **Same on both sides (6 min).** Show a star shape: "If I drew a line down the middle of me, would both sides match?" (Yes.) That is a symmetrical shape. Show a teapot shape: "Do both sides match?" (No.) That is an asymmetrical shape. Children try two shapes from the picture sheet of each kind, then invent one of each. Partners take turns to show a shape; the other says "same on both sides" or "different on both sides". Partners never touch.
4. **Draw the levels (5 min).** Children sit down. On their worksheet they draw one of their own shapes next to each stick figure (or draw a tick under the figure that matches a shape the teacher shows). Show the level cards again; children draw the matching symbol (up arrow, flat line, down arrow) under each figure.

✓ Discussion questions (5 min)

- "What is the difference between a high shape and a low shape?" (A high shape reaches up, away from the floor; a low shape is close to the floor.)
- "Is a star shape symmetrical or asymmetrical? How do you know?" (Symmetrical: both sides match.)
- "Can you make a high shape sitting down?" (Yes: reach the arms or one hand up.)

✓ Closing check (5 min)

Children sit with eyes closed (or face the wall). The teacher says a level word: "Show me a low shape." Then: "Show me a high shape." Watch each child. Then, with eyes open, the teacher holds up the middle card and asks children to hold one, two or three fingers against their chest: "Is this card high (1), middle (2) or low (3)?" (2, middle.) Finish with three slow breaths in a still shape.

Vocabulary

shape, freeze, level, high, middle, low, symmetrical (the same on both sides), asymmetrical (different on each side), space bubble

Differentiation

- More support: show the shape and say it at the same time; use only high and low at first; give the child a picture card of a shape to copy.
- More challenge: make an asymmetrical shape at a low level; change level in exactly three beats; make a shape with a partner that matches theirs without touching.
- Children who move only part of their body show levels with their arms, hands or head and draw their own shapes.

⚠ Safety

- Check the floor before the lesson. Clear space; space bubbles.
- Go down to low level slowly; no dropping to the knees, no rolls.
- Nobody holds a shape that hurts; three slow counts is enough.

Teacher notes and misconceptions

- Some children think "low" means "small". A low shape can be wide (lying in a star); a high shape can be thin. Show both.
- "Symmetrical" is a hard word; "same on both sides" is fine. Children may say a shape is symmetrical when the arms match but the head is tilted; praise the looking and let them decide.
- Comments are about choices ("you chose a low level"), never about how a body looks.

Lesson 2: Pathways through space

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

Back to the grade 2 year plan

About 40 minutes.

Goal

Children travel along straight, curved and zigzag pathways with different locomotor movements (movements that travel), use non-locomotor movements (movements on the spot), keep their own space while moving among others, and tell turning (spinning on the spot) from circling (travelling round a circle).

Materials

- A hand drum and soft beater; the stop signal; a tambourine (a sound to travel towards); ear defenders and the quiet spot; a clear space with the floor checked.
- The level cards from lesson 1.
- The three large pathway cards (a straight line, a curved line, a zigzag line) and their tactile copies.
- 4 soft cones or floor markers for the edge of the space.
- Masking tape or a rope to make one straight, one curved and one zigzag path on the floor, taped flat, and wide enough for a wheelchair.
- Movement-word cards: walk, tiptoe, wheel, slide, march, glide (these travel); stretch, bend, twist, sway, turn, circle (these are for the game in step 1 and for step 4).

Steps

✎ Opening (5 min)

1. Warm-up on the spot to a slow drum beat: stretch up, bend down, twist gently side to side, sway like a tree. "These movements stay on the spot. Dancers call them non-locomotor movements."
2. "Today our movements will travel. Movements that take us from one place to another are called locomotor movements." Show the walk, tiptoe, wheel, slide, march and glide cards.

✎ Main activity (25 min)

1. **Travel and freeze (5 min).** Everyone travels the same way round the room, inside the cones, using the movement on the card the teacher holds up (walk, tiptoe, march, glide; wheelchair users wheel or glide). On the stop signal, freeze in a shape. Before moving again, check your space bubble. Swap the card every few freezes. Once or twice, call "on the spot!" and hold up stretch, sway or twist instead: everyone stays where they are.

2. **Pathways on the floor (8 min).** Show the three pathway cards. In three groups, children follow the taped paths one at a time, leaving two big steps (or one chair length) between dancers: the straight path with a march, the curved path with a glide, the zigzag path with a walk that turns sharply at each corner. Groups move on to the next path when the drum gives three beats. A partner can call the path for a child who is blind ("straight, now curve"), or the child can travel towards the tambourine.
3. **Pathways in the air (4 min).** Without the tape, children draw each pathway in the air with a hand or an elbow, then travel it across the space in their own way. The teacher holds up a card; children show it.
4. **Turning and circling (5 min).** Show the turn card: "A turn spins you round on the spot. You end up in the same place." Everyone does one slow turn (standing, seated turning the chair, or turning the head and shoulders), then looks at one still spot. Show the circle card: "A circle is a pathway. You travel round a big circle and come back to where you started." Half the class walks or wheels a big circle round a cone while the other half watches, then swap. At most three turns at a time; anyone dizzy sits down.
5. **Facing (3 min).** Children walk four steps forward, then four steps with their front facing a different wall, then four steps backwards (only if the space behind is clear, and slowly). "Which way is your front facing?" Wheelchair users turn the chair to face each wall.

✓ Discussion questions (5 min)

- "What is the difference between a locomotor and a non-locomotor movement?" (Locomotor movements travel from place to place, like walking; non-locomotor movements stay on the spot, like stretching.)
- "What is the difference between turning and circling?" (Turning: spinning on the spot. Circling: travelling round a circle and back.)
- "How did you keep your space bubble on the pathways?" (Waiting for a gap; leaving two steps between dancers; slowing down; stopping on the signal.)

✓ Closing check (5 min)

Children sit with eyes closed, or with a hand over their eyes. The teacher describes a movement: "I travel round a big ring and come back. Am I turning or circling?" Children show one finger for turning and two fingers for circling, held against their chest. (Two: circling.) Then: "I spin round on the spot." (One: turning.) Then, eyes open, each child traces one pathway card the teacher points to in the air with a finger. Finish sitting still for three slow breaths.

Vocabulary

locomotor (travelling), non-locomotor (on the spot), pathway, straight, curved, zigzag, turn, circle, facing, space bubble

Differentiation

- More support: travel only along the taped paths; follow a partner (without touching) along a pathway; use only walk and tiptoe.
- More challenge: travel a zigzag pathway at a low level; change the locomotor movement at each corner; draw a pathway on a card for a partner to follow.
- Children with limited movement can trace pathways with a hand, an eye pointer or a finger on the tactile card.

⚠ Safety

- Taped paths must lie flat. Everyone travels the same way round the room in step 1.
- Backwards travel is slow, only four steps, and only with clear space behind; it is optional.
- Turning: at most three turns at a time, then stop and look at one still spot. Turning is optional.

Teacher notes and misconceptions

- Children often mix up "turn" and "circle" because both go round. The test is: did you travel? If you end up where you started after travelling, that was a circle; if you never left the spot, that was a turn.
- A pathway is the shape your travelling leaves on the floor, like a snail trail. Some children find it easier to draw it first and dance it second.
- Galloping and skipping are fine extras if your class can do them safely; they are left out here because not every child can do them yet.

Lesson 3: Fast, slow, still and mirrors

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

Back to the grade 2 year plan

About 40 minutes.

Goal

Children change the speed of a movement, freeze and hold stillness, tell a long move from a short move, step or tap on the strong beat in twos and in threes, copy a partner's slow movement as a mirror without touching, and repeat a short movement and then change one thing about it.

Materials

- A hand drum and soft beater; the stop signal; a tambourine; ear defenders and the quiet spot; a clear space with the floor checked.
- The level cards and pathway cards from lessons 1 and 2.
- Speed cards: "fast" (a hare) and "slow" (a snail), with tactile copies (a smooth card for fast and a bumpy card for slow), and a "still" card (a statue).
- Optional: the song chart of "Little Hill Market" from the term 2 arts unit and a tuned instrument with G, E and A.

Steps

✎ Opening (5 min)

1. Warm-up: travel round the room the same way to the drum. Fast beats: small quick steps (or quick taps on the chair's armrests). Slow beats: big slow steps or a slow glide. The drum stops: freeze.
2. Show the fast, slow and still cards. "Stillness is part of dancing too. A still dancer is still dancing."

✎ Main activity (25 min)

1. **Speed changes (6 min).** On the spot, children make one movement, such as reaching an arm up and bringing it down. The teacher holds up the slow card: do it as slowly as a snail. The fast card: quick and small. The still card: freeze. Try it with a sway, a twist and a stretch. Then travel: slow on a straight pathway, fast (but safe and small) on a curved pathway, freeze on the signal.
2. **Long and short (4 min).** The teacher drums one beat: children make a short, sharp move (a quick point or a pop up). The teacher drums eight slow beats: children make one long move that lasts all eight (one slow rise from low to high). "Was that move long or short?"
3. **Strong beats in twos and threes (6 min).** Remind children of term 2: some music goes "ONE two, ONE two" and some "ONE two three, ONE two three". Drum twos: everyone steps, pats or nods on the strong beat (ONE) and stays still on the weak beat.

Drum threes: a big sway on ONE and small taps on two and three. The teacher can sing "Little Hill Market" (it goes in twos) while children step on the strong beats.

4. **Mirrors (6 min).** Partners face each other, an arm's length apart, never touching. One is the leader and moves very slowly (arms, head, shoulders, fingers, level changes); the other is the mirror and copies at the same time, like a reflection. "If your leader moves their right hand, you move the hand on the same side as it would be in a mirror." Keep it slow so the mirror can keep up. Swap after about a minute; do two rounds each. Seated partners mirror seated.
5. **Repeat and change (3 min).** Partners make a short pattern of three moves (for example: stretch up, twist, freeze low). Do it twice exactly the same. Then change ONE thing: the speed, the level or the pathway. Show the change to another pair, who guess what changed.

✓ Discussion questions (5 min)

- "What made a good mirror?" (Moving slowly; watching the leader's face and whole body; keeping the same timing; not touching.)
- "When you repeated your pattern and then changed one thing, what did you change?" (Any of speed, level, pathway or size.)
- "Was it harder to move fast or slow? Why?" (Any answer with a reason; many children find very slow movement harder to control.)

✓ Closing check (5 min)

Children sit with eyes closed. The teacher drums one beat, then eight slow beats, then one beat. "Hold up one finger against your chest if the last sound was long, two fingers if it was short." (Two: short.) Then, eyes open, the teacher is the leader and moves slowly while every child mirrors; watch each child's timing and side. Finish in a still shape for three slow breaths.

Vocabulary

speed, fast, slow, still, freeze, long, short, strong beat, mirror, leader, repeat, change

Differentiation

- More support: mirror only one body part (hands); the teacher leads; use only fast and slow (leave long and short for another day).
- More challenge: change two things at once (speed and level); lead a mirror that changes level; step on the strong beat while travelling a pathway.
- A child who cannot see the leader can mirror by sound: the leader describes each move ("right hand up slowly"); or the child leads.

⚠ Safety

- Fast travel stays small and safe; everyone travels the same way round the room; fast is never a race.
- Mirrors never touch and stay an arm's length apart.

- Stop on the signal every time.

Teacher notes and misconceptions

- Many children think mirroring means using the same hand as the leader (their right for the leader's right). A real mirror swaps sides; show this slowly, but do not mark children down for it in this lesson.
- Slow and quiet are different. A slow movement can be strong and a fast movement can be gentle.
- If children rush on the strong beat, let them only nod on ONE at first.

Lesson 4: Making a weather dance

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

Back to the grade 2 year plan

About 40 minutes.

Goal

In groups of about 4, children choose a kind of weather and make a short dance about it, with a beginning shape, a middle of at least three movements that show the weather, and an ending freeze. They record the dance on a dance map with symbols, give a reason for a movement choice, show it to another group, and change one thing after feedback.

Materials

- A hand drum and soft beater; the stop signal; a tambourine; ear defenders and the quiet spot; a clear space with the floor checked.
- The level, pathway and speed cards (and the still card) on the wall.
- Four weather cards, each with a picture and words: wind (blowing, gusty, swirling); rain (dripping, splashing, puddles); snow (falling, soft, settling); sun (warm, growing, stretching). With each card, a tactile object: a paper fan (wind), a sealed bottle of water to shake (rain), a cotton wool ball (snow), a warm-coloured felt circle (sun).
- Per group of about 4: a dance map card (three boxes in a row labelled "beginning", "middle", "end", with space to draw), a set of small level, pathway and speed symbols (stickers or cut-out copies of the large cards), and a pencil.
- The teacher's large example dance map (below), drawn on chart paper.

Teacher's example dance map: "Snow" (an example, not from a source):

- Beginning: a high, still shape, arms up and fingers spread (symbols: high, still).
- Middle: (1) fingers flutter slowly down from high to low (slow, high to low); (2) glide on a curved pathway, gently (curved, slow); (3) one slow turn, sinking to a middle level (middle, slow).
- End: a low, curled, still shape, like snow settling (low, still).

Steps

✎ Opening (5 min)

1. Warm-up: a quick game of "fast, slow, still" with the cards from lesson 3, then two level changes (high to low in three beats, low to high in three beats).
2. Show the weather cards and pass round the objects. "Dancers get ideas from all kinds of things: music, pictures, objects, things that happen. Today our idea is the weather."

✎ Main activity (25 min)

1. **Explore (5 min).** The teacher reads one weather card's words, and everyone tries movements for each word: "dripping" (small sharp finger flicks), "swirling" (circling arms, or circling the room), "settling" (sinking slowly to low). Do two cards together as a class. Ask: "Is rain fast or slow? High or low? Does it travel?" Any answer with a reason is fine.
2. **Build the dance (10 min).** Groups choose a weather card (two groups may have the same weather). Each group decides: a beginning shape (everyone holds it still, all together); a middle with at least three movements that show the weather, using at least two levels and one pathway; an ending freeze. Groups practise it three times, starting and ending together. The teacher circulates and asks: "Why did you choose that movement?" Every child in the group chooses or changes at least one movement.
3. **Draw the dance map (5 min).** Show the example "Snow" map. Each group draws its dance in the three boxes: a stick figure or a word for each part, plus the level, pathway and speed symbols. One child can draw while others call out the next part, and roles can swap.
4. **Show, feedback, change (5 min).** Pairs of groups take turns to show their dance to each other. The watching group says one thing they saw ("I saw a low, slow ending") and one idea ("Could you add a fast part?"). The dancing group chooses ONE change (speed, level, pathway or movement), tries it, and adds it to the map.

✓ Discussion questions (5 min)

- "How does your dance show the weather?" (Any movement linked to the weather, for example "fast zigzag for the wind", "low and still for a puddle".)
- "What did you change after feedback, and was it better?" (Any change with a reason. "Not better, so we changed it back" is a good answer.)
- "Why does a dance need a clear ending?" (So the audience knows it has finished; so dancers end together.)

✓ Closing check (5 min)

Each group holds up its dance map. The teacher points to one symbol on each map ("Which level is this?" or "Which pathway is this?"), and the group answers. Then, one child at a time from each group, quietly to the teacher, points to or says one reason for one movement in their dance. Note which children gave a reason. Finish by sitting still for three slow breaths.

Vocabulary

idea, weather, beginning, middle, end, ending freeze, dance map, symbol, reason, feedback, change

Differentiation

- More support: use the "Snow" example and change only one part; the teacher gives three movement choices and the group picks; groups of 3.

- More challenge: add a part where the group moves in unison (all the same) and then in their own ways; repeat one movement twice to make a pattern; add a strong beat in twos or threes from lesson 3.
- Children who do not speak can choose movements by showing them or by pointing to symbols; their choices go on the map.

⚠ Safety

- Groups need space between them; agree where each group practises.
- No lifting, carrying or leaning on each other in any group shape. Group shapes are made by standing or sitting near each other, not touching.
- The water bottle stays sealed and the cotton wool is not for mouths.

Teacher notes and misconceptions

- Groups often make the middle very long. Three movements is enough; a short, clear dance is better than a long one nobody remembers.
- Some groups act the weather (pretending to hold an umbrella) rather than being it. Both are fine; ask "Can you show the rain itself?"
- If a group argues, give each child one part of the middle to choose.
- If anyone in the class has had a frightening experience of a storm or a flood, leave out wind and rain or use a different idea (see Known gaps in the unit overview).

Lesson 5: Performing and watching

Unit overview - Previous: Lesson 4

Back to the grade 2 year plan

About 40 minutes.

Goal

Groups rehearse their weather dance, perform it for another class in a space where the performers and the audience are in different areas, and watch the other dances quietly. Children say what weather a dance showed and which movement told them, and notice a movement that repeated to make a pattern.

Materials

- A hand drum and soft beater; the stop signal; a tambourine; ear defenders and the quiet spot; a clear space with the floor checked.
- The groups' dance maps from lesson 4.
- Masking tape to mark the performing area and the audience area (taped flat).
- Per child who wants one: a lightweight scarf (an optional hand prop).
- A large "good audience" card: watch; stay still; clap at the end.
- A large "what did you see?" card: "I think it was ___ because ___."
- The level, pathway and speed cards (and the still card) on the wall.
- The four weather cards from lesson 4 (wind, rain, snow, sun, with their tactile objects) on the wall.
- A class performance checklist on chart paper: (1) a clear beginning shape; (2) at least three movements in the middle; (3) a still ending freeze; (4) we kept our space.

Before the lesson

Invite another class (or a small group of them) for about 20 minutes in the middle of the lesson (from about minute 11, after the final rehearsal, until the discussion). Tape the performing area at one end of the space and the audience area at the other, with a clear gap and a wide route for wheelchairs. Agree the order of groups.

Steps

✎ Opening (5 min)

1. Warm-up: wake up each body part, three level changes, and one round of "fast, slow, still".
2. Read the class checklist together. "Today we perform for an audience. Performers dance in this area; the audience sits in that area."

✎ Main activity (25 min)

1. **Final rehearsal (6 min).** Each group rehearses its dance twice, using its map, starting and ending together. Children who want a scarf decide where in the dance to use it (for example, swirling for wind). Scarves are held in the hand only and put down at the side before any fast travel. A group can also choose a drummer from its own members.
2. **Set up and audience rules (3 min).** The visiting class arrives and sits in the audience area. Children from both classes read the "good audience" card together. The dancing class sits in the audience area too while it waits for its turn.
3. **Performances (16 min).** Each group in turn: walks or wheels to the performing area, holds its beginning shape (the teacher gives two quiet drum beats to start), dances, holds its ending freeze, and the audience claps. After each dance (about 2 minutes each, including answers), ask the audience:
    - "What weather do you think that was? Which movement told you?" (Children use the "I think it was ___ because ___" card; any weather with a linked movement counts. The dancers then say what it was.)
    - "Did any movement happen more than once and make a pattern?" (For example: "They swirled and froze, swirled and froze.")

A child who has chosen not to dance in front of the visitors can hold up the group's dance map, be the drummer, or perform for the teacher afterwards.

✓ Discussion questions (5 min)

After the visitors leave:

- "What was it like to perform? What was it like to watch?" (Any honest answer. Feeling nervous is normal; it might feel different next time.)
- "Which checklist point did your group do best?" (Any point with an example.)
- "If you danced it again, what one thing would you change?" (Any change to speed, level, pathway or movement.)

✓ Closing check (5 min)

With eyes closed, children answer by holding fingers against their chest: "In our dances, the audience and the performers were in different places. One finger if that is true, two if it is false." (One: true.) Then the teacher holds up one group's dance map and asks: "What weather was this dance?" Children point to the weather card on the wall. Finish with a cool-down: a slow stretch up, a slow sink to a low or seated shape, and three slow breaths.

Vocabulary

perform, rehearse, audience, performing area, hand prop, pattern, checklist

Differentiation

- More support: groups perform for the teacher and their own class before the visitors arrive; the teacher counts the group in and out.

- More challenge: a group explains its dance map to the audience before dancing; a child notices a pattern in another dance and copies it.
- Audience answers can be signed, pointed to on the weather cards, or given to the teacher quietly afterwards.

⚠ Safety

- The performing and audience areas are marked with flat tape and kept apart; nobody runs between them.
- Scarves are held in the hand only, never round the neck or tied on.
- Only one group dances at a time.

Teacher notes and misconceptions

- Performing is optional for each child, but everyone has a role. Never push a child to perform alone.
- Audience comments are about what they saw (levels, speed, pathways, the weather), not about who was "best".
- If you cannot invite another class, a small group of adults or the class itself split into two halves works as an audience.
- Use the week of this lesson for the one-to-one check in the unit overview.

Grade 2 Health and PE: Balance, Rolling and Jumping (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 10 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Check space, mats, footwear, medical and contact notes against your school's rules and PE guidance.
>
> Text-checked by one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 1. Builds on grade 1: Moving and dodging: travelling, warming up and safe tag (the class warm-up and the stop signal) and kindergarten Balance, jumping, ball skills and feelings words (first balances and two-foot jumps)

Big idea

We can balance on many different parts of our body, at high, middle and low levels, and hold still like a statue. We can move our weight from our feet onto other body parts, roll sideways in a long thin shape or a small curled shape, and jump and land softly. Joining a balance, a move and another balance makes a short floor sequence with a clear start and finish.

This is the first health and PE unit of the grade 2 year (term 1). In kindergarten children tried first balances and two-foot jumps with soft landings, and in grade 1 they built a class warm-up and travelled in many ways. Term 2 of grade 2 moves on to hitting and passing, and term 3 to healthy habits and a class game day.

Outcomes

By the end of the unit a student can:

1. Hold a still balance on at least three different bases of support (for example one foot, two hands and two feet, bottom only, knees and hands), at more than one level, and name the body parts touching the mat.
2. Show and tell apart a curl, a stretch, a twist and a bend.
3. Move their weight from their feet onto other body parts (for example rocking, a "bear walk", or sitting down and rolling) and roll sideways in a long thin "pencil" shape and a small curled "egg" shape, in their own way.
4. Jump and land softly with bent knees: forwards (horizontal) and upwards (vertical), taking off and landing on two feet and trying one-foot take-offs and landings.
5. Make and show a three-part floor sequence (balance - move or roll - balance) with a clear still start and finish, and follow the mat rules (one at a time on a mat, wait off the mat, nobody in a landing zone).
6. Say that our class warm-up starts gently and gets faster and gets our bodies ready, and lead one move of it.

Prior knowledge

- From kindergarten: "my bubble" space, freezing on the stop signal, simple balances and two-foot jumps with soft landings.

- From grade 1: the class warm-up (march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently), the travelling words, high and low.
- Seven-year-olds vary a lot in balance, strength and confidence. Some will already do gymnastics outside school; others will be new to mats. Praise stillness, control and trying, not difficulty, and accept each child's own way of moving.

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	Statues on the mats	Mat rules; balancing on different bases, at three levels, in different shapes
2	Curl, stretch, twist, bend	Shape cards; rocking and moving weight onto other body parts
3	Pencil roll and egg roll	Sideways rolls in a narrow or curled shape, both directions
4	Jump and land like a cat	Forward and upward jumps; one- and two-foot take-offs and landings
5	Our floor sequence	Balance - move or roll - balance, shown to a partner; one-to-one check

Materials (whole class unless noted)

- A hall or cleared indoor space with a non-slip floor, at least a couple of metres from walls and furniture. Cones or floor spots to mark the edge.
- Gymnastics or PE mats: about one mat per two or three children, laid with clear gaps (at least a metre) between mats and away from walls (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).
- A large "mat rules" card with pictures: one at a time on the mat; wait sitting at the end of the mat; nobody on the mat while someone is moving; bare feet or gym shoes, no socks (every lesson).
- 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).
- Lesson 1: three large level cards (high, middle, low) each with a stick picture and one, two or three dots from the floor so they can be read without colour; eight balance cards with a stick picture and the body parts touching the floor written underneath (one foot; two feet tiptoe; two hands and two feet; two knees and two hands; one knee and one hand; bottom only; tummy only, arms and legs lifted; one hand and one foot, side on); beanbags, one per child; blank small cards and pencils for early finishers.
- Lesson 2: four large shape cards with a word and a stick picture (curl, stretch, twist, bend); the balance cards and level cards from lesson 1.
- Lesson 3: the shape cards; a soft toy or rolled-up towel per mat as a "start spot" marker; floor tape or chalk to mark each mat's rolling lane.
- Lesson 4: about 12 floor spots or hoops for take-off spots; floor tape or chalk to mark a "landing zone" on each mat (a box drawn at the far end); a large "cat landing" card (stick

picture: knees bent, arms forward, feet apart, quiet); about 16 small cones or beanbags to mark how far jumps go (no measuring tapes, no recording distances).
- Lesson 5: the balance, level and shape cards; a "my sequence" card per child with three empty boxes (start balance, move or roll, finish balance) and pencils; the cat landing card.
- For blind or low-vision children: a sighted guide partner (every lesson); raised-line (dried glue) copies of the four shape cards and the "my sequence" card; a small bell or shaker for the guide to show where the mat starts and ends.

⚠ Safety and access

- **Mats and space:** check the floor, mats and space before each lesson. Mats lie flat with no gaps or overlaps between pieces in a lane. Bare feet or gym shoes, as your school allows; no socks on a slippery floor. Hair tied back; no jewellery; pockets empty.
- **One at a time:** only one child moves on a mat at a time. Others sit at the end of the mat and wait. Nobody stands or sits in a landing zone or rolling lane.
- **Rolls:** this unit teaches sideways rolls only (pencil roll and egg roll). Forward and backward rolls are not taught or asked for; a child who already does them outside school is asked to save them for a club or a coached session. No weight on the head or neck in any balance or roll.
- **Opt-in:** every balance, roll and jump is an invitation. Children choose how big to go, can do a smaller version, or can rest at the edge, with no reason needed. Never physically push or place a child into a shape.
- **Hands-on help:** if an adult needs to steady a child, ask first ("Can I hold your hand to help you balance?") and help only at the hand or shoulder.
- **Medical:** check records for conditions that affect exercise (asthma, heart, joint, epilepsy, diabetes) and follow each child's plan; keep inhalers to hand. Some children are told by their doctor not to roll, jump or go upside down; they choose from the other balances and moves.
- **Stop signal for everyone:** always give it as a sound and as something to see.
- **Moving in your own way:** children who use a wheelchair, walker or crutches balance in their chair (for example one arm lifted, leaning in a shape, a twist or a stretch with the arms), move their weight by leaning and shifting, and make their sequence from their own balances and moves; a child may also choose to come out of the chair onto a mat with their school's agreed support. "Your own way counts" is said in every lesson. Blind or low-vision children work with a sighted guide partner and can feel raised-line shape cards; deaf children get every instruction shown as well as said.
- **Bodies:** never measure, weigh or compare children's bodies; jump markers show "further than last time" for each child only and are never recorded or ranked.

Assessment

- Lessons 1-4: the teacher watches for still balances on different bases and levels, telling curl, stretch, twist and bend apart, sideways rolls with control, soft landings with bent knees, and following the mat rules, and notes it on a class list.
- Lesson 5: a one-to-one check with five parts and an answer guide (about 4 minutes per child), done while the class practises sequences. Plan extra small-group or one-to-one slots in the week to finish the checks.

Sources

- SHAPE America, "Grade-Level Outcomes for K-12 Physical Education" (2013), read 10 November 2026; quotations checked against page images: https://www.shapeamerica.org/wp-content/uploads/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf
- S1.E7.2a: "Balances on different bases of support, combining levels and shapes."
- S1.E7.2b: "Balances in an inverted position* with stillness and supportive base." The footnote says: "*Teachers must use differentiated instruction and developmentally appropriate practice tasks for individual learners when presenting transfers of weight from feet to other body parts."
- S1.E8.2: "Transfers weight from feet to different body parts/bases of support for balance and/or travel."
- S1.E9.2: "Rolls in different directions with either a narrow or curled body shape."
- S1.E10.2: "Differentiates among twisting, curling, bending and stretching actions."
- S1.E11.2: "Combines balances and transfers into a three-part sequence (i.e., dance, gymnastics)."
- S1.E3.2: "Demonstrates 4 of the 5 critical elements for jumping and landing in a horizontal plane using a variety of one- and two-foot takeoffs and landings."
- S1.E4.2: "Demonstrates 4 of the 5 critical elements for jumping and landing in a vertical plane."
- S4.E4.2: "Works independently with others in partner environments."
- S4.E6.2a: "Works independently and safely in physical education."
- S4.E6.2b: "Works safely with physical education equipment."
- Warm-up and cool-down outcomes (S3.E4) first appear in grade 3 in this document.
- Wikipedia, "Warming up" (read 9 November 2026, for the grade 1 unit): https://en.wikipedia.org/wiki/Warming_up
- The grade 2 year plan (health and PE, term 1).

Known gaps

- One other agent (Gemini 4 Argon, at 7ab4714) text-checked this unit on 2026-11-10 and reported no errors. That is a text check by an AI agent, not a teacher review or classroom test.
- 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" for jumping and landing are not listed in the outcomes document, so the unit uses its own simple checklist (bent knees to start, arms swing, take off, land on the balls of the feet then heels, knees bend to land quietly). That checklist is an example, not from a source.
- **Inverted balance (S1.E7.2b) is only partly covered.** Lesson 2 offers "hips higher than head" shapes (bear shape and "mountain" with hands and feet on the mat) as an optional try; headstands, handstands and shoulder stands are not taught. A school with trained gymnastics staff may want to go further.
- Forward and backward rolls are left out on purpose (see Safety and access); SHAPE's grade 2 outcome asks for rolls "in different directions" and the unit covers left and right sideways rolls only.
- The warm-up is our class routine from grade 1, not a grade 2 outcome in the source (warm-up outcomes start in grade 3 there).
- Pacing is untested; classes new to mats may need two sessions for lesson 3.

- The order of lessons, the games, the balance list and the timings are my choice, not taken from a source.

Lesson 1: Statues on the mats

Unit overview - Next: Lesson 2

Goal: Children learn the mat rules and hold still balances on different bases of support, at high, middle and low levels.

Length: about 30 minutes.

Materials

- The cleared space, edge cones or floor spots, and mats (about one per two or three children) with clear gaps between them.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The large "mat rules" card.
- Three large level cards (high, middle, low), with one, two or three dots.
- Eight balance cards with the body parts touching the floor written underneath: one foot; two feet tiptoe; two hands and two feet; two knees and two hands; one knee and one hand; bottom only; tummy only, arms and legs lifted; one hand and one foot, side on.
- Beanbags, one per child.
- Blank small cards and pencils for early finishers.
- For blind or low-vision children: a sighted guide partner and a bell or shaker to mark the mat ends.
- 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 the mat rules card and read each picture together: one at a time on the mat; wait sitting at the end; nobody on the mat while someone is moving; bare feet or gym shoes, no socks. "Why do we have these rules?" (So nobody bumps or slips.) Say: "This term we are going to be statues, rollers and jumpers. Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1 with the six cards: march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently. Ask a child to hold up each card. Freeze on the stop signal.

✎ Main activity (15 min)

1. **Statue game (4 min).** Children walk around the space (not on the mats). On the stop signal they freeze as a statue and hold for a count of five. "Which parts of you are

touching the floor?" (Usually two feet.) "That is your base. Now freeze with a different base." Try one foot, two knees and two hands, bottom only.

2. **Balance cards at the mats (6 min).** Two or three children per mat, one at a time on the mat. Show a balance card; each child tries it and holds for five, then sits at the end for the next child. Use four or five of the eight cards. "Point to the parts touching the mat." Children in a wheelchair make balances in their chair: lifting one arm, leaning to the side, a stretched or curled shape with the arms.
3. **High, middle, low (5 min).** Show the level cards. "High is up tall, low is near the floor, middle is in between." Call a level and a base: "Low balance on bottom only", "High balance on one foot", "Middle balance on two hands and two feet". Stretch: balance a beanbag on a body part while holding still.

✓ Discussion questions (4 min)

- "What helped you hold still?" (Answer guide: looking at one spot, a wide base, tight tummy, arms out; accept sensible ideas.)
- "Is it easier to balance on lots of parts or on one part? Why?" (Answer guide: usually lots of parts, because the base is bigger; accept sensible ideas.)

✓ Closing check (3 min)

Show the balance card "one knee and one hand". "Which parts touch the mat? What level is it, high, middle or low?" Children point or say. (Answer guide: one knee and one hand; low or middle, depending on the shape - accept either with a reason. Note who names the base correctly.)

Vocabulary

balance, still, statue, base, high, middle, low, mat rules

Differentiation

- Support: balances with a bigger base (two knees and two hands, bottom only); hold for a count of three; an adult holds a hand if the child asks.
- Stretch: balance a beanbag on a body part; change level without losing stillness.
- Early finishers: invent a new balance and draw its base on a blank card.

⚠ Safety

- One at a time on each mat; others sit at the end, never in the lane.
- No weight on the head or neck in any balance.
- Children may choose a smaller version of any balance or rest at the edge.
- Water available; children with asthma follow their plan.

Teacher notes

- Praise stillness and control rather than hard balances.
- Keep the mat rules card up for every lesson of the unit.

Lesson 2: Curl, stretch, twist, bend

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

Goal: Children show and tell apart a curl, a stretch, a twist and a bend, and move their weight from their feet onto other body parts.

Length: about 30 minutes.

Materials

- The cleared space, edge cones or floor spots, and mats with clear gaps.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The large "mat rules" card.
- Four large shape cards with a word and a stick picture: curl, stretch, twist, bend.
- The eight balance cards and three level cards from lesson 1.
- For blind or low-vision children: a sighted guide partner and raised-line copies of the four shape cards.
- 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. Read the mat rules card together. Show the four shape cards one at a time and make each shape sitting down: curl (small and round like a ball), stretch (long and wide, reaching far), twist (one part turns while another stays still, like wringing a cloth), bend (fold at a joint, like an elbow or a knee).

Warm-up (5 min)

The class warm-up with the six cards, led by a child holding the cards. Freeze on the stop signal.

✎ Main activity (15 min)

1. **Shape caller (4 min).** Children spread out in their own space. Call a shape: everyone makes it, then freezes on the stop signal. Mix with levels: "a low curl", "a high stretch", "a middle twist". Children in a wheelchair make each shape with their arms, head and upper body.
2. **Rock and roll over the feet (5 min).** At the mats, one at a time. Show three ways to move weight from feet to other parts:
3. Crouch, then rock back onto your bottom and curved back, and rock up onto your feet again (a "rocking egg"). Chin stays tucked; weight never goes onto the head or neck.
4. From standing, put your hands on the mat and walk your feet around them (a "bear walk" on hands and feet).

5. From standing, kneel down, sit, and lie on your side in a long shape. "Where is your weight now?" after each one.
6. **Hips-high shapes (optional, 3 min).** "Can you make a shape where your hips are higher than your head?" Show two: a bear shape (hands and feet on the mat, hips high, knees bent or straight) and a "mountain" (hands and feet on the mat, hips pushed up to a point). Hold for a count of three, then lower the knees to the mat. Head stays off the mat; no weight on the head or neck. Any child can choose a balance card instead.
7. **Balance, move, balance taster (3 min).** Each child picks one balance card, holds it, moves their weight to a new base in any way from step 2, and holds a new balance.

✓ Discussion questions (4 min)

- "What is the difference between a twist and a bend?" (Answer guide: in a twist one part turns around while another stays facing the same way; in a bend a joint folds; accept a demonstration.)
- "How did you get from your feet to your bottom without bumping?" (Answer guide: going low first, bending the knees, using hands, rocking slowly.)

✓ Closing check (3 min)

Make three shapes yourself, one at a time: a curl, a twist, a stretch. After each, children hold up the matching shape card or say the word. (Answer guide: curl, twist, stretch. Note who tells the twist apart from the bend.)

Vocabulary

curl, stretch, twist, bend, weight, rock, hips, base

Differentiation

- Support: practise only curl and stretch first; rock with an adult's hand held if the child asks.
- Stretch: a curl at a high level or a twist on one foot; link two shapes smoothly.
- Early finishers: show a partner a shape and let them guess which word it is.

⚠ Safety

- Rocking: chin tucked; roll on the curved back only, never onto the head or neck.
- Hips-high shapes are optional and held only briefly; no headstands, handstands or shoulder stands in this unit.
- One at a time on each mat; others sit at the end.
- Water available; children with asthma follow their plan.

Teacher notes

- The SHAPE America grade 2 outcomes include an inverted balance and say teachers must use differentiated, developmentally appropriate tasks for each learner. This lesson offers only gentle hips-high shapes; see the unit's Known gaps.

Lesson 3: Pencil roll and egg roll

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

Goal: Children roll sideways in both directions, in a long narrow shape (pencil roll) and a small curled shape (egg roll), with control.

Length: about 30 minutes.

Materials

- The cleared space, edge cones or floor spots, and mats with clear gaps.
- Floor tape or chalk to mark each mat's rolling lane.
- A soft toy or rolled-up towel per mat as a "start spot" marker.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The large "mat rules" card.
- The four shape cards from lesson 2 (curl, stretch, twist, bend).
- For blind or low-vision children: a sighted guide partner, raised-line shape cards, and a bell or shaker to mark the mat ends.
- 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. Read the mat rules card together, especially "nobody on the mat while someone is moving". Hold up the stretch and curl cards. "Today we roll in a stretched shape and in a curled shape. We roll sideways, like a log rolling down a hill. We do not do forward rolls in this unit."

Warm-up (5 min)

The class warm-up with the six cards. Add two moves on the mat edge: lying on the back, rock gently side to side; then hug the knees and rock side to side.

✎ Main activity (15 min)

1. **Pencil roll (5 min).** One child at a time lies at the start spot on their back, arms stretched above the head (or by the sides), legs together, body long and straight like a pencil. Roll sideways along the lane to the end of the mat, then roll back the other way. "Try to stay in the lane and stay straight." The child sits at the end; the next child goes.
2. **Egg roll (5 min).** Kneel and curl up small, tummy on the knees, hands holding the shins or tucked in, head tucked. Tip sideways onto the side and back and over to the knees again, rolling along the lane. Then try the other direction.

3. **Choose and change (5 min).** Each child chooses pencil or egg roll and which direction (towards the window, towards the door), says it out loud or signs it, then does it. Partners at the end of the mat watch and say one thing they saw: "You stayed straight", "You stayed curled".

Children who do not want to roll can rock side to side in a pencil or egg shape on the spot. Children in a wheelchair, or who choose not to leave the chair, make a long thin shape and a small curled shape with the upper body and lean from side to side; with their school's agreed support they may also roll on a mat.

✓ Discussion questions (4 min)

- "Which roll was easier to keep straight? Why?" (Answer guide: any answer with a reason; many find the pencil roll drifts and the egg roll is slower.)
- "What does your body look like in a pencil roll and in an egg roll?" (Answer guide: long and narrow, stretched; small and curled.)

✓ Closing check (3 min)

Ask one child at a time, quickly at the mat: "Show me a pencil roll to the window side" or "Show me an egg roll to the door side". (Answer guide: the right shape (long and narrow, or small and curled) and the right direction. Children who rock instead of roll show the shape and direction by rocking. Note shape and direction on the class list.)

Vocabulary

roll, sideways, pencil roll, egg roll, narrow, curled, direction, lane

Differentiation

- Support: rock in the shape before rolling; an adult kneels beside the lane (not in it) to give a direction cue.
- Stretch: pencil roll with arms above the head and feet together the whole way; link a pencil roll into a balance.
- Early finishers: hold the start spot marker and judge "straight" for a partner.

⚠ Safety

- Sideways rolls only; no forward or backward rolls.
- One child in a lane at a time; the next child waits until the roller is sitting at the end.
- Children who feel dizzy sit still at the edge until it passes; stop after a few rolls each.
- No weight on the head or neck.

Teacher notes

- The SHAPE America grade 2 outcome asks for rolls "in different directions with either a narrow or curled body shape." This lesson uses two sideways directions only.
- Lay the lanes so rollers move away from walls and other mats.

Lesson 4: Jump and land like a cat

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

Goal: Children jump forwards and upwards and land softly, using a five-point checklist, with two-foot and one-foot take-offs and landings.

Length: about 30 minutes.

Materials

- The cleared space, edge cones or floor spots, and mats with clear gaps.
- About 12 floor spots or hoops as take-off spots.
- Floor tape or chalk to mark a "landing zone" box at the far end of each mat.
- A large "cat landing" card (stick picture: knees bent, arms forward, feet apart, quiet).
- About 16 small cones or beanbags to mark how far a jump went.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The large "mat rules" card.
- For blind or low-vision children: a sighted guide partner and a bell or shaker sounded from the side of the landing zone.
- 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. Show the cat landing card. "How does a cat land when it jumps down? Quietly, with bent legs." Teach the five-point jump checklist with actions (this checklist is our own, not from a source):

1. Bend your knees and swing your arms back.
2. Swing your arms forwards and up.
3. Push off and stretch in the air.
4. Land on the front of your feet, then your heels.
5. Bend your knees to land quietly and freeze.

Warm-up (5 min)

The class warm-up with the six cards, then small bunny hops on the spot, landing quietly.

✎ Main activity (15 min)

1. **Upward jumps (4 min).** In their own space (not on mats). "Jump up as if to touch the ceiling, land like a cat and freeze for three." Try five jumps, checking one point of the checklist at a time.

2. **Forward jumps onto the mat (6 min).** Each mat has a take-off spot just in front of it and a landing zone box at the far end. One child at a time jumps forwards from two feet, lands on two feet on the mat, freezes, then walks off to the side, never back through the landing zone. A partner at the side places a cone or beanbag where they landed. "Can you jump past your own marker next time?" Markers are each child's own and are not compared or written down.
3. **One foot, two feet (5 min).** Try new combinations, one at a time on the mat: two feet to two feet; one foot to two feet (a "leap and land"); one foot to the same foot (a hop); one foot to the other foot (a leap). Children choose which to try. Landing always ends in a quiet, still freeze.

Children in a wheelchair can do a "chair jump": a quick push forward and a controlled stop that freezes still, or a fast arm-swing-and-reach upward with a still finish. Children who choose not to jump do a big step-and- freeze onto the mat.

✓ Discussion questions (4 min)

- "Why do we bend our knees when we land?" (Answer guide: to land softly and quietly, so the landing does not jolt; accept sensible ideas.)
- "Which take-off and landing felt steadiest for you?" (Answer guide: any answer; often two feet to two feet.)

✓ Closing check (3 min)

Two or three children at a time jump upwards in their own space while you watch for four of the five checklist points. (Answer guide: note which points each child shows; four or more of the five meets the goal - for example knees bent, arm swing, push off, quiet bent-knee landing. Children who use a chair or step show a controlled push or step and a still finish.)

Vocabulary

jump, land, take off, upwards, forwards, one foot, two feet, quiet, freeze

Differentiation

- Support: small jumps from a low line on the floor; hold an adult's hand if the child asks.
- Stretch: a forward jump with a quarter turn in the air; a hop and land still on one foot.
- Early finishers: be the partner who places the landing marker and watches one checklist point.

⚠ Safety

- Only one child on a mat; nobody stands, sits or walks in a landing zone.
- Leave the mat by the side, never back through the landing zone.
- Jumping on mats or in own space only; no jumping off benches or boxes in this unit.
- Markers are never measured, compared or recorded.

- Water available; children with asthma follow their plan.

Teacher notes

- SHAPE America's grade 2 outcomes ask for 4 of the 5 "critical elements" of jumping and landing, horizontally and vertically, but the outcomes document does not list the five elements. The checklist above is my own example.

Lesson 5: Our floor sequence

Unit overview - Previous: Lesson 4

Goal: Children make, practise and show a three-part floor sequence (balance - move or roll - balance) with a still start and finish; the teacher does a one-to-one check.

Length: about 30 minutes.

Materials

- The cleared space, edge cones or floor spots, and mats with clear gaps.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The large "mat rules" card.
- The eight balance cards, three level cards and four shape cards.
- The cat landing card.
- A "my sequence" card per child with three empty boxes (start balance, move or roll, finish balance) and pencils.
- For blind or low-vision children: a sighted guide partner and a raised-line "my sequence" card (three glue-line boxes) with the balance chosen said aloud and remembered by the guide.
- Water.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes, with space for the one-to-one check.

Steps

✎ Opening (3 min)

Sitting. Show the three-box "my sequence" card. "A sequence is like a sentence: a start, a middle and an end. We start still in a balance, move or roll, and finish still in a balance." Show one example yourself: a high balance on one foot, kneel down and pencil roll, a low balance on bottom only. Freeze for three at the start and the end.

Warm-up (5 min)

The class warm-up with the six cards, led by two children. Finish with two quiet cat jumps.

✎ Main activity (15 min)

1. **Plan (4 min).** Each child draws or chooses cards for the three boxes: a start balance, a move or roll (rocking egg, bear walk, pencil roll, egg roll, a cat jump, or their own way), and a finish balance at a different level. Children who prefer not to draw place the cards in order on the floor.
2. **Practise (5 min).** At the mats, one at a time, children practise their sequence two or three times. Remind: freeze for three at the start, freeze for three at the end.

3. **Show a partner (6 min).** Partners take turns: one shows, the other watches and says one thing they liked and names the shapes or levels they saw ("You were still at the start", "Your finish was low and curled"). While the class practises and shows, the teacher does the one-to-one checks below.

Children in a wheelchair make their sequence from chair balances, a lean or shift and another balance (or on a mat with their school's agreed support). "Your own way counts."

✓ Discussion questions (4 min)

- "What made a sequence easy to watch?" (Answer guide: a clear still start and finish, moving smoothly, different levels or shapes.)
- "How did you keep safe on the mat?" (Answer guide: one at a time, waiting at the end, nobody in the lane or landing zone.)

✓ Closing check (3 min)

Each child shows their sequence card to a partner and says the three parts in order. Children who use cards on the floor point to them in order. (Answer guide: start balance, move or roll, finish balance. Note who can give all three in order.)

One-to-one check (about 4 minutes per child)

Done at a mat, during the practise and show time and in extra slots in the week. A child may show any part their own way.

1. **Balance:** "Show me a still balance on a base that is not your two feet. Which parts are touching the mat?" (Answer guide: holds still for about three seconds; names the base, for example two knees and two hands.)
2. **Level:** "Now show me a balance at a different level." (Answer guide: a clear change between high, middle and low.)
3. **Shapes:** "Show me a curl, then a twist." (Answer guide: small and round; one part turning while another stays still.)
4. **Roll or move:** "Show me a pencil roll or an egg roll, either way." (Answer guide: the matching narrow or curled shape, rolling sideways with control. Children who do not roll show weight moving from feet to another base, for example a rocking egg or a bear walk.)
5. **Jump and land:** "Show me a jump and a cat landing." (Answer guide: at least four of the five checklist points from lesson 4, ending in a still, quiet freeze. Children who use a chair show a controlled push and a still stop.)

Record on the class list what each child showed. Do not record anything a child chose not to try; offer it again another day.

Vocabulary

sequence, start, middle, finish, still, smooth, level, partner

Differentiation

- Support: a two-part sequence (balance - roll) or cards placed ready; an adult walks through it with the child first.
- Stretch: add a change of level and shape inside the move; show it without stopping between parts.
- Early finishers: teach their sequence to a partner and do it side by side on separate mats.

⚠ Safety

- One at a time on each mat; partners watch from the end, never in the lane or landing zone.
- Sideways rolls only; no weight on the head or neck.
- Children may change any part of their sequence to a smaller or easier version at any time.
- Water available; children with asthma follow their plan.

Teacher notes

- SHAPE America's grade 2 outcome: "Combines balances and transfers into a three-part sequence (i.e., dance, gymnastics)." This lesson uses a gymnastics-style floor sequence.

Grade 2 Health and PE: Hitting and Passing (5 lessons, about 3 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 space, equipment, latex and medical notes against your school's rules and PE guidance.
>
> Text-checked by two other agents (Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 2. Builds on grade 2 term 1 Balance, rolling and jumping (working safely in our own space) and grade 1 Throwing, catching, kicking and calm-down (sending and receiving a ball with a partner)

Big idea

We can hit a light object with a flat open hand, with a short paddle and with a bat. A good hit starts with watching the object, a flat hitting surface and a firm wrist. We can keep a balloon up with hits in a row, send it to a partner so they can hit it back, and keep it going together as a small team. Hitting games need space and safe waiting places, and when we disagree in a game we can stop, say what we saw and choose a fair way to carry on.

This is the second health and PE unit of the grade 2 year (term 2). In grade 1 children threw, caught and kicked with a partner; in term 1 of grade 2 they worked safely in their own space on mats. Term 3 (planned) moves on to healthy habits and a class game day.

In this unit "passing" means sending a balloon or soft ball to a partner or team-mate by hitting it with a hand or paddle. Passing and receiving with the feet is left for grade 3 (see Sources and Known gaps).

Outcomes

By the end of the unit a student can:

1. Hit a balloon upward with an open, flat hand several times in a row (consecutive hits), in their own space, watching the balloon.
2. Hit a balloon, and then a soft ball, upward with a short paddle several times in a row, keeping the paddle face flat and the wrist firm.
3. Pass a balloon to a partner with a gentle hit so the partner can hit it back, and keep a balloon up with a small team, taking turns and calling "mine".
4. Hit a soft ball off a tee or tall cone with a light bat, holding the bat with both hands together and standing side-on to the tee.
5. Follow the hitting-space rules (own space, waiting line, bats are put down not thrown, collect only on the signal) and say one fair way to sort out a disagreement in a game.

Prior knowledge

- From kindergarten and grade 1: "my bubble" space, the stop signal, the class warm-up, throwing and catching with a partner, taking turns.
- From grade 2 term 1: working on your own spot, waiting at the edge, nobody in someone else's landing zone.
- Seven-year-olds vary a lot in hand-eye coordination. Some will already play bat-and-ball games outside school; others will find tracking a ball hard. Balloons are slow on purpose. Praise watching, a flat hitting surface and trying again, not the number of hits.

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	Balloon keep-up	Open-palm hits upward, hits in a row; first gentle passes to a partner
2	Paddle and balloon	Flat paddle face, firm wrist; hits in a row with a paddle; partner passes with paddles
3	Team keep-up and fair play	Small-team balloon keep-up; calling "mine"; sorting out a disagreement (made-up characters)
4	Batting off a tee	Grip, side-on stance and a level swing; batting box and waiting line
5	Hitting stations	Three stations with class-made rules; one-to-one check

Materials (whole class unless noted)

- A hall or cleared indoor space (or a flat outdoor area with no wind for balloons) 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 so a swinging arm or paddle cannot reach a neighbour (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).
- **Latex-free** balloons, about one per child plus spares, blown up by an adult to about the size of a child's head (lessons 1, 2, 3 and 5). A lidded box for any burst balloon pieces (every balloon lesson).
- A few light beach balls or very light foam balls as a slower or non-balloon option (lessons 1, 2, 3 and 5).
- Short-handled light paddles, one per child: foam paddles, or paper plates with a wide wooden craft stick taped firmly to the back as a handle (lessons 2, 3 and 5). A few paddles with a hand strap and one or two longer-handled light paddles for children who need them.
- Soft foam balls about tennis-ball size, one per pair (lessons 2 and 5).
- For lesson 4 and the batting station in lesson 5: two to four batting tees or tall cones; light foam or plastic bats with a wide barrel; large soft foam balls (about the size of a grapefruit), six per tee; floor tape or chalk to mark a batting box and a waiting line beside each tee; a collecting bucket per tee; a big cone as a target for children who want a challenge; a

"collect" card (a green card with a circle); a safety circle about 2 metres across around each batting box, marked with tape or chalk.
- Rolled-up newspaper "bats" or pool-noodle pieces, one per child, for practice swings without a ball (lesson 4 and the lesson 5 check).
- Large picture cards: "good hit" (eyes on the object, flat hand or paddle, firm wrist); "bat grip" (hands together, one above the other, knuckles lined up); "side-on" (stick figure with shoulder pointing at the target) (lessons 1-5 as listed in each lesson).
- A "hitting space" rules card: stay on your spot; wait behind the line; put the bat down, never throw it; collect only on the green card (lessons 4 and 5).
- Lesson 3: four "game trouble" picture cards with made-up characters from Little Hill (see lesson 3) and a "fair ways" card (stop; say what you saw; listen; choose: do it again, take turns, or ask the referee).
- Lesson 5: a large blank card and a thick pen for the class's own station rules; three station signs with pictures (team keep-up, paddle keep-up, tee batting).
- 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; balloons can burst with a bang (every lesson).
- For blind or low-vision children: a sighted guide partner (every lesson); a brightly coloured large balloon with a small bell or a few dried beans inside, put in by an adult before blowing up, so it can be heard; a beeping or bell ball or a larger bright foam ball on the tee; raised-line (dried glue) copies of the "good hit" and "bat grip" cards.

⚠ Safety and access

- **Space:** every child works on their own spot or hoop, at least 3 metres from the next. Before each lesson check that no paddle or bat can reach a wall, window, light or radiator. Hair tied back; no jewellery; pockets empty; shoes as your school allows.
- **Latex and balloons:** use latex-free balloons only and check records for latex allergy. An adult blows up and ties every balloon; children do not blow up balloons or chew them. Burst pieces go straight into the lidded box because they are a choking risk; children tell an adult and do not pick them up. Warn the class that a balloon may go "bang"; offer ear defenders before balloon lessons.
- **Bats:** only light foam or plastic bats. One child bats at a time at each tee, inside the batting box. Everyone else waits behind the waiting line, which is behind the batter's safety circle, never in front. The bat is put down in the box after each hit (never thrown or swung while walking). Balls are collected only when the adult shows the green "collect" card and nobody is holding a bat. Only the batter goes inside a safety circle about 2 metres across, and the waiting line is at least 4 metres behind it, so it is out of reach whichever side a child bats from (see lesson 4).
- **Paddles:** paddles stay below head height of anyone nearby; no hitting towards a person's face; no swinging paddles while walking between spots. Check taped paper-plate paddles for loose tape or splinters before use.
- **Opt-in:** every task is an invitation. Children choose to use a balloon, a slower beach ball or a soft ball, choose how many hits to try, and can rest at the edge, with no reason needed. Never physically move a child's arm without asking first ("Can I hold your hand on the bat to show you?").
- **Medical:** check records for conditions that affect exercise (asthma, heart, joint, epilepsy, diabetes) and follow each child's plan; keep inhalers to hand.

- **Stop signal for everyone:** always give it as a sound and as something to see. On the stop signal, children catch or hold their balloon or ball, put paddles and bats on the floor, and freeze.
- **Moving in your own way:** a child who uses a wheelchair or walker hits a balloon from their chair, hits a ball off a tee set at chair height, or uses a longer-handled light paddle; partners pass to reach them. A child who cannot grip a paddle can use a paddle with a hand strap, a balloon on a short string held by a partner, or an open-hand hit. "Your own way counts" is said in every lesson. Blind or low-vision children use a sound balloon or bell ball with a sighted guide partner who calls "now"; deaf children get every instruction shown as well as said.
- **Counts are private:** children may count their own hits in a row, but the numbers are never recorded, shown or compared. "Beat your own best" is the only challenge.

Assessment

- Lessons 1-4: the teacher watches for watching the object, a flat hand or paddle face, hits in a row, gentle passes a partner can return, a hands-together grip and a side-on stance at the tee, and following the hitting-space 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 the class works at stations. 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. The number of hits is never part of the mark.

Sources

- SHAPE America, "Grade-Level Outcomes for K-12 Physical Education" (2013), read 10 and 11 November 2026; quotations checked against page images: https://www.shapeamerica.org/wp-content/uploads/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf
- S1.E22.2 (volleying, underhand): "Volleys an object upward with consecutive hits."
- S1.E24.2 (striking, short implement): "Strikes an object upward with a short-handled implement, using consecutive hits."
- S1.E25.2 (striking, long implement): "Strikes a ball off a tee or cone with a bat, using correct grip and side orientation/proper body orientation."
- S4.E4.2: "Works independently with others in partner environments."
- S4.E5.2: "Recognizes the role of rules and etiquette in teacher-designed physical activities."
- S4.E6.2b: "Works safely with physical education equipment."
- Passing and receiving with the feet (S1.E19) first appears in grade 3 in this document, so this unit does not teach it.
- The grade 2 year plan (health and PE, term 2).

Known gaps

- Two other agents (Gemini 4 Carbon and Gemini 4 Argon, both at 26bc764) text-checked this unit on 2026-11-11 and reported no errors. Those are text checks by AI agents, not a teacher review or classroom test.
- 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 "good hit" points (watch it, flat surface, firm wrist), the bat grip description and the side-on picture are my own simple teaching points, not the "critical elements" of a mature pattern, which the outcomes document does not list.
- The year plan says "passing to a partner and in small teams". Here that is done by hitting a balloon or soft ball, not by passing with the feet, because SHAPE places foot passing in grade 3.
- Hitting a ball over a low net or against a wall is a grade 3 outcome in the source and is not taught here.
- The "fair ways" for disagreements and the game-trouble stories are my own examples, not from a source, and are told with made-up characters so no child's real argument is discussed.
- Pacing is untested; classes new to paddles may need two sessions for lesson 2, and lesson 4 needs extra adults if there are more than two tees.
- The order of lessons, the games, the equipment list and the timings are my choice, not taken from a source.

Lesson 1: Balloon keep-up

Unit overview - Next: Lesson 2

Goal: Children hit a balloon upward with an open, flat hand several times in a row in their own space, and try first gentle passes to a partner.

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.
- Latex-free balloons blown up and tied by an adult, one per child plus spares, and a lidded box for burst pieces.
- A few light beach balls or very light foam balls as a slower option.
- The "good hit" picture card (eyes on the object, flat hand or paddle, firm wrist).
- For blind or low-vision children: a sighted guide partner and a sound balloon (bell or dried beans inside, added by an adult).
- 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 balloon. "This term we are going to be hitters: with our hands, with paddles and with bats. Today the balloon helps us, because it is slow." Agree the stop signal: hold your balloon, freeze. Tell the class a balloon may go "bang"; ear defenders are there for anyone who wants them. If a balloon bursts, leave the pieces and tell an adult. "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 "wrist wiggles" and "starfish hands" (fingers spread wide, then a flat hand) at the end.

✎ Main activity (15 min)

1. **Find your spot (2 min).** Each child stands on their spot or in their hoop. Arms out wide and turn slowly: "If you can touch anyone, move."
2. **Flat hand (3 min).** Show the "good hit" card. Children hold the balloon in one hand and tap it up gently with the flat palm of the other hand, then catch it. Say: "Eyes on the balloon. Flat hand. Push up." Try both hands.

3. **Hits in a row (5 min).** Now tap, tap, tap without catching. Children count their own hits in a row quietly. When the balloon lands, pick it up and start again. "Can you beat your own best?" Numbers are not said out loud or written down. Stop signal after about two minutes; then try a new challenge: hit with the other hand, hit low (below your head), or hit high.
4. **First passes (5 min).** Pairs stand on two spots about 2 metres apart with one balloon. Partner A taps it gently up and towards B; B catches it, then taps it back. When pairs are ready, B taps it back without catching. "A good pass is gentle and goes up, so your partner has time."

Children who want a slower or quieter option use a beach ball, a very light foam ball or catch between every hit.

✓ Discussion questions (4 min)

1. "Where do your eyes go when you hit?" (On the balloon, all the time.)
2. "Why does a flat hand work better than a fist?" (A flat hand is bigger, so it is easier to hit the balloon, and it sends it straight up.)
3. "What makes a pass easy to hit back?" (Gentle, goes up, goes to your partner, not too fast.)

✓ 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. "We keep our eyes on the balloon when we hit." (True.)
2. "A good pass is as hard as we can hit." (False: gentle so your partner has time.)
3. "If a balloon bursts, we pick up the pieces." (False: leave them and tell an adult.)

Vocabulary

hit, tap, flat hand, palm, upward, in a row, pass, partner, gentle

Differentiation

- **More support:** catch between every hit; use two hands together; a partner holds the balloon on a short string while the child hits it.
- **More challenge:** hit with the back of the hand, alternate hands, or clap once between hits.
- **Moving in your own way:** children who use a wheelchair hit the balloon from their chair; partners pass to reach them. Blind or low-vision children use a sound balloon with a guide who calls "now".

⚠ Safety

- Spots at least 3 metres apart; arms-out check before starting.
- Latex-free balloons only, blown up by an adult. Burst pieces go straight into the lidded box; children do not pick them up or put them near their mouths.

- On the stop signal children hold their balloon and freeze.
- Counts are private and never recorded.

Teacher notes and misconceptions

- Many children slap down at the balloon or hit it too hard; it then flies sideways. "Push up, like lifting a tray" helps.
- Children chase balloons into other spots. Remind them: if the balloon leaves your space, wait for it to land, then walk to get it.
- Some children find it hard to track a moving object. A bigger, brightly coloured balloon and hitting low make it easier.

Lesson 2: Paddle and balloon

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

Goal: Children hit a balloon, and then a soft ball, upward with a short paddle several times in a row, keeping the paddle face flat and the wrist firm, and pass a balloon to a partner with paddles.

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.
- Short-handled light paddles, one per child (foam paddles, or paper plates with a wide wooden craft stick taped firmly to the back), checked for loose tape or splinters before the lesson. A few paddles with a hand strap.
- Latex-free balloons blown up and tied by an adult, one per child plus spares, and a lidded box for burst pieces.
- A few light beach balls or very light foam balls as a slower option.
- Soft foam balls about tennis-ball size, one per pair.
- The "good hit" picture card.
- For blind or low-vision children: a sighted guide partner, a sound balloon and a raised-line copy of the "good hit" 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 paddle. "A paddle is like a big flat hand." Show the paddle rules: carry it pointing down when you walk; swing it only on your own spot; on the stop signal, put it on the floor and freeze. "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1, using the six cards, then wrist wiggles and "starfish hands".

✎ Main activity (15 min)

1. **Flat face, firm wrist (3 min).** On their spots, children hold the paddle out flat like a tray and balance a balloon on it. Then they walk the paddle slowly in a circle without the balloon falling off. "Keep the face flat. Keep your wrist firm, not floppy."
2. **Paddle taps (5 min).** Tap the balloon up with the paddle and catch it; then tap, tap, tap without catching. Children count their own hits in a row quietly and try to beat their

own best (never said out loud or written down). Show the "good hit" card again: eyes on the balloon, flat paddle, firm wrist.
3. **Soft-ball try (3 min, optional).** Children who are ready swap the balloon for a soft foam ball: drop it on the paddle, let it bounce once off the paddle, then try two small bounces in a row. Others stay with the balloon.
4. **Paddle passes (4 min).** Pairs on two spots about 2 metres apart with one balloon. A taps it up and towards B with the paddle; B taps it back. "Gentle and up, so your partner has time."

✓ Discussion questions (4 min)

1. "What happened when the paddle face was tipped?" (The balloon or ball went sideways, not up.)
2. "Why do we keep our wrist firm?" (So the paddle stays flat and the hit goes where we want.)
3. "Why do we carry the paddle pointing down?" (So it doesn't hit anyone as we walk.)

✓ Closing check (3 min)

Thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "A flat paddle face sends the balloon straight up." (True.)
2. "We swing our paddle while we walk to our spot." (False: carry it pointing down; swing it only on your own spot.)
3. "On the stop signal, we put the paddle on the floor and freeze." (True.)

Vocabulary

paddle, face, handle, flat, firm wrist, bounce, in a row

Differentiation

- **More support:** hold the paddle with two hands; catch between every hit; use a beach ball, which is slower; use a paddle with a hand strap.
- **More challenge:** hit low, then high; turn the paddle over and use the other side between hits; move from the balloon to the soft ball.
- **Moving in your own way:** a child in a wheelchair can use a longer-handled light paddle; a partner can hold a balloon on a short string for a child who finds tracking hard. Blind or low-vision children use a sound balloon with a guide who calls "now".

⚠ Safety

- Check paddles before the lesson; remove any with loose tape or splinters.
- Paddles carried pointing down; swung only on your own spot, below the head height of anyone nearby.
- Latex-free balloons; burst pieces into the lidded box.

- Counts are private and never recorded.

Teacher notes and misconceptions

- Children often swing the paddle like a racket and hit sideways. "Lift the tray" works better at this age than "swing".
- A floppy wrist sends the balloon backwards over the child's head. Ask them to "freeze the wrist" and lift from the shoulder.
- The soft ball is much faster than a balloon. Some children will not be ready this lesson; that is fine.

Lesson 3: Team keep-up and fair play

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

Goal: Children keep a balloon up together in a small team, calling "mine" and taking turns, and talk about fair ways to sort out a disagreement in a game, using made-up characters.

Length: about 30 minutes.

Materials

- The cleared space and edge cones. Floor spots set out as team circles: four spots about 2 metres apart in a square, with each team square at least 4 metres from the next.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- Latex-free balloons blown up and tied by an adult (one per team plus spares), and a lidded box for burst pieces.
- A few light beach balls as a slower option.
- Short-handled light paddles, one per child (optional in this lesson).
- Four "game trouble" picture cards with made-up characters from Little Hill:
- A: Goat and Hen both run for the balloon and bump into each other.
- B: Mouse says the balloon touched the floor. Duck says it didn't.
- C: Remy hits the balloon every time. Bear never gets a turn.
- D: Duck gets cross and kicks the balloon away.
- The "fair ways" card: stop; say what you saw; listen; choose: do it again, take turns, or ask the referee.
- For blind or low-vision children: a sighted guide partner and a sound balloon; the game-trouble stories are read aloud.
- 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. "Today we hit together as a team of four. Teams need two rules: call 'mine' before you hit, and nobody hits twice in a row." Show how to call "mine" (or raise a hand, or sign it). "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1, using the six cards, then wrist wiggles.

✎ Main activity (15 min)

1. **Team keep-up (7 min).** Teams of four stand on their square of spots. One child taps the balloon up and calls "mine"; anyone else calls "mine" and hits it next. Nobody hits

twice in a row. Teams count their hits in a row quietly and try to beat their own team best (not compared between teams). Children may use hands or paddles. Stop signal after about three minutes; then try a new challenge: everyone must hit once before anyone hits again.

2. **Game trouble (8 min).** Children sit by their team. Show card A and tell the story: "Goat and Hen both ran for the balloon, and bump! What could they do?" Take ideas, then point to the "fair ways" card. Do the same with cards B, C and D. Possible answers:
3. A: Call "mine"; the one who called first hits; check they are both all right.
4. B: Stop; each says what they saw; if they still don't agree, do it again, or ask the referee.
5. C: Use the rule: nobody hits twice in a row; Bear can call "mine".
6. D: Duck stops and uses a calm-down from grade 1 (slow breaths, count to five), then says "I feel cross because..."; the team carries on.

The stories are always about the made-up characters. Children are not asked to share a real argument they have had.

✓ Discussion questions (4 min)

1. "Why do we call 'mine'?" (So two people don't run for the same balloon and bump.)
2. "What is one fair way to sort out 'it touched the floor' / 'it didn't'?" (Do it again, or ask the referee.)
3. "How did the 'nobody twice in a row' rule help Bear?" (Everyone gets a turn.)

✓ Closing check (3 min)

Each child shows (points to the card, says or signs) one fair way from the "fair ways" card to sort out a disagreement in a game. The teacher notes it on the class list. Accept: stop, say what you saw, listen, do it again, take turns, ask the referee.

Vocabulary

team, mine, turn, rule, fair, disagree, referee

Differentiation

- **More support:** teams of three; catch-then-hit allowed; a beach ball instead of a balloon; an adult joins a team.
- **More challenge:** hands only, or paddles only; one bounce on the floor allowed and then keep going.
- **Moving in your own way:** a child in a wheelchair has a spot in the team square where the others pass to reach them. Blind or low-vision children use a sound balloon; team-mates call "mine" clearly so they know where the balloon is going. Deaf children see "mine" as a raised hand or sign.

⚠ Safety

- Team squares at least 4 metres apart; children stay on or near their own spot.
- "Mine" calls stop collisions; children do not dive for the balloon.
- Paddles below head height of team-mates.
- Latex-free balloons; burst pieces into the lidded box.

Teacher notes and misconceptions

- Children often think "fair" means "I win". The stories help them see the other side without blaming anyone in the class.
- Some children will want to tell a real story ("my brother..."). Thank them and bring it back to the made-up characters.
- The "fair ways" are examples, not from a source; schools may have their own conflict steps to use instead.

Lesson 4: Batting off a tee

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

Goal: Children hit a soft ball off a tee or tall cone with a light bat, holding the bat with both hands together and standing side-on to the tee, and follow the batting-box rules.

Length: about 30 minutes.

Materials

- The cleared space and edge cones. Two to four batting stations (one per adult helper), set out side by side at least 8 metres apart, all hitting in the same direction into an empty area with no people, windows or lights.
- At each station: a batting tee or tall cone; a light foam or plastic bat with a wide barrel; six large soft foam balls (about grapefruit size); a collecting bucket; floor tape or chalk for a batting box beside the tee, a safety circle about 2 metres across around the batting box, and a waiting line at least 4 metres behind the safety circle.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The green "collect" card.
- The six grade 1 warm-up cards.
- The "bat grip" and "side-on" picture cards and the "hitting space" rules card.
- Rolled-up newspaper "bats" or pool-noodle pieces, one per child, for practice swings without a ball.
- For blind or low-vision children: a sighted guide partner, a bell ball or larger bright foam ball, and a raised-line copy of the "bat grip" 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, facing a batting station. Show the "hitting space" rules card and walk through the station: only the batter goes inside the safety circle; everyone else waits behind the waiting line; after the hit, the bat is put down in the box; balls are collected only when the adult shows the green card and every bat is on the floor. "Why?" (A swinging bat can hurt someone standing close.) "Your own way counts."

Warm-up (5 min)

The class warm-up from grade 1, using the six cards, then slow "trunk twists" with arms out (turning the shoulders gently from side to side).

✎ Main activity (15 min)

1. **Grip and stance without a ball (4 min).** Each child on their own spot with a newspaper bat or noodle piece. Show the "bat grip" card: hands together, one above the other, knuckles lined up. Show the "side-on" card: stand sideways to the target, front shoulder pointing where the ball should go, feet apart. Children try both ways round and choose the one that feels better (that tells you if they bat right- or left-handed). Slow practice swings: "Look at the spot. Swing level, like sweeping a table."
2. **Batting stations (11 min).** Groups of about six to eight at each station with an adult. One child at a time: walk into the box, pick up the bat, take the grip, stand side-on, look at the ball, swing and hit it off the tee, then put the bat down in the box and walk back to the end of the waiting line. Each child has about three hits per turn. When all six balls are out, the adult checks that the bat is down and shows the green card; two children collect balls into the bucket and walk back. Groups keep turning until the stop signal.

Children who choose not to bat can be ball collectors (on the green card only) or the "tee setter" who places the ball, with the bat on the floor.

✓ Discussion questions (4 min)

1. "Where do your hands go on the bat?" (Together, one above the other.)
2. "Which way do you stand to the tee?" (Side-on, shoulder pointing at the target.)
3. "When can we collect the balls?" (Only when the adult shows the green card and every bat is on the floor.)

✓ Closing check (3 min)

Thumbs up for true, thumbs down for false (or say or sign "yes" or "no").

1. "We wait behind the waiting line while someone bats." (True.)
2. "After the hit, we throw the bat so we can run." (False: put it down in the box.)
3. "We look at the ball when we swing." (True.)

Vocabulary

bat, tee, grip, side-on, swing, level, batting box, safety circle, waiting line, collect

Differentiation

- **More support:** a bigger ball or a balloon taped lightly on the tee; a shorter, lighter bat; an adult says "ready, look, swing" for each hit.
- **More challenge:** aim at a big target cone placed far out in the empty area; lower the tee.
- **Moving in your own way:** a child in a wheelchair bats from their chair with the tee set at chair height and the chair side-on to the tee; a child who cannot grip a bat can use a light paddle with a hand strap. Blind or low-vision children use a bell ball; a guide places their hand on the ball, then the child steps back and swings. Deaf children see the green card and the stop signal.

⚠ Safety

- Only the batter inside the safety circle. Waiting line at least 4 metres behind it. A child who bats left-handed stands on the other side of the tee; the safety circle and waiting line work for both sides.
- Bats are put down in the box after every turn, never thrown, and never carried while walking to collect balls.
- Balls collected only on the green card, with every bat on the floor.
- Stations far apart and all hitting the same way into an empty area.
- Light foam or plastic bats and soft foam balls only.

Teacher notes and misconceptions

- Many children stand facing the tee and chop down. The side-on card and "sweep the table" help.
- Some children let go of the bat after the hit. Practise "hit, hold, put it down" with the newspaper bats first.
- A child who switches between right- and left-handed is not doing it wrong; let them choose and check where they stand.

Lesson 5: Hitting stations

Unit overview - Previous: Lesson 4

Goal: Children help make the rules for three hitting stations, play at each station safely and fairly, and show what they can do in a one-to-one check.

Length: about 30 minutes, plus extra check slots in the week.

Materials

- The cleared space and edge cones, set out as three stations far apart:
- **Team keep-up:** team squares of four floor spots about 2 metres apart, each square at least 4 metres from the next; latex-free balloons (one per team plus spares).
- **Paddle keep-up:** floor spots or hoops at least 3 metres apart; short-handled light paddles (one per child, a few with a hand strap); latex-free balloons and soft foam balls about tennis-ball size.
- **Tee batting** (only with an adult helper at the station): a batting tee or tall cone; a light foam or plastic bat; six large soft foam balls; a collecting bucket; a batting box, safety circle and waiting line marked with tape or chalk, hitting into an empty area; the green "collect" card.
- Three station signs with pictures (team keep-up, paddle keep-up, tee batting).
- A lidded box for burst balloon pieces.
- A few light beach balls as a slower option.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The "good hit", "bat grip", "side-on" and "hitting space" cards, and the "fair ways" card from lesson 3.
- A large blank card and a thick pen for the class's station rules.
- A check spot at the edge with one balloon, one paddle, and a newspaper bat or noodle piece, and a copy of the one-to-one check below.
- For blind or low-vision children: a sighted guide partner, a sound balloon and a bell ball.
- 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. "Today you help make the rules." Ask: "What rule keeps us safe at the batting station? What rule keeps the team keep-up fair?" Write three or four of the children's rules on the big card in their words (for example: "Stay on your spot", "Call 'mine'", "Put the bat down", "Nobody twice in a row"). Read them back together. Show the "fair ways" card: "If something goes wrong, which of these can we use?"

Warm-up (5 min)

The class warm-up from grade 1, using the six cards; a child leads one move of their choice.

✎ Main activity (15 min)

Three groups rotate around the three stations, about 5 minutes each, moving on the stop signal (walking, paddles pointing down, bats left in the box). Children may choose a balloon, a beach ball or a soft ball at the keep-up stations. Hit counts stay private.

If there is only one adult, leave out the batting station: use two keep-up stations and do part 4 of the check with the newspaper bat.

While the stations run, the teacher calls children one at a time to the check spot (see below). Children who are not being checked keep playing.

✓ Discussion questions (4 min)

1. "Which of our rules did you use today?" (Any rule from the class card.)
2. "Did anything go wrong at a station? Which fair way helped?" (Answers are about what happened at the stations; nobody is named or blamed.)
3. "What is one thing you can do now that was hard in lesson 1?" (Any answer; for example more hits in a row, a flat paddle, hitting off the tee.)

✓ Closing check (3 min)

Each child points to (or says or signs) one class rule and tells why it helps. The teacher notes any child who has not yet done the one-to-one check.

One-to-one check (about 3 minutes per child)

Done at the check spot. Each part is marked yes / with help / not yet on the class list. The number of hits is not recorded.

1. **Open-hand hits:** "Keep the balloon up with your hand." Yes: three or more hits in a row upward, eyes on the balloon. With help: hits with a catch between. Not yet: cannot make contact yet.
2. **Paddle hits:** "Now with the paddle." Yes: three or more hits in a row upward with a flat paddle face. With help: a catch between hits, or two hands on the paddle. Not yet: the balloon goes sideways most times.
3. **Pass:** the teacher stands about 2 metres away. "Pass the balloon to me so I can hit it back." Yes: a gentle upward hit that reaches the teacher. With help: reaches after a second try or a step closer. Not yet: goes hard or away from the teacher.
4. **Grip and stance:** with the newspaper bat (or at the tee). "Show me how you hold the bat and stand to hit." Yes: hands together, one above the other, standing side-on. With help: one of the two. Not yet: neither.
5. **Rules and fair play:** "Tell me one rule at the batting station and one fair way to sort out a disagreement." Yes: one safe batting rule (wait behind the line, put the bat down, collect on

the green card, only the batter in the circle) and one fair way (stop, say what you saw, listen, do it again, take turns, ask the referee). With help: one of the two. Not yet: neither.

Children answer in their own way: saying, signing, pointing to a card or showing. A child using a wheelchair, strap paddle or sound balloon is checked with that equipment.

Vocabulary

station, rule, rotate, fair, safe, check

Differentiation

- **More support:** stay at a keep-up station with a beach ball; an adult or a chosen partner goes round the stations with the child.
- **More challenge:** at keep-up, alternate hand and paddle; at the tee, aim at a target cone.
- **Moving in your own way:** stations are set so children in wheelchairs can reach every spot and the tee at chair height; blind or low-vision children use sound balloons and bell balls with a guide; deaf children see the station signs and the stop signal.

⚠ Safety

- Stations far apart; the batting station hits away from the other two.
- Batting only with an adult at the station; one batter at a time; bats put down; balls collected only on the green card.
- Paddles pointing down while moving between stations.
- Latex-free balloons; burst pieces into the lidded box.

Teacher notes

- Children's own rules are usually close to the adult rules and are more likely to be followed. If a safety rule is missing (for example the green card), add it and say why.
- If a disagreement happens, use the "fair ways" card rather than deciding for the children straight away.
- Finish any checks in the week; it is fine to check a child over two short visits.

Grade 2 Health and PE: Healthy Habits and a Class Game Day (5 lessons, about 3 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 space, equipment, sun, heat, water, hygiene and medical notes against your school's rules and health guidance.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 3. Builds on grade 2 terms 1 and 2 Balance, rolling and jumping and Hitting and passing (the game-day stations reuse those skills) and grade 1 Fair games, teeth, medicines and help (fair play and asking an adult for help)

Big idea

Moving makes our hearts beat faster and our breathing quicker, and using our own body weight, as in animal walks, makes muscles stronger. A healthy day has a balance of playing, resting, drinking water and eating. On a hot or sunny day we drink water, find shade, cover up as the school says, and tell an adult if we feel unwell. Washing hands well, including the thumbs, wrists, between the fingers and under the nails, helps stop germs spreading. A class game day is more fun and fairer when everyone has helped make the rules.

This is the third health and PE unit of the grade 2 year (term 3). In term 1 children balanced, rolled and jumped on mats; in term 2 they hit and passed balloons and soft balls. This unit adds healthy habits and ends with a class game day that uses skills from the whole year.

Outcomes

By the end of the unit a student can:

1. Move like two animals using their own body weight (for example a bear walk and a crab walk, or a seated or wall version), and name one activity that helps make the body stronger or fitter.
2. Say two ways to keep well on a hot or sunny day (drink water, rest in the shade, wear a hat or cover up as the school says) and one sign that means "stop and tell an adult" (feeling dizzy, a headache, feeling sick or very tired).
3. Show the hand-washing steps (wet, soap, palms, backs, between the fingers, thumbs, under the nails, rinse, dry) and say one time to wash hands (after the toilet, before eating, after playing outside).
4. Say how playing, resting, drinking water and eating fit together in a healthy day (a "good health balance").
5. Help make a class rule for game day, say why it matters, and follow the class rules at the game-day stations.

Prior knowledge

- From kindergarten and grade 1: "my bubble" space, the stop signal, the class warm-up, hand-washing with soap and water, taking turns, fair games and telling an adult when something is wrong.
- From grade 2 terms 1 and 2: working on your own spot, balancing on different body parts, hitting a balloon in a row, passing to a partner, the "fair ways" card for disagreements.
- Children come with very different home routines. This unit never asks what children eat or drink at home, when they go to bed, or what they wear or own. Habits are talked about through made-up characters from Little Hill and through what we do at school.

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	Strong bodies, beating hearts	Animal walks with our own body weight; noticing breathing and heartbeat after moving; resting when we need to
2	Water, shade and keeping cool	A gentle circuit with water breaks; the "keeping cool" cards; signs that mean stop and tell an adult (made-up characters)
3	Clean hands and a balanced day	Hand-washing steps with a washable-marker check; the "good health balance" wheel
4	Making our game-day rules	Trying the four game-day stations; groups suggest rules; the class agrees its rule card
5	Class game day	Stations with the class rules, water and rest breaks; one-to-one check

Materials (whole class unless noted)

- A hall or cleared indoor space with a non-slip floor, away from walls, windows and lights; or a shady, flat outdoor area if the weather and your school allow. 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 (march, arm circles, knee lifts, side-steps, leg swings holding a wall or partner, jog gently) (every lesson).
- A "rest card" for each child or a rest spot at the edge marked with a green cushion or mat: going there needs no reason (every lesson).
- Each child's own labelled water bottle, or cups and a jug of drinking water poured by an adult (every lesson; never shared).
- Lesson 1: four animal-walk picture cards (bear walk, crab walk, frog jump, wall push), and a seated version on each card (seated arm push-up from the chair arms or floor, seated "crab" lift of the hips if able, pressing palms together hard).
- Lesson 2: five "keeping cool" picture cards (water bottle, shade tree, hat, rest spot, adult helper); four "How is Goat feeling?" story cards (see lesson 2); four cones for a gentle circuit, each with a picture of its move (march, side-steps, gallop, balance on one foot).
- Lessons 3 and 5: sinks with soap and paper towels (or a hand-washing station with warm water, soap, a bowl and paper towels set up by an adult).

- Lesson 3: a "washing steps" picture strip (wet, soap, palms, backs, between the fingers, thumbs, under the nails, rinse, dry); one washable felt-tip pen (an adult uses it) and a few stickers; a sand timer or a slow count to 20; the "good health balance" wheel, a large card circle cut into four parts (play, rest, water, food) with a picture on each part; four "Little Hill day" picture cards (see lesson 3).
- Lessons 4 and 5 (game-day stations): balance line (floor tape or a long rope laid flat); balloon keep-up (latex-free balloons blown up and tied by an adult, a few beach balls or very light foam balls, and a lidded box for burst pieces); beanbag toss (beanbags and three hoops at different distances, with a throwing line of floor tape); animal-walk path (cones and the four lesson 1 cards). Four station signs with pictures.
- Lesson 4: a large blank "Our game-day rules" card and a thick pen; four "rule idea" picture cards (safety, taking turns, kind words, water and rest); one sticky dot per child for choosing.
- Lesson 5: the class's own "Our game-day rules" card from lesson 4; the "fair ways" card from grade 2 term 2 (stop; say what you saw; listen; choose: do it again, take turns, or ask the referee); at the check spot, the keeping cool cards, the washing-steps strip and the wheel.
- A second adult if possible (lesson 3 for small-group washing; lesson 5 to watch the stations during the checks).
- A class list for notes (every lesson).
- Ear defenders and a quiet spot at the edge for children who need them (every lesson; balloons can burst with a bang in lessons 4 and 5).
- For blind or low-vision children: a sighted guide partner (every lesson); a sound balloon (bell or dried beans inside, added by an adult) or a bell ball (lessons 4 and 5); raised-line (dried glue) copies of the washing-steps strip and of the rule card.

⚠ Safety and access

- **Heat and sun:** follow your school's sun and heat policy. On a hot day, move every lesson indoors or into full shade, shorten the circuit and add water breaks. Hats and covering up follow school rules. Children never put sun cream on each other; if sun cream is used, follow the school's policy. Never look at the Sun.
- **Water:** each child drinks from their own bottle or cup only. Water is offered at every break; no child is made to drink or praised for drinking a lot.
- **Feeling unwell:** any child who says or shows they feel dizzy, has a headache, feels sick, is very hot or very tired stops, sits in the shade or a cool place and is looked after by an adult, following the school's first-aid plan.
- **Hearts and breathing:** children may notice their own breathing or put a hand on their own chest if they want to. Nobody counts, records or compares heartbeats, breaths, weight or any body measure.
- **Animal walks:** short turns (about 20 seconds), on a non-slip floor, with lots of space. Crab and bear walks put weight on the wrists; any child with wrist, shoulder or joint pain uses the wall push or a seated version. Frog jumps land on two feet with bent knees, never onto anyone.
- **Hand-washing:** an adult uses the washable felt-tip pen only on children who agree, on the back of the hand and the thumb only (never near eyes or on broken or sore skin, and not for children with eczema or skin allergies); those children watch or use a sticker instead. Check soap allergies. Wipe up water spills at once.

- **Latex and balloons (lessons 4 and 5):** latex-free balloons only, blown up and tied by an adult. Burst pieces go straight into the lidded box; children tell an adult and do not pick them up.
- **Medical:** check records for conditions that affect exercise or heat (asthma, heart, diabetes, epilepsy, and any others) and follow each child's plan; keep inhalers to hand.
- **Opt-in:** every activity is an invitation. Children may rest at any time with the rest card and no reason. "Your own way counts" is said in every lesson.
- **Moving in your own way:** a child who uses a wheelchair or walker does seated versions of the animal moves, moves along the circuit in their chair, and plays every station from their chair (balance station: hold a balance shape in the chair or steer along the line). Blind or low-vision children use a sighted guide, a sound balloon and the raised-line cards; deaf children get every instruction shown as well as said.
- **Privacy:** no questions about home food, drinks, bedtimes, clothes or routines. Stories use made-up characters.

Assessment

- Lessons 1-4: the teacher watches for safe animal walks (or a chosen version), choosing water and rest, the hand-washing steps, and helping to make and keep 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 the class plays at the stations. 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. No body measure is ever part of the mark.

Sources

- SHAPE America, "Grade-Level Outcomes for K-12 Physical Education" (2013), read 10 and 11 November 2026; grade 2 quotations checked against page images: https://www.shapeamerica.org/wp-content/uploads/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf
- S3.E3.2a: "Uses own body as resistance (e.g., holds body in plank position, animal walks) for developing strength."
- S3.E3.2b: "Identifies physical activities that contribute to fitness."
- S3.E6.2 (nutrition): "Recognizes the "good health balance" of good nutrition with physical activity."
- S5.E1.2: "Recognizes the value of "good health balance.""
- S4.E2.2: "Accepts responsibility for class protocols with behavior and performance actions."
- S4.E5.2: "Recognizes the role of rules and etiquette in teacher-designed physical activities."
- S5.E2.2: "Compares physical activities that bring confidence and challenge."
- Fitness knowledge about warm-up and cool-down (S3.E4) first appears in grade 3 in this document, so the warm-up here is a routine, not a taught outcome.
- Wikipedia, "Hand washing" (read 6 November 2026): https://en.wikipedia.org/wiki/Hand_washing
- Steps: lather the backs of hands, between fingers and under nails; scrub for at least 20 seconds; rinse well under running water; dry with a clean towel or air dry.
- The most commonly missed areas are the thumb, the wrist, between the fingers and under the fingernails.
- Critical times include after using the toilet and before eating.
- Frequent hand washing can dry the skin.

- Wikipedia, "Sunburn" (read 11 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 11 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 of heat-related illness; symptoms of heat exhaustion may include headache, nausea, dizziness and feeling unwell, and treatment includes removing the person from the heat and replenishing fluids.
- KidsHealth (Nemours), "What's a Healthy Alternative to Water?" (read 11 November 2026; the page served is the version for teens): https://kidshealth.org/en/kids/water.html
- "Water is always the best way to hydrate and avoid empty calories."
- The grade 2 year plan (health and PE, term 3).

Known gaps and cautions

- SHAPE America's outcomes are physical education outcomes. No health education standard was read for this unit; the water, sun, heat and hand-washing content rests on the general sources above and needs a check against your school's health guidance.
- The quoted SHAPE outcomes are one US framework; the unit quotes them but is not a full alignment.
- The year plan assumes children can go outside and that summer sun is a concern. Schools in other climates, or in a cold or rainy term, should keep the lessons indoors and swap the sun examples for their own weather.
- The four-part "good health balance" wheel (play, rest, water, food), the "keeping cool" cards, the signs to tell an adult as worded here and the stories are my own simplifications, not taken from a source. The wheel does not sort foods into good and bad.
- Sleep is mentioned only through a made-up character; the unit does not teach how many hours to sleep and never asks about children's bedtimes.
- Grade 2 social-interaction outcomes (S5.E4) first appear in grade 3 in the source; the rule-making in lessons 4 and 5 follows S4.E2.2 and S4.E5.2 instead.
- Pacing is untested. Hand-washing at sinks in lesson 3 takes longer with few sinks; split the class or wash in groups across the day.
- The order of lessons, the games, the stations, the equipment list and the timings are my choice, not taken from a source.
- Three other agents (Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon, all at 120023f) text-checked this unit on 2026-11-11 and reported no errors in the unit files. Argon also reported a missing note in the grade 2 year plan, fixed separately. Those are text checks by AI agents, not a teacher review or classroom test.

Lesson 1: Strong bodies, beating hearts

Unit overview - Next: Lesson 2

Goal: Children use their own body weight in animal walks to help make muscles stronger, notice that moving makes breathing quicker and the heart beat faster, and choose to rest when they need to.

Length: about 30 minutes.

Materials

- The cleared 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.
- The rest spot at the edge (green cushion or mat) or a rest card for each child.
- Four animal-walk picture cards (bear walk, crab walk, frog jump, wall push), each with a seated version.
- Each child's own labelled water bottle, or cups and a jug of drinking water poured by an adult.
- For blind or low-vision children: a sighted guide partner.
- 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 is about keeping our bodies well: moving, resting, water, clean hands. At the end we will have a class game day, and you will help make the rules." Show the rest spot: "If you need a rest, go there. You don't need to tell anyone why." Agree the stop signal: freeze where you are. "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.

✎ Main activity (15 min)

1. **Quiet bodies (2 min).** Children sit on their spots. "Put a hand on your chest or tummy if you want to. Is your breathing slow or quick?" Nothing is counted.
2. **Animal walks (8 min).** Show one card at a time and model it. Each turn is about 20 seconds, then the stop signal and a short rest.
3. **Bear walk:** hands and feet on the floor, bottom up, walk slowly forwards.
4. **Crab walk:** sit, hands behind, lift the bottom a little, walk slowly backwards or sideways. (Look over your shoulder first.)

5. **Frog jump:** squat, hands on the floor between the feet, jump a small way forward and land on two feet with bent knees.
6. **Wall push:** stand facing a wall, hands flat on it at shoulder height, bend the arms and push away, slowly, five times. "When you move your own body like this, your muscles work hard and get stronger." Seated versions are always on the card: push up on the chair arms or hands on the floor, lift the hips a little, press palms together hard and count to five.
7. **Notice again (2 min).** Sit on the spot. "Hand on your chest or tummy if you want to. Is your breathing slower or quicker than before? Is your heart beating harder?" Children may say, sign or show with a hand moving fast or slow.
8. **Water and rest (3 min).** Everyone has a drink from their own bottle or cup. "When we move a lot, our bodies need rest and water. Rest is part of playing well, not giving up."

✓ Discussion questions (4 min)

1. "What happened to your breathing after the animal walks?" (It got quicker; our heart beat faster.)
2. "Which animal walks made your arms or legs work hard?" (Any honest answer, for example bear walk for arms, frog jump for legs.)
3. "Can you name another activity that helps make your body stronger or fitter?" (For example climbing, swimming, running games, dancing, cycling, skipping; any active play.)

✓ 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. "When we move fast, our heart beats faster and we breathe quicker." (True.)
2. "Animal walks use our own body to make muscles work." (True.)
3. "If we need a rest, we have to tell everyone why." (False: we go to the rest spot, no reason needed.)

Vocabulary

muscles, strong, heart, breathing, quicker, slower, rest, body weight

Differentiation

- **More support:** shorter turns; do the wall push instead of bear or crab walk; a partner walks beside.
- **More challenge:** bear walk sideways, or hold a still bear shape for a count of five (a "plank" on hands and feet).
- **Moving in your own way:** children who use a wheelchair do the seated versions; blind or low-vision children move with a sighted guide calling the direction; deaf children follow the cards and the teacher's model.

⚠ Safety

- Lots of space between children; walks go in the same direction, slowly.
- Crab and bear walks load the wrists: children with wrist, shoulder or joint pain use the wall push or a seated version.
- Frog jumps are small and land on two feet, never onto anyone.
- Nobody counts, records or compares heartbeats or breaths.
- Water from each child's own bottle or cup only.

Teacher notes and misconceptions

- Some children think being out of breath means something is wrong. Quicker breathing after moving is usual; say so. If a child seems very unwell, stop and follow the school's first-aid plan.
- Some children think resting means they "lost". Praise choosing rest.
- Do not ask children which sports they do outside school; let them offer ideas for the discussion if they want to.

Lesson 2: Water, shade and keeping cool

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

Goal: Children say ways to keep well on a hot or sunny day (water, shade, a hat or covering up, rest) and the signs that mean "stop and tell an adult", and practise taking water and rest breaks during a gentle circuit.

Length: about 30 minutes.

Materials

- The cleared space (indoors, or a shady outdoor area if the weather and your school allow), 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.
- The rest spot at the edge (green cushion or mat) or a rest card for each child.
- Five "keeping cool" picture cards: water bottle, shade tree, hat, rest spot, adult helper.
- Four "How is Goat feeling?" story cards (below).
- Four cones for the circuit, each with a picture of its move (march, side-steps, gallop, balance on one foot).
- Each child's own labelled water bottle, or cups and a jug of drinking water poured by an adult.
- For blind or low-vision children: a sighted guide partner.
- 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 our hearts beat faster and we needed rest and water. Today: how do we keep well when it is hot or sunny?" Remind the class of the rest spot and 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.

✎ Main activity (15 min)

1. **Keeping cool cards (3 min).** Show the five cards one at a time. Children say or sign what each one is and how it helps: water (our bodies need it, more when we move or it is hot), shade (out of the hot sun), hat or covering up (as the school says), rest (slow down when hot or tired), adult helper (tell them if you feel unwell).
2. **Gentle circuit with breaks (7 min).** Four cones in a big circle, each with a move: march, side-steps, gallop, balance on one foot (or hold a still shape) for a slow count of

five. Children move round in the same direction. After about two minutes, give the stop signal: "Water and shade break." Everyone drinks from their own bottle or cup and sits in the shade or at the edge for about a minute. Repeat once more. Anyone may go to the rest spot at any time.

3. **How is Goat feeling? (5 min).** Goat is visiting Little Hill from Snowy Peak, where it is cold. Show the cards one at a time; children decide what Goat should do.
4. **Card 1:** It is a hot, sunny day. Goat runs and runs in the middle of the field. Goat has no hat and left its water bottle in the classroom. (Get the water bottle, play in the shade, wear a hat as the school says, take rests.)
5. **Card 2:** Goat stops. Goat feels dizzy and has a headache. (Stop, sit somewhere cool or in the shade, tell an adult straight away.)
6. **Card 3:** Duck is playing too. Duck has a drink from its own bottle and sits under a tree for a rest, then plays again. (Duck is keeping cool; resting is part of playing.)
7. **Card 4:** Goat wants to share a drink from Duck's bottle. (Each person drinks from their own bottle or cup; ask an adult for a cup.) Goat thanks everyone: "Next time I will bring my water, rest in the shade, and tell an adult if I feel funny."

✓ Discussion questions (4 min)

1. "Why do we need more water when we move a lot or it is hot?" (Our bodies get hot and sweaty and lose water; drinking helps us keep well.)
2. "What are some signs that mean stop and tell an adult?" (Feeling dizzy, a headache, feeling sick, feeling very hot or very tired.)
3. "Why do we each drink from our own bottle or cup?" (So we do not pass germs to 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. "On a hot day, playing in the shade can help us keep cool." (True.)
2. "If we feel dizzy, we keep running and don't tell anyone." (False: stop, sit somewhere cool and tell an adult.)
3. "It is fine to share a friend's water bottle." (False: each person uses their own bottle or cup.)

Vocabulary

hot, cool, shade, water, thirsty, dizzy, headache, rest, sun

Differentiation

- **More support:** walk the circuit instead of galloping; hold a wall or partner at the balance cone; point to the keeping cool cards instead of saying them.
- **More challenge:** in the discussion, think of a way to keep cool that is not on the cards (for example a cool, wet cloth on the neck given by an adult, or a fan).

- **Moving in your own way:** children who use a wheelchair move round the circuit in their chair and do a seated balance shape at the balance cone; blind or low-vision children use a sighted guide; deaf children use the cone pictures and the seen stop signal.

⚠ Safety

- Follow your school's sun and heat policy. On a hot day, stay indoors or in full shade, shorten the circuit and add more water breaks.
- Never look at the Sun.
- No child is made to drink or praised for drinking more than others.
- Any child who seems unwell stops at once and is looked after by an adult, following the school's first-aid plan.
- Children never put sun cream on each other.

Teacher notes and misconceptions

- Some children think "keeping cool" means only on summer holidays. Moving hard indoors makes us hot too.
- Some children think a hat is enough on its own. Water, shade and rest matter as well.
- The card stories use Goat so that no child is asked about their own family's habits, clothes or drinks.
- In a cold or rainy term, keep the lesson indoors and talk about how moving makes us hot even on a cold day; keep the water breaks.

Lesson 3: Clean hands and a balanced day

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

Goal: Children show the hand-washing steps, find the places that are often missed, say when to wash hands, and say how playing, resting, water and food fit together in a healthy day.

Length: about 30 minutes.

Materials

- The cleared space or the classroom, near sinks.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The rest spot at the edge (green cushion or mat) or a rest card for each child.
- Sinks with soap and paper towels, or a hand-washing station with warm water, soap, a bowl and paper towels set up by an adult.
- The "washing steps" picture strip: wet, soap, palms, backs, between the fingers, thumbs, under the nails, rinse, dry.
- One washable felt-tip pen (an adult uses it) and a few stickers.
- A sand timer, or a slow count to 20.
- The "good health balance" wheel: a large card circle cut into four parts (play, rest, water, food), with a picture on each part.
- Four "Little Hill day" picture cards (below).
- Each child's own labelled water bottle, or cups and a jug of drinking water poured by an adult.
- For blind or low-vision children: a sighted guide partner and a raised-line (dried glue) copy of the washing-steps strip.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for notes.
- A second adult if possible (for small-group washing at the sinks).

Steps

✎ Opening (3 min)

Sitting together. "Germs are too small to see. Washing our hands with soap and water helps stop them spreading. Today we will find the places that are easy to miss." Remind the class of the stop signal and the rest spot. "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. Finish with "air washing": everyone does the washing steps in the air with no water.

✎ Main activity (15 min)

1. **The washing steps (3 min).** Show the strip. Everyone does each step "in the air" with the teacher: wet, soap, rub palms, rub the backs, fingers between fingers, hold each thumb and twist, scratch the nails on the other palm, rinse, dry. "We rub for about 20 seconds: a slow count to 20, or until the sand runs out."
2. **The marker check (7 min).** Ask for volunteers. With each child's agreement, an adult draws a small dot with the washable felt-tip on the back of their hand and one on their thumb. (Children who do not want a dot, or who have eczema, sore skin or a skin allergy, wear a sticker in the same place instead and peel it off at the end, or watch.) In small groups at the sinks, children wash using the steps and the slow count. Then they look: has the dot gone? "The thumb and between the fingers are the places people miss most." If there are few sinks, one group washes with the second adult while the others start part 3, and the rest wash later in the day.
3. **A balanced day (5 min).** Show the four Little Hill day cards and the wheel. Children place each card on the right part of the wheel.
4. Mouse plays chase in the park with friends. (Play.)
5. Bear has a drink of water from its own bottle after playing. (Water.)
6. Duck eats lunch at the picnic table, after washing its wings. (Food.)
7. Goat goes to bed early the night before the big game day, so it feels rested. (Rest.) "If Mouse played all day and never rested, never had a drink and never ate, how might Mouse feel?" (Tired, thirsty, hungry, maybe unwell.) "A healthy day has some of every part. That's a good health balance."

✓ Discussion questions (4 min)

1. "Which places on our hands are easy to miss?" (The thumbs, between the fingers, the wrists and under the nails.)
2. "When should we wash our hands?" (After the toilet, before eating, after playing outside, after blowing our nose.)
3. "Why does a healthy day need play and rest and water and food?" (Play makes us strong, food gives us energy to play, water and rest help our bodies recover; we need all of them.)

✓ 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. "We wash our hands before we eat." (True.)
2. "A quick splash of water with no soap is enough." (False: soap, rub for about 20 seconds, rinse, dry.)
3. "A healthy day has play, rest, water and food." (True.)

Vocabulary

germs, soap, rinse, thumbs, nails, wrist, balance, energy, rest

Differentiation

- **More support:** an adult or partner says each step; follow the picture strip step by step; use a pump soap that is easy to press.
- **More challenge:** put the washing-steps pictures in order without looking at the strip; think of another time to wash hands.
- **Moving in your own way:** children who use a wheelchair wash at a low sink or the bowl station set at the right height; blind or low-vision children follow the raised-line strip with a guide; deaf children follow the strip and the teacher's model; children who cannot rub their hands together are helped by an adult in the way their plan says.

⚠ Safety

- The washable felt-tip pen is used only by an adult, only on children who agree, on the back of the hand and the thumb only; never near eyes and never on sore or broken skin, or for children with eczema or skin allergies (stickers instead).
- Check soap allergies; offer a different soap if a child needs one.
- Warm, not hot, water. Wipe up water spills at once so nobody slips.
- No questions about what children eat or when they go to bed; the wheel uses made-up characters.

Teacher notes and misconceptions

- Many children think hands are clean if they look clean. Germs are too small to see; the marker dot only shows which places were missed.
- Some children rush and rinse after a few seconds. The sand timer or a slow count helps.
- The wheel does not sort foods into good and bad. If children start doing that, say "every part of the wheel matters, and food gives us energy to play."
- Frequent washing can make skin dry; children with dry skin may need the school's hand cream after washing.

Lesson 4: Making our game-day rules

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

Goal: Children try the four game-day stations, suggest rules that keep the games safe and fair, and agree a class rule card for game day.

Length: about 30 minutes.

Materials

- The cleared space, edge cones, and floor spots or hoops.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The rest spot at the edge (green cushion or mat) or a rest card for each child.
- The four game-day stations, set up before the lesson, each with a picture sign:
- **Balance line:** floor tape or a long rope laid flat.
- **Balloon keep-up:** latex-free balloons blown up and tied by an adult, a few beach balls or very light foam balls, and a lidded box for burst pieces.
- **Beanbag toss:** beanbags, three hoops at different distances and a throwing line of floor tape.
- **Animal-walk path:** cones and the four animal-walk cards from lesson 1.
- A large blank "Our game-day rules" card and a thick pen.
- Four "rule idea" picture cards: safety, taking turns, kind words, water and rest.
- One sticky dot per child.
- Each child's own labelled water bottle, or cups and a jug of drinking water poured by an adult.
- For blind or low-vision children: a sighted guide partner, a sound balloon (bell or dried beans inside, added by an adult) or a bell ball, and a raised-line copy of the rule card (made after the lesson).
- Ear defenders and a quiet spot at the edge for children who need them (balloons can burst with a bang).
- A class list for notes.

Steps

✎ Opening (3 min)

Sitting at the edge. "Next time is our class game day. You are going to help make the rules. Rules in games help everyone stay safe and have a fair turn." Remind the class of the stop signal, the rest spot and that a balloon may go "bang". "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.

✎ Main activity (15 min)

1. **Try the stations (9 min).** Four groups, about 2 minutes at each station, moving round on the stop signal (walking, holding nothing). "While you play, think: what could go wrong here? What would make it fair?"
2. Balance line: walk along the line, or balance on one foot beside it.
3. Balloon keep-up: hits in a row with a flat hand, on your own or with a partner.
4. Beanbag toss: underarm throws into the hoops, one child at a time; the others wait behind the throwing line.
5. Animal-walk path: bear walk, crab walk, frog jump or wall push between the cones, one at a time.
6. **Rule ideas (6 min).** Sit together. Show the four rule idea cards. For each card, children suggest a rule for game day; the teacher writes each suggestion in the children's words under that heading (for example: "Wait behind the line until the bags are collected", "Everyone gets the same number of throws", "Say 'good try'", "Get a drink at the break"). Each child puts their sticky dot next to the rule they think matters most. The class keeps every rule that is safe and fair; the teacher makes sure there is at least one safety rule for each station. Read the card aloud together.

✓ Discussion questions (4 min)

1. "Why do games need rules?" (So everyone is safe, everyone gets a turn, and the game is fair and fun.)
2. "Goat changes a rule in the middle of the beanbag game so it can win. Is that fair? What could Goat do instead?" (No, everyone should agree the rules before playing; Goat could suggest the change for next time and ask the others.)
3. "What will you do if someone forgets a rule on game day?" (Remind them kindly, use the fair ways card, or tell an adult.)

✓ 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. "We made our game-day rules together." (True.)
2. "It is fair to change the rules in the middle of a game so you can win." (False: rules are agreed before the game.)
3. "We wait behind the line until the beanbags are collected." (True, if the class chose that rule; otherwise use the class's own beanbag safety rule.)

Vocabulary

rule, fair, safe, turn, agree, station, remind

Differentiation

- **More support:** point to a rule idea card instead of saying a rule; a partner helps place the sticky dot.
- **More challenge:** explain why a rule is fair, or suggest a rule that helps a child who uses a wheelchair or a sound balloon join in.
- **Moving in your own way:** children who use a wheelchair hold a balance shape in their chair or steer along the line, hit balloons from the chair, throw from a closer line, and do seated animal moves; blind or low-vision children use a sighted guide and a sound balloon or bell ball; deaf children get every instruction shown as well as said.

⚠ Safety

- Beanbag throws are underarm, one child at a time, with everyone else behind the throwing line; beanbags are collected only when the adult says so.
- Latex-free balloons only, blown up by an adult; burst pieces go straight into the lidded box.
- The animal-walk path is one child at a time, in one direction.
- Water from each child's own bottle or cup only.

Teacher notes and misconceptions

- Children sometimes suggest rules that leave someone out ("only fast people"). Ask: "Is that fair to everyone? How could we change it?"
- Keep the children's own words on the rule card where you can; it matters that they recognise it as theirs.
- Make the raised-line copy of the rule card before lesson 5 for any blind or low-vision child.

Lesson 5: Class game day

Unit overview - Previous: Lesson 4

Goal: Children play at the four game-day stations following the rules they made, take water and rest breaks, compare which activities felt confident and which felt like a challenge, and show what they learned in a one-to-one check.

Length: about 30 minutes, plus extra slots in the week for checks.

Materials

- The cleared space, edge cones, and floor spots or hoops.
- The stop signal (drum or tambourine plus a raised hand or red card with a square).
- The six grade 1 warm-up cards.
- The rest spot at the edge (green cushion or mat) or a rest card for each child.
- The four game-day stations from lesson 4, each with its picture sign: balance line (floor tape or rope); balloon keep-up (latex-free balloons blown up and tied by an adult, beach balls or very light foam balls, and the lidded box for burst pieces); beanbag toss (beanbags, three hoops and a taped throwing line); animal-walk path (cones and the four animal-walk cards).
- The class's "Our game-day rules" card from lesson 4, on the wall where everyone can see it.
- The "fair ways" card from grade 2 term 2 (stop; say what you saw; listen; choose: do it again, take turns, or ask the referee).
- For the check spot: the five "keeping cool" cards (lesson 2), the washing-steps strip (lesson 3) and the good health balance wheel (lesson 3).
- Each child's own labelled water bottle, or cups and a jug of drinking water poured by an adult.
- Sinks with soap and paper towels for washing hands after game day.
- For blind or low-vision children: a sighted guide partner, a sound balloon or bell ball, and raised-line copies of the rule card and the washing-steps strip.
- Ear defenders and a quiet spot at the edge for children who need them.
- A class list for the check. A second adult to watch the stations while the teacher does checks.

Steps

✎ Opening (3 min)

Sitting at the edge. "Welcome to our class game day!" Read the class rule card together. Remind the class of the stop signal, the rest spot, the fair ways card, and the water break in the middle. "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.

✎ Main activity (15 min)

Four groups rotate around the four stations, about 3 minutes each, moving on the stop signal (walking, holding nothing). After the second station, everyone has a water break (about 2 minutes) in the shade or at the edge. Any child may use the rest spot at any time. Children choose how to play at each station (for example balance on the line or beside it, a balloon or a beach ball, a near or far hoop). Nothing is scored.

While the stations run, the second adult watches the stations and the teacher calls children one at a time to the check spot (see below). Children who are not being checked keep playing. If there is only one adult, run two stations at a time and do the checks in the extra slots.

✓ Discussion questions (4 min)

1. "Which station felt easy for you, and which felt like a challenge?" (Any honest answer; children may pass. Both are good: easy ones help us feel confident, challenges help us learn.)
2. "Did our rules work? Is there a rule we would change next time?" (Any answer that keeps the games safe and fair.)
3. "What did we do today to keep our bodies well?" (Water break, rest when we needed it, moving our bodies, and we will wash our hands now.)

✓ 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. "We followed the rules we made together." (Children answer honestly; talk about any rule that was hard to keep.)
2. "A challenge can feel hard and still be fun." (True.)
3. "After game day we wash our hands before we eat." (True.)

Then everyone washes hands at the sinks, in small groups.

One-to-one check (about 3 minutes per child)

Done at the check spot. Each part is marked yes / with help / not yet on the class list. No body measure, score or count is recorded.

1. **Strong body:** "Show me one animal walk, or your seated version, and tell me one activity that helps make your body stronger or fitter." Yes: a safe, controlled animal walk or seated version and one active activity. With help: one of the two, or after the teacher shows the cards. Not yet: neither.
2. **Keeping cool:** "It is a hot, sunny day. Tell me two ways to keep well, and one sign that means stop and tell an adult." Yes: two ways (water, shade, hat or covering up, rest) and one sign (dizzy, headache, feeling sick, very hot or very tired). With help: after pointing to the keeping cool cards. Not yet: neither.

3. **Clean hands:** "Show me how to wash your hands, in the air, and tell me one time we wash our hands." Yes: soap, palms, backs, between the fingers or thumbs, rinse and dry, and one time (after the toilet, before eating, after playing outside). With help: with the washing-steps strip. Not yet: misses most steps.
4. **A balanced day:** "Point to the wheel. What does a healthy day need?" Yes: names play, rest, water and food, or says we need some of each. With help: names two or three with prompting. Not yet: one or none.
5. **Rules:** "Tell me one of our game-day rules and why it matters." Yes: a rule from the class card and a reason (safe, fair, everyone gets a turn, kind). With help: a rule without a reason, or after looking at the card. Not yet: neither.

Children answer in their own way: saying, signing, pointing to a card or showing. A child using a wheelchair shows the seated version of an animal walk; a child who cannot rub their hands shows the steps in their own way or points to the strip.

Vocabulary

game day, station, rule, fair, challenge, confident, rest, balance

Differentiation

- **More support:** stay with a partner at each station; shorter turns; answer the check by pointing to cards.
- **More challenge:** be a "rule helper" who reminds others kindly; try the far hoop or a balance shape on one foot.
- **Moving in your own way:** children who use a wheelchair play every station from their chair (balance shape in the chair or steering along the line, balloon hits, a closer throwing line, seated animal moves); blind or low-vision children use a sighted guide, a sound balloon or bell ball and raised-line cards; deaf children get every instruction shown as well as said.

⚠ Safety

- Follow your school's sun and heat policy; on a hot day keep game day indoors or in full shade and add another water break.
- Beanbag throws are underarm, one child at a time, with everyone else behind the throwing line.
- Latex-free balloons only; burst pieces go straight into the lidded box.
- Any child who feels dizzy, has a headache, feels sick or is very hot or tired stops and is looked after by an adult.
- Water from each child's own bottle or cup only.

Teacher notes and misconceptions

- If a disagreement happens, use the fair ways card rather than deciding for the children straight away.
- Some children may want a winner. Game day has no scores; praise following the rules, trying a challenge and helping others.

- Finish any checks in the week; it is fine to check a child over two short visits.

Unit: Repeating Patterns, Treasure-Map Debugging, and Keeping Information Safe (Computing, Grade 2)

> **Unreviewed AI draft.** Written by Gemini 4 Argon (2026-11-05). No human teacher has reviewed this unit. All content is CC0 1.0 Public Domain.

Overview

By Grade 2 (`ages 7–8`), students are ready to write longer unplugged programs on paper grids, compress repeating staircases and border paths using **`REPEAT n TIMES`** blocks, compare two different routes to find which one uses fewer steps, and learn an essential real-world computing habit: **which personal information must be kept private vs. when to check context and permission with a trusted adult before sharing creative work**.

Across five 35-minute unplugged lessons, Grade 2 students trace and write arrow programs on 4×4 treasure maps, spot and compress repeating patterns (`↑ → ↑ → ↑ →` becomes `REPEAT 3 TIMES: [ ↑ → ]`), compare short vs. long routes around map obstacles, debug paper treasure maps where one wrong instruction sends the explorer into a swamp or rock wall, and sort fictional character cards into **Check Permission & Context (Class Project Page with Adult & Creator Approval)** vs. **Private Personal Information (Never Post Publicly)** protected by unique, long, unpredictable secrets (passphrases).

Prior knowledge

- Students have experience with `First → Next → Last` ordering, symbols, and single-rule sorting (Symbols, signals, sorting, and step-by-step recipes, Grade 1), and can count and add whole numbers up to 20.
- Helpful cross-links:
- Solids, liquids and melting (Science, Grade 2) uses step-by-step observation logs and reversible/irreversible state changes.
- Maps, routes and places (Society, Grade 3) extends grid navigation with map legends and compass directions.
- Leads to: Inputs, outputs, loops, and debugging (Computing, Grade 3) and Computing & systems progression.

Learning goals

By the end of this unit, a student can:

1. Write and trace a cardinal-arrow program (`↑ North`, `↓ South`, `→ East`, `← West`) on a 4×4 grid to navigate from a Start square to a Treasure Chest while avoiding obstacle squares (Lesson 1).
2. Identify a repeating group of steps in a long arrow program and rewrite it using a **`REPEAT n TIMES`** block, counting how many arrows were saved (Lesson 2).
3. Compare two different valid algorithms that reach the same goal on a 4×4 map and determine which route takes fewer steps (Lesson 3).

4. Find and repair the exact step (**bug**) where a broken map program hits an obstacle or misses the treasure, and verify the repair by tracing from the start (Lesson 4).
5. Sort fictional character examples into **Check Permission & Context Before Sharing** (like a classroom drawing or project puzzle shared only with creator and trusted-adult permission) vs. **Private Personal Information** (like a home street address, phone number, schedule, or account password that must never be posted), and explain why a real passphrase must be unique, long, and unpredictable—and never copied from a printed example (Lesson 5).

Lesson sequence

Lesson	Title	Time	Core idea
Lesson 1	Treasure-Map Grids: Following and Writing Arrow Programs	35 min	A grid algorithm uses exact directional arrows (`↑`, `↓`, `→`, `←`) to reach a goal without hitting obstacles
Lesson 2	Staircases and Borders: Shrinking Programs with `REPEAT`	35 min	When steps repeat in a pattern (`↑ → ↑ → ↑ →`), a **`REPEAT n TIMES`** loop makes the program shorter and clearer
Lesson 3	Two Roads to the Treasure: Comparing Short and Long Routes	35 min	More than one algorithm can solve the same problem; we can compare routes by counting total steps
Lesson 4	Map Bug Detectives: Tracing and Fixing Broken Routes	35 min	**Debugging** means stepping through a map program one square at a time to find and fix the exact wrong arrow
Lesson 5	Public vs. Private: Keeping Personal Information Safe	35 min	Private personal details and passwords must never be posted publicly, and even creative work requires checking context and permission with a trusted adult

Materials for the whole unit

- Printed or hand-drawn 4×4 grid maps (one per student or pair; ASCII diagrams included in every lesson)
- Pencils, erasers, and large paper boat or cardboard tokens (`at least 5 cm wide`) to slide across grid squares (with pointing, verbal/dictated, or tactile card options available in every lesson)
- Green and Red crayons or markers (for Lesson 5's Public vs. Private sorting cards)

Assessment summary

Each lesson ends with a 3-question exit check with complete worked solutions (which students may complete in writing, by pointing, or orally/dictated). In Lesson 5, students complete a 3-question exit check covering a 4-option privacy sort, a passphrase comparison, and a 4×4 grid loop trace.

Sources

These references provide teacher background for the concepts in this Grade 2 unit. All links were checked to load on 2026-11-05.

- Algorithm (step-by-step problem-solving procedure): https://en.wikipedia.org/wiki/Algorithm — background for Lessons 1 and 3.
- For loop (count-controlled repetition in programming): https://en.wikipedia.org/wiki/For_loop — background for Lesson 2's `REPEAT n TIMES` compression.
- Debugging (tracing and fixing errors in a program): https://en.wikipedia.org/wiki/Debugging — background for Lesson 4's step-by-step map trace.
- Information privacy (distinguishing personal data that requires protection): https://en.wikipedia.org/wiki/Information_privacy — background for Lesson 5's private vs. public information sort.
- Password (secret word or phrase used to protect access): https://en.wikipedia.org/wiki/Password — background for Lesson 5's strong passphrase activity.
- Bell, T., Witten, I. H., & Fellows, M. (2015). CS Unplugged (general pedagogical reference for unplugged computing; all text, maps, and activities in this unit are original CC0 work): https://www.csunplugged.org/

Known gaps and cautions

- **Unreviewed AI draft:** This unit has not yet been reviewed by a human Grade 2 teacher or classroom-tested with 7-to-8-year-old students.
- **Cardinal Grid Arrows (`↑ ↓ → ←`) vs. Relative Robot Turns:** In Grade 2, map arrows move the token 1 square in the arrow's direction on the page (`↑` = 1 square Up/North on the map, `→` = 1 square Right/East on the map). Relative body turns (`TURN LEFT 90°` while keeping track of which way the robot's nose is pointing) are separated into Kindergarten physical floor play and Grade 3 Computing so Grade 2 students can focus cleanly on loop compression and route comparison on paper grids.
- **Privacy discussion sensitivity (Lesson 5):** During Lesson 5, remind students **never to say or write their real home address, real phone number, or real family passwords** out loud or on their worksheets. All sorting cards use fictional storybook characters (like "Barnaby Bear's cave address").

Lesson 1: Treasure-Map Grids — Following and Writing Arrow Programs

- **Unit:** Repeating Patterns, Treasure-Map Debugging, and Keeping Information Safe (Computing, Grade 2)
- **Time:** 35 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will trace and write a sequence of directional arrows (↑, ↓, →, ←) on a 4×4 grid map to move a ship token from a Start dock (S) to a Treasure Chest (T) without landing on Rock (#) squares.

Materials

- Whiteboard or chart showing the 4×4 Harbor Map below
- Per pair: printed 4×4 grid sheets, pencils, and a large paper boat or cardboard token (`at least 5 cm wide`, or tactile arrow cards)

Vocabulary

- **Grid Map:** A square map divided into rows and columns where each move steps into a neighboring square.
- **Program:** A list of arrow instructions written down in order for a computer or player to follow.
- **Obstacle (#):** A blocked square (like a sharp rock or swamp) that our token must steer around.

Lesson flow

✎ 1. Opening: Reading the 4 Arrow Commands (7 min)

1. Draw the four map arrows on the board:
2. ↑ **(Up / North):** Move 1 square up toward the top of the page.
3. ↓ **(Down / South):** Move 1 square down toward the bottom of the page.
4. → **(Right / East):** Move 1 square right.
5. ← **(Left / West):** Move 1 square left.
6. Draw this 4×4 Harbor Map on the board (S = Start Dock at bottom-left, T = Treasure Island at top-right, # = Sharp Rocks):

```
Row 4 (Top):    [ . ]  [ # ]  [ . ]  [ T ]
Row 3:          [ . ]  [ # ]  [ . ]  [ . ]
Row 2:          [ . ]  [ . ]  [ . ]  [ # ]
Row 1 (Bottom): [ S ]  [ # ]  [ . ]  [ . ]
                Col 1  Col 2  Col 3  Col 4
```

1. Ask: "Why can't our boat sail straight right from *[S]* (*Col 1, Row 1*) using → → →?"

2. Because `[Col 2, Row 1]` has a sharp Rock (`#`)!

✎ 2. Main activity: Tracing & Writing Safe Harbor Programs (18 min)

1. **Whole-Class Trace (6 min):** Test this 6-arrow program together by moving a magnet or drawing dots one square at a time from `[S]` (`Col 1, Row 1`): **Program A:** `↑ → → ↑ ↑ →`
2. Arrow 1 (`↑`): Moves from `(Col 1, Row 1)` to `(Col 1, Row 2)` — safe water `[.]`!
3. Arrow 2 (`→`): Moves to `(Col 2, Row 2)` — passes right between the two rocks!
4. Arrow 3 (`→`): Moves to `(Col 3, Row 2)` — safe water `[.]`!
5. Arrow 4 (`↑`): Moves to `(Col 3, Row 3)` — safe water `[.]`!
6. Arrow 5 (`↑`): Moves to `(Col 3, Row 4)` — safe water `[.]`!
7. Arrow 6 (`→`): Moves to `(Col 4, Row 4)` — lands right on **`[T]` Treasure**!
8. **Pair Map Designer & Navigator (12 min):**
9. Give each pair two blank 4×4 grids.
10. **Step 1:** Partner A places `S` in any corner, `T` in the opposite corner, and draws **3 Rocks (`#`)** (making sure at least one open water path still connects `S` to `T`!).
11. **Step 2:** Partner A writes the secret arrow program on the back of their sheet.
12. **Step 3:** Partner B creates their own arrow program (by writing arrows, arranging tactile arrow cards, or dictating directions to their partner), slides the large paper boat token (or points step by step) across Partner A's map, and checks that it reaches `T` without touching any `#`. Then partners switch!

✓ 3. Discussion questions (5 min)

- **Question 1:** "What happens if you place Rocks (`#`) all the way across Row 2 (*`[#][#][#][#]`*)?"
- Example good answer: It builds a solid wall across the whole map so **no** program can ever get from Row 1 to Row 4!
- **Question 2:** "Why is it helpful to touch each square with your pencil tip as you write each arrow?"
- Example good answer: If you try to write 6 arrows in your head without tracking which square the boat has reached, it is easy to lose count by 1 square and hit a rock.

✓ 4. Closing check (5 min)

Look at the 4×4 Harbor Map from the board (`S` at `Col 1, Row 1`):

1. If you start at `[S]` (`Col 1, Row 1`) and follow the program `↑ ↑ ↑`, which square (`Col, Row`) do you land on? Does that square have a Rock (`#`)?
2. From `(Col 1, Row 4)`, why can't you go `→` to reach the Treasure?
3. Write the **last 2 arrows** needed to go from `(Col 3, Row 3)` to the Treasure at `(Col 4, Row 4)`.

Worked answers for closing check

1. Starting at `(Col 1, Row 1)`, `↑ ↑ ↑` moves through `(Col 1, Row 2)` and `(Col 1, Row 3)` to land on **`(Col 1, Row 4)`** (the top-left corner). It is safe water (`[.]`), **no rock**.

2. Because `(Col 2, Row 4)` has a **Rock (#)** blocking the way!
3. ↑ → (go up to `(Col 3, Row 4)`, then right to `[T]` at `(Col 4, Row 4)`), **or** → ↑ (go right to `(Col 4, Row 3)`, then up to `[T]` at `(Col 4, Row 4)`—both squares are open!).

Differentiation

- **Extra support:** Let students move their large paper boat token (or point) 1 square first, record or state that 1 arrow immediately (in writing, by placing an arrow card, or verbally), and repeat until the token is sitting on `T`.
- **Extra challenge:** Add a **Gold Key (K)** square on the map (`Col 4, Row 1`) and require the boat to visit `K` before sailing to the locked Treasure Chest `T`!

Lesson 2: Staircases and Borders — Shrinking Programs with `REPEAT`

- **Unit:** Repeating Patterns, Treasure-Map Debugging, and Keeping Information Safe (Computing, Grade 2)
- **Time:** 35 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will spot repeating groups of arrows inside a grid program, rewrite them using a **`REPEAT n TIMES: [ ... ]`** loop block, and verify that the long program and the loop program land on the exact same square.

Materials

- 4×4 Staircase Map on the board and student worksheets

Vocabulary

- **Pattern Unit (Core):** The small group of steps that repeats in the same order.
- **`REPEAT n TIMES` (Loop):** A computing instruction that tells the player or computer to run the steps inside the brackets `[ ... ]` exactly `n` times in a row.

Lesson flow

✎ 1. Opening: The Staircase Climb (7 min)

1. Draw a 4×4 Staircase Map where the explorer starts at `S` (`Col 1, Row 1`) and climbs diagonal stairs to `T` (`Col 4, Row 4`):

```
Row 4 (Top):    [ . ]  [ . ]  [ . ]  [ T ]
Row 3:          [ . ]  [ . ]  [ * ]  [ * ]
Row 2:          [ . ]  [ * ]  [ * ]  [ . ]
Row 1 (Bottom): [ S ]  [ * ]  [ . ]  [ . ]
                Col 1  Col 2  Col 3  Col 4
```

1. Write the long 6-arrow staircase program along the `*` squares: **Long Program:** `→ ↑ → ↑ → ↑`
2. Ask: "Read or tap through that arrow list with me: 'Right, Up, Right, Up, Right, Up!' What 2-arrow pattern repeats over and over, and how many times does it repeat?"
3. Pattern: **`[ → ↑ ]`**, repeated **`3` times**!
4. Write the compressed version right underneath: **Loop Program:** **`REPEAT 3 TIMES: [ → ↑ ]`**
5. Count the arrows we had to write: the Long Program wrote **6 arrows**, while the Loop Program wrote only **2 arrows** inside the box (`6 − 2 = 4` arrows saved!).

✎ 2. Main activity: Unrolling & Compressing Loops (18 min)

1. **Practice Unrolling a Loop (6 min):**
2. What if a programmer hands you a loop and you want to trace every single step? You **unroll** it!
3. Write on the board: `REPEAT 3 TIMES: [ ↑ ]` followed by `REPEAT 3 TIMES: [ → ]`
4. Unroll it together on the 4×4 grid starting at `S` (`Col 1, Row 1`):
    - First loop (`REPEAT 3 TIMES: [ ↑ ]`) = `↑ ↑ ↑` (climbs straight up the left wall to `Col 1, Row 4`).
    - Second loop (`REPEAT 3 TIMES: [ → ]`) = `→ → →` (walks straight across the top row to `T` at `Col 4, Row 4`!).
5. **Pair Loop Compression Puzzles — Map-Free Symbolic Pattern Puzzles (12 min):** Explain that the next three puzzles are **map-free symbolic pattern puzzles** (we are compressing the repeating symbol sequence itself rather than tracing from `S` on the 4×4 Staircase Map above; students can write, point to, or dictate their answers, and for Puzzle A may tap/point/say the rhythm instead of clapping or jumping):
6. **Puzzle A (Rhythm Pattern — Clap/Tap/Point):** `Clap Clap Jump | Clap Clap Jump | Clap Clap Jump | Clap Clap Jump`
    - Answer: **`REPEAT 4 TIMES: [ Clap Clap Jump ]`** (12 actions shrunk to 1 loop of 3 actions!).
7. **Puzzle B (Symbolic Zig-Zag Arrow Sequence):** `↑ ← ↑ ← ↑ ←`
    - Answer: **`REPEAT 3 TIMES: [ ↑ ← ]`**.
8. **Puzzle C (Symbolic Loop + Extra Step at the End!):** `→ ↑ → ↑ → ↑ →` (7 arrows total)
    - Guide students to see that the first 6 arrows are `REPEAT 3 TIMES: [ → ↑ ]`, followed by one extra `→` outside the loop: **`REPEAT 3 TIMES: [ → ↑ ]` then `→`**.

✓ 3. Discussion questions (5 min)

- **Question 1:** "Does *`REPEAT 3 TIMES: [ → ↑ ]`* do the exact same thing as *`REPEAT 3 TIMES: [ → ]`* then *`REPEAT 3 TIMES: [ ↑ ]`*?"
- Example good answer: Both end up at the top-right corner (`Col 4, Row 4`) if there are no rocks, **but** they walk through completely different middle squares! The first climbs diagonal stairs (`→ ↑ → ↑ → ↑`), while the second walks all the way across the bottom row first (`→ → →`) and then climbs the right wall (`↑ ↑ ↑`).
- **Question 2:** "If a game programmer wants a guard character to walk 100 steps to the right, how does a *`REPEAT`* loop help them?"
- Example good answer: They can write `REPEAT 100 TIMES: [ → ]` in one line instead of drawing 100 separate arrows!

✓ 4. Closing check (5 min)

1. (Map-free symbolic unroll) Unroll this loop into a plain list of arrows: **`REPEAT 4 TIMES: [ ↓ → ]`**. How many total single-square steps does the unrolled list contain?
2. (Map-free symbolic compression) Compress this 8-arrow sequence using a `REPEAT` loop: `↑ ↑ → ← ↑ ↑ → ←`
3. (4×4 grid trace) Start at (`Col 1, Row 1`) on an open 4×4 grid. Where do you land after running **`REPEAT 2 TIMES: [ ↑ → ]`**?

Worked answers for closing check

1. Unrolled: `↓ → ↓ → ↓ → ↓ →`. Since there are `2` arrows inside the box repeated `4` times, the token takes `4 × 2 = 8` **total steps**.
2. **`REPEAT 2 TIMES: [ ↑ ↑ → ← ]`** (the 4-arrow pattern `↑ ↑ → ←` repeats twice).
3. Round 1 (`↑ →`) moves from `(Col 1, Row 1)` → `(Col 1, Row 2)` → `(Col 2, Row 2)`. Round 2 (`↑ →`) moves to `(Col 2, Row 3)` → **`(Col 3, Row 3)`**.

Differentiation

- **Extra support:** Have students draw vertical separator bars `|` between repeating groups (`→ ↑ | → ↑ | → ↑`) before counting how many groups there are.
- **Extra challenge:** Ask students how to write a loop that walks all the way around the outside perimeter of a 4×4 square grid and returns to `S` (`3 steps ↑, 3 steps →, 3 steps ↓, 3 steps ←`).

Lesson 3: Two Roads to the Treasure — Comparing Short and Long Routes

- **Unit:** Repeating Patterns, Treasure-Map Debugging, and Keeping Information Safe (Computing, Grade 2)
- **Time:** 35 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will trace two or more valid grid algorithms that reach the same goal, count the total steps taken by each route, and explain why finding a shorter route matters when energy or time is limited.

Materials

- Printed 4×4 Island Map worksheets (diagram below) and pencils

Vocabulary

- **Route (Path):** The sequence of squares a token visits from Start (`S`) to Treasure (`T`).
- **Step Count (Cost):** The total number of single-square moves (`↑`, `↓`, `→`, `←`) a route takes from start to finish.
- **Efficient:** Finishing the job correctly without wasting extra steps.

Lesson flow

✎ 1. Opening: Two Sailors, One Treasure Island (7 min)

1. Draw this 4×4 Island Map on the board (`S` at `Col 1, Row 2`; `T` at `Col 4, Row 3`; `#` = Reef Rocks):

```
Row 4 (Top):    [ . ]  [ . ]  [ . ]  [ . ]
Row 3:          [ . ]  [ # ]  [ . ]  [ T ]
Row 2:          [ S ]  [ # ]  [ . ]  [ . ]
Row 1 (Bottom): [ . ]  [ . ]  [ . ]  [ . ]
                Col 1  Col 2  Col 3  Col 4
```

1. Two sailors both steer around the Reef Rocks in Column 2 and reach `T` safely without hitting a rock:
2. **Sailor Ava's Program (North Pass via Row 4):** `↑ ↑ → → ↓ →`
3. **Sailor Ben's Program (South Pass via Row 1):** `↓ → → ↑ ↑ →`
4. Trace both on the board:
5. Do **both** sailors reach `T` safely? **Yes!**
6. Count the steps: Ava took **`6` steps**, and Ben took **`6` steps**—a tie!

✎ 2. Main activity: Finding the Shortest Safe Route (18 min)

1. **Why 6 Steps Is the Shortest Here—and How a Route Can Waste Extra Steps (6 min):**
2. Ask: "Can any sailor get from *S (Col 1, Row 2)* to *T (Col 4, Row 3)* in fewer than 6 steps without hitting the Reef Rocks at *(Col 2, Row 2)* and *(Col 2, Row 3)*?"
3. Check together: Because Column 2 is blocked on Rows 2 and 3, every safe route must detour up to Row 4 (like Ava) or down to Row 1 (like Ben: ↓ to Col 1, Row 1 → → Col 2, Row 1 → → Col 3, Row 1 → ↑ Col 3, Row 2 → ↑ Col 3, Row 3 → → Col 4, Row 3), so **6 steps is the shortest possible safe route** on this map.
4. Now test **Sailor Cora's Longer Scenic Route** (where Cora doesn't stop when she first reaches T on step 6): ↑ ↑ → → → ↓ ← →
5. Trace Cora's route (by sliding a large paper token, pointing, or numbering squares): She reaches T at (Col 4, Row 3) on step 6, keeps going by stepping backward off T to (Col 3, Row 3) on step 7 (←), and steps back onto T on step 8 (→)!
6. Cora took **8 steps** (2 wasted back-and-forth steps after already reaching T!).
7. **Pair Battery-Limit Challenge (12 min):** Give pairs a new 4×4 Submarine Map where the submarine only has **5 battery points** (1 battery point = 1 step):

```
Row 4 (Top):    [ . ]  [ . ]  [ # ]  [ T ]
Row 3:          [ . ]  [ . ]  [ . ]  [ . ]
Row 2:          [ # ]  [ # ]  [ . ]  [ # ]
Row 1 (Bottom): [ . ]  [ S ]  [ . ]  [ . ]
                Col 1  Col 2  Col 3  Col 4
```

- S is at **(Col 2, Row 1)**; T is at **(Col 4, Row 4)**.
- Pairs must:
    1. Trace **Route 1:** ← ↑ (hits rock at *Col 1, Row 2*—invalid!)
    2. Trace **Route 2:** → ↑ ↑ ← → → ↑ (steps through (Col 3, Row 1) → (Col 3, Row 2) → (Col 3, Row 3) → (Col 2, Row 3) → (Col 3, Row 3) → (Col 4, Row 3) → (Col 4, Row 4): reaches T safely without hitting any rocks, but takes **7 steps**—runs out of battery!).
    3. Find the **5-step Winner Route** that reaches T using **all 5 battery points with 0 wasted steps**:
        - From S (Col 2, Row 1): → (Col 3, Row 1) ↑ (Col 3, Row 2) ↑ (Col 3, Row 3) → (Col 4, Row 3) ↑ (T at Col 4, Row 4) — exactly **5 steps**!

✓ 3. Discussion questions (5 min)

- **Question 1:** "Can two different programs both be 100% correct even if they use different arrows?"
- Example good answer: Yes! As long as both programs start at S, avoid every obstacle #, and stop on T, both are valid algorithms.
- **Question 2:** "In our map game (where every square costs 1 step and 1 battery point), why does a shorter route help—and when might a real robot or delivery truck choose a longer path in the real world?"
- Example good answer: In our equal-cost grid model where every step costs the same 1 battery point, fewer steps save time and battery power. (In the real world, hills, rough

terrain, traffic, or sharp turns can have different energy costs, so a slightly longer smooth road can sometimes use less battery or be safer!)

✓ 4. Closing check (5 min)

1. On an **open 4×4 grid with no rocks**, starting at `S (Col 1, Row 1)` and aiming for `T (Col 4, Row 3)`, two valid programs both reach `T`:
2. **Program X:** `↑ ↑ → → →`
3. **Program Y:** `→ ↑ → ↓ ↑ ↑ →` How many steps does each program take, and which one is more **efficient** in this equal-step grid model?
4. Look closely at **Program Y** (`→ ↑ → ↓ ↑ ↑ →`). Which two arrows in the middle undo each other and waste 2 steps?
5. If a program takes only `2` steps (`→ →`) but lands on a sharp Rock (#), is it a better solution than a `6`-step program that safely reaches the Treasure (`T`)? Why or why not?

Worked answers for closing check

1. **Program X** takes **`5` steps**; **Program Y** takes **`7` steps**. **Program X** is more efficient because it reaches the goal in 2 fewer steps.
2. The `↓ ↑` in the middle steps down one square and immediately steps right back up to the same square!
3. **No!** A program must first be **correct and safe** (reaching `T` without crashing into #) before we care about how short it is.

Differentiation

- **Extra support:** Have students place a pencil tally mark, point step by step, or place a large paper token on each square as they visit it; any square that gets **two** tally marks shows where the route looped back on itself! Students may give responses in writing, by pointing, or verbally.
- **Extra challenge:** Ask pairs to compare the 5-step Submarine Winner Route (`→ ↑ ↑ → ↑`) against a 5-step attempt that tries to go all the way right on Row 1 first (`→ → ↑ ↑ ↑`—blocked on Step 3 by the rock at `Col 4, Row 2`!) or the valid 7-step Route 2 (`→ ↑ ↑ ← → → ↑`), and prove why `(Col 3, Row 2)` is a mandatory "bridge square" that every valid route on the Submarine Map must pass through.

Lesson 4: Map Bug Detectives — Tracing and Fixing Broken Routes

- **Unit:** Repeating Patterns, Treasure-Map Debugging, and Keeping Information Safe (Computing, Grade 2)
- **Time:** 35 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will step through a broken map program one instruction at a time, circle the exact arrow (**bug**) where the path hits an obstacle or goes the wrong way, and write a working repair.

Materials

- Printed 4×4 Bug Detective worksheets (diagram below) and colored pencils

Vocabulary

- **Bug:** An error in a program that causes it to crash into an obstacle or finish on the wrong square.
- **Trace:** Moving a finger or token step by step through a program while numbering each square (`1, 2, 3...`) to see what the program actually does.
- **Debug:** Finding the exact wrong arrow and fixing it.

Lesson flow

✎ 1. Opening: Why Guessing Doesn't Fix Bugs (7 min)

1. Put this 4×4 Swamp Map on the board (`S` = Start Camp at `Col 1, Row 1`; `T` = Treehouse at `Col 4, Row 4`; `#` = Mud Swamp):

```
Row 4 (Top):    [ . ]  [ . ]  [ . ]  [ T ]
Row 3:          [ . ]  [ # ]  [ # ]  [ . ]
Row 2:          [ . ]  [ . ]  [ . ]  [ . ]
Row 1 (Bottom): [ S ]  [ . ]  [ # ]  [ . ]
                Col 1  Col 2  Col 3  Col 4
```

1. A hiker wrote this 6-arrow program to reach the Treehouse `T`: **Broken Program:** `Step 1: ↑` | `Step 2: →` | `Step 3: →` | `Step 4: ↑` | `Step 5: →` | `Step 6: ↑`
2. Ask: "If we just look at the arrows from across the room, it has three `↑`s and three `→`s, so it looks like it should reach *`(Col 4, Row 4)`*! Why did the hiker get stuck in the Mud Swamp?"
3. **Trace and Number Each Step Together on the Map:**
4. Start at `S (Col 1, Row 1)`.
5. `Step 1 (↑)`: Lands on `(Col 1, Row 2)` — write `1` in that square (safe!).
6. `Step 2 (→)`: Lands on `(Col 2, Row 2)` — write `2` in that square (safe!).
7. `Step 3 (→)`: Lands on `(Col 3, Row 2)` — write `3` in that square (safe!).

8. `Step 4 (↑)`: Moves from `(Col 3, Row 2)` up to **`(Col 3, Row 3)`** — SPLAT! `(Col 3, Row 3)` is a **Mud Swamp (#)**!
9. Circle **`Step 4`** and **`Step 5`**: If we swap Step 4 and Step 5 so the hiker goes `→` **first** (to `Col 4, Row 2`) and **then** `↑ ↑` up Column 4, the hiker walks right around the swamp and reaches `T`!

✎ 2. Main activity: Three Bug-Hunter Cases on the Swamp Map (18 min)

Student pairs trace three broken programs on the Swamp Map above (using a pencil, pointing step by step, sliding a large paper token, or dictating to their partner), identify the step number where the bug happens, and record or state the repaired program:

1. **Case 1 — The Wrong-Direction Bug:**
2. Broken Program: `↑ ↑ ↑ → → ←`
3. Trace: Steps 1–3 (`↑ ↑ ↑`) climb Column 1 to `(Col 1, Row 4)`. Steps 4–5 (`→ →`) walk across Row 4 to `(Col 3, Row 4)`. Then **Step 6 (←)** steps backward to `(Col 2, Row 4)` instead of stepping onto `T`!
4. Bug Location: **Step 6 (←)**.
5. Fix: Change Step 6 from `←` to `→` (`↑ ↑ ↑ → → →`).
6. **Case 2 — The Loop Count Bug (Off-by-One):**
7. Broken Program: `REPEAT 2 TIMES: [ ↑ ]` then `REPEAT 3 TIMES: [ → ]`
8. Trace: `REPEAT 2 TIMES: [ ↑ ]` only climbs 2 squares from `(Col 1, Row 1)` to `(Col 1, Row 3)`. Then the first `→` of the second loop crashes straight into the swamp at `(Col 2, Row 3)`!
9. Bug Location: The first loop said **`REPEAT 2 TIMES`** instead of **`REPEAT 3 TIMES`**.
10. Fix: Change the first loop to **`REPEAT 3 TIMES: [ ↑ ]`** (so the hiker climbs all the way to Row 4 before walking 3 steps right to `T`).
11. **Case 3 — Partner Bug Swap (6 min):**
12. Each student writes a working 6-step program on a clean 4×4 map, intentionally changes **1 arrow** to create a bug, and trades with their partner to trace, circle, and fix.

✓ 3. Discussion questions (5 min)

- **Question 1:** "Why did numbering the squares *`1, 2, 3, 4...`* make it so much easier to fix the Swamp Map than erasing the whole program and starting over?"
- Example good answer: Because Steps `1, 2, 3` were already working! Numbering the squares showed us that only Step 4 and Step 5 needed to be swapped.
- **Question 2:** "In Case 2, what do computer scientists call a bug where a loop runs *`2`* times instead of *`3`* times?"
- Example good answer: An **off-by-one bug** (counting one too few or one too many).

✓ 4. Closing check (5 min)

On the Swamp Map (`S` at `Col 1, Row 1`; Swamp `#` at `Col 3, Row 1`; `T` at `Col 4, Row 4`):

1. A student writes the program: `→ → ↑ → ↑ ↑`. On which step number (`1, 2, 3, 4, 5, or 6`) does the hiker step into a Mud Swamp (`#`), and which square is it?
2. What is wrong with the program `↑ ↑ ↑ → →` on the Swamp Map? (Where does it stop?)

3. How do you fix `↑ ↑ ↑ → →` so it reaches `T` at `(Col 4, Row 4)`?

Worked answers for closing check

1. **Step 2 (→)!** Step 1 (→) moves safely to `(Col 2, Row 1)`, and **Step 2 (→)** steps right into the Mud Swamp `#` at **`(Col 3, Row 1)`**.
2. It stops 1 square short at **`(Col 3, Row 4)`** because it only has two → arrows at the end instead of three.
3. Add one more → at the end (`↑ ↑ ↑ → → →`, or `REPEAT 3 TIMES: [ ↑ ]` then `REPEAT 3 TIMES: [ → ]`).

Lesson 5: Public vs. Private — Keeping Personal Information Safe

- **Unit:** Repeating Patterns, Treasure-Map Debugging, and Keeping Information Safe (Computing, Grade 2)
- **Time:** 35 minutes
- **Grouping:** Whole class and pairs

Learning objective

Students will sort fictional character examples into **Private Personal Information** (which must never be posted publicly) vs. **Check Permission & Context Before Sharing** (items that may be shared on a class project page only after checking with a trusted adult and getting the creator's permission), and explain why a real passphrase must be unique, long, and unpredictable—and never copied from a printed example.

Materials

- Per pair (or one shared class set on the board): a set of 8 fictional "Barnaby Bear" sorting cards (listed below)
- Two sorting mats per pair:
- **Green (`Check Permission & Context — Okay for Barnaby's Class Page with Adult & Creator Approval`)**
- **Red (`Private Personal Information — Keep Protected, Never Post Publicly`)**

  Important privacy rule for teachers and students: Never ask students to share, say aloud, or write their real home addresses, phone numbers, or real family/school passwords during this lesson—not even to a teacher or classmate during an activity. All examples use our fictional storybook character, **Barnaby Bear**.

Vocabulary

- **Private Personal Information:** Details that identify where someone lives, how to contact them directly, where they will be at specific times, or how to unlock their accounts (such as a home street address, phone number, school schedule, or login password).
- **Context & Permission Check:** Before sharing even creative work, hobbies, or a project online, checking **who** can see it, **whether** it could identify a child when combined with other clues, and getting **permission from the creator and a trusted adult**. (Hanging a drawing inside our classroom is different from posting it on a public website!)
- **Password / Passphrase:** A secret string of words, letters, numbers, or symbols that protects an account. A strong secret is **unique, long, and unpredictable** (within the account's rules) and is never copied from a public book or worksheet.

Lesson flow

✎ 1. Opening: Hallway Bulletin Board vs. Public Website Fence (7 min)

1. Ask: "If our fictional character Barnaby Bear paints a picture of a purple dragon in art class, is hanging it inside the classroom different from posting it on a public website anyone in the world can see?"
2. Explain: **Yes—context and permission matter!** Inside the classroom, only classmates and teachers see it. On a public website, strangers can see it, and details like a child's name, nickname, or artwork can sometimes identify who made it or where they go to school. Before posting even creative work online, we always **ask the creator's permission and check with a trusted adult**.
3. Ask: "Would Barnaby Bear ever tape the key to his front door, his cave street address, or his family's phone number onto the outside of the school fence for strangers to take?" (`No!` That is **Private Personal Information** and must never be posted!)

✎ 2. Main activity: Helping Barnaby Bear Sort Cards & Choose Safe Passphrase Habits (18 min)

1. **Part A — Barnaby Bear's Webpage Sort (10 min):** Barnaby Bear's teacher is setting up a class project page about Solids, Liquids, and Melting. Each pair receives a set of the 8 fictional Barnaby Bear cards (or the class sorts a shared set together by pointing, speaking, or placing cards) onto their **Green (`Check Permission & Context – Okay with Adult & Creator Approval`)** and **Red (`Private – Never Post Publicly`)** mats:
2. **Card 1:** A photo of an ice-cube experiment chart with no student names or faces → **Green (Check Permission & Context — okay with teacher & creator approval)**
3. **Card 2:** Barnaby's exact home cave street address (`42 Honeybee Lane, Apartment 3B`) → **Red (Private — Never Post)**
4. **Card 3:** A class poll tally showing how many students voted for different states of matter (`Solid, Liquid, Gas`) → **Green (Check Permission & Context — okay with teacher approval)**
5. **Card 4:** Barnaby's tablet login password → **Red (Private — Never Post)**
6. **Card 5:** Barnaby's parent's cell phone number → **Red (Private — Never Post)**
7. **Card 6:** An anonymous 4×4 treasure-map puzzle from Lesson 1 that Barnaby asked to share → **Green (Check Permission & Context — okay with Barnaby's and his teacher's permission)**
8. **Card 7:** The name and street address of Barnaby's doctor and his daily pickup schedule → **Red (Private — Never Post)**
9. **Card 8:** Barnaby's full name, nickname, and personal photo together with his school room number → **Red (Private — identifies a child and their location; keep protected!)**
10. **Part B — What Makes a Secret Passphrase Strong? (8 min):**
11. Barnaby needs a secret passphrase for his fictional tablet account. Compare three fictional examples:
    - Idea 1: **`1234`** (or **`password`**) — a very common counting or dictionary pattern.
    - Idea 2: **`Barnaby`** — his own name, which anyone who knows him could try first.

    - Idea 3: **`ThreeBlueFrogsJump9!`** — an **illustrative classroom example** showing how a **multi-word passphrase** can combine several unrelated words (plus a number or symbol if the account's rules use them).
12. Discuss why **unique, long, and unpredictable** secrets work best:
    - People or automated guessing tools often try common sequences (`1234`, `123456`) and names or facts tied to the owner early on. Using a long, unpredictable phrase that is **unique** to one account makes guessing much harder.
    - **Critical rule about printed examples: Never use `ThreeBlueFrogsJump9!` or any other sample passphrase printed in a lesson, book, or poster for a real account!** Once an example is printed for everyone to read, it is no longer a secret.
13. **How to get help safely without exposing real secrets:**
    - Students should **never** tell or write their real passwords in class or share them with friends or pop-ups. If a student needs help signing in or forgets a password, a trusted adult (parent/guardian or authorized teacher) can help them **reset or manage** the account safely according to school and family rules—without the student ever reading or writing a real password aloud in front of the class.

✓ 3. Discussion questions (5 min)

- **Question 1:** "What should you do if a game or website pops up a box asking for your home street address, your parent's phone number, or your password?"
- Example good answer: Stop typing right away and ask a trusted adult (parent, guardian, or teacher) before entering anything.
- **Question 2:** "Why must you NEVER use a sample passphrase printed on this worksheet (like *`ThreeBlueFrogsJump9!`*) as your real password—even though it is long?"
- Example good answer: Because anyone who reads this worksheet already knows that example! A real passphrase must be a secret that isn't printed in a public lesson.

✓ 4. End-of-unit synthesis & Closing check (5 min)

Students may answer in writing, by pointing/circling, or verbally:

1. **(Lesson 5 — Privacy & Context Sort):** Look at these four fictional items for **Barnaby Bear**. Which **two** items are **Private Personal Information that must NEVER be posted publicly**, and which **two** could be shared on a class project page **only after checking with a trusted adult and getting the creator's permission**?
2. `A. Barnaby's home cave street address`
3. `B. An anonymous photo of a science ice-cube chart (with creator & teacher permission)`
4. `C. Barnaby's tablet login password`
5. `D. An anonymous 4×4 treasure-map puzzle (with creator & teacher permission)`
6. **(Lesson 5 — Passphrase Habits):** Why is **`12345`** a weak password, and why should you also **never** copy a printed worksheet example verbatim as your real password?
7. **(Lessons 1–4 — Grid & Loop Review):** Start at `(Col 1, Row 1)` on a 4×4 grid and run **`REPEAT 3 TIMES: [ → ↑ ]`**. Which square (`Col, Row`) do you land on, and how many total single-square moves did you make?

Worked answers for closing check

1. **`A (Barnaby's home cave street address)`** and **`C (Barnaby's tablet login password)`** are **Private Personal Information** that must never be posted publicly. **`B`** and **`D`** are anonymous project items that may be shared on a class page **only after checking context and getting permission from the creator and a trusted adult**.
2. **`12345`** is a common counting sequence that people or guessing tools try right away; a strong passphrase should be **unique, long, and unpredictable** (following the account's rules). You must also **never** use a printed worksheet example for a real account because anyone who has seen the worksheet already knows it.
3. Each round of `[ → ↑ ]` moves +1 column right and +1 row up. Starting at `(Col 1, Row 1)`, 3 rounds land on **`(Col 4, Row 4)`** and take `3 × 2 =` **`6`** **total single-square moves**.

Grade 2 Computing: Codes and Plans (5 lessons, about 3 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. Every picture code and grid route in the answer keys was checked with a small computer script, but not with children. Check the floor space and materials 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 2 year plan - Term 2. Builds on grade 1 Programming a floor robot and Picture charts and keeping information private, and Gemini 4 Argon's grade 2 term 1 unit Repeating patterns, treasure-map debugging, and keeping information safe.

This unit is "unplugged": paper grids, crayons, cards and a floor grid. No device is needed.

Big idea

Computers keep information as numbers or other symbols. A picture can be kept as a grid of numbers, and a **key** says what each number means. Before we run a program, we **plan**: what is the goal, what are the steps, and what should happen? Then we run it and compare what happened with the plan. Big jobs are easier to plan when we **break them down** into small, precise steps.

Outcomes

By the end of the unit, most children can:

1. Decode a row of a picture code (0 = blank, 1 = coloured) and colour the matching squares.
2. Write the code for a row of a simple picture.
3. Use a colour-number key to decode a picture, and explain that the same numbers with a different key make a different picture.
4. Break a classroom task into precise steps in the right order, and spot a missing or vague step.
5. Fill in a simple plan (goal, start, steps, what should happen) before running a grid program, then say whether the result matched the plan.

Prior knowledge

- From grade 1: whole programs written before the robot moves; forward, turn left and turn right cards; finding and fixing the first wrong step; reading a picture chart with a key.
- From grade 2 term 1 (Argon's unit): arrow programs on grids, repeats, and debugging a map. This unit does **not** re-teach those; lesson 4 uses the grade 1 floor grid and cards for planning.
- Counting to 10 and reading the digits 0 to 3.

Lessons

Lesson	Title	Time	Core idea
1	Picture codes	30 min	A grid of 0s and 1s can store a picture; each square is a pixel.
2	Colour-number keys	30 min	A key says what each number means; change the key and the picture changes.
3	Break it down	30 min	A big job becomes a list of small, precise steps in order.
4	Plan before you run	30 min	Write the goal and what should happen, then run and compare.
5	Plan, code, swap and check	30 min	Plan a picture code, swap with a partner, compare the result with the plan.

The grids and the codes

- **Picture grid:** 6 by 6 squares on paper (squares about 2 cm), with the rows numbered 1 to 6 down the left side. Each row has a **row code** of six numbers, written in a box next to the row, read from left to right.
- **Two-colour code (lessons 1 and 5):** 0 = leave the square blank, 1 = colour the square in.
- **Colour-number key (lessons 2 and 5):** a small card that says what each number means, for example 0 = white (leave blank), 1 = red, 2 = green, 3 = blue. Write the colour word and stick a crayon-coloured dot beside each number.
- **Small grid (lesson 5):** 4 by 4 squares, so a whole picture fits in the time.
- **Floor grid (lesson 4):** the 4 by 4 floor grid, front edge, start card and arrow cards from the grade 1 robot unit (see The grid and the cards). Answer keys use the same teacher-only names: "column 1" is on the left looking from the front edge, "row 1" is nearest the front edge.

Materials

Whole class unless noted.

- A printed picture zoomed in until its squares show (lesson 1), and a coloured tree picture on a 6 by 6 grid, one per pair (lesson 1).
- Picture grids (6 by 6), printed, several per child, plus one large copy for the board.
- Small grids (4 by 4), two per child.
- Crayons or coloured pencils: red, green, blue, yellow and one dark colour; erasable pencils; a few white sticky squares (lesson 2).
- Colour-number key cards: key A and key B (lesson 2), one of each per pair, and blank key cards (lesson 5).
- Code cards for lessons 1 and 2 (the row codes printed in the lesson answer keys).
- Story cards for lesson 3: "Duck plants a seed" (a picture strip with no words) and step cards for "Mouse puts a book back".
- Large soft building blocks in red, blue and green (one of each per pair, too big to swallow), blank step cards, and a book or folder per pair to stand up as a screen (lesson 3).
- Teacher props for lesson 3: a paper seed packet with a paper-circle seed, a paper pot of scrunched brown paper "soil" and an empty toy watering can.

- Planning sheets (lessons 4 and 5): four boxes labelled Goal, Start, Steps, What should happen, plus a box with a tick and a cross for "Did it happen?"; one large copy for the board.
- Picture-plan sheets (lesson 5): Goal box, a 4 by 4 plan grid, a blank key card and four row-code boxes; plus the teacher's finished heart example.
- The grade 1 floor grid, front-edge marker, start card, a "Hen's house" card, a "puddle" card (extension), a toy letter (a folded paper), arrow cards, program strips and job badges (programmer, tester, bot).
- Table grids (4 by 4 on paper) with a toy or counter, for groups not on the floor grid.
- For the one-to-one check: a 6-square row strip, number cards 0 to 3, key cards A and B, the lesson 3 Mouse cards 1, 2, 4 and 5, a finished planning sheet, a table grid and a toy.
- Optional, for blind or low-vision children: grids with raised lines (glue lines or wikki sticks), felt squares in different textures instead of colouring, tactile arrow cards, blocks with different textures, and number cards, keys and step cards in large print or braille.
- Ear defenders and a quiet spot.

Access and inclusion

- **Numbers stay on the squares.** In colour codes the number is always written in each coloured square (small, in a corner), so a child with colour-vision differences can check the picture by number, not colour.
- **Colouring is not the skill.** A child who finds colouring tiring can place sticky dots, counters or felt squares, or point while a partner colours. Neat colouring is never assessed.
- **Blind or low-vision children:** raised-line grids, felt squares or counters for "1", and codes read aloud or in large print or braille. Pictures are checked by touch.
- **Speaking is optional.** Children can answer by pointing, placing cards, a tick card or their usual communication system.
- **Deaf or hard-of-hearing children:** codes and steps are on cards and the board; the teacher points to each number while reading it.
- **Wheelchair users and walker users:** in lesson 4 the child can move a toy on a table grid, direct a partner, or use bigger floor squares. Being the bot is never required.
- **Left and right:** never test left and right words. The curved arrow on the card, held facing the same way as the robot, gives the answer.

Assessment

Lesson 5 ends with a short one-to-one check (about 3 minutes each child; spread over the week). Record each part as **yes**, **with help** or **not yet**:

1. **Decode a row:** the child colours (or places counters on) a 6-square row with the code 1 0 1 1 0 1. (Answer: squares 1, 3, 4 and 6 coloured.)
2. **Write a row code:** the teacher shows a row with squares 2, 3 and 4 coloured. The child writes or places number cards for its code. (Answer: 0 1 1 1 0 0.)
3. **Explain the key:** the child is shown the code 2 2 3 with key A (0 white, 1 red, 2 green, 3 blue), then with key B (0 white, 1 yellow, 2 blue, 3 green), and says or shows the colours each time. (Answer: green, green, blue; then blue, blue, green.) **Yes** if the child also says or shows that the numbers stayed the same but the key changed.
4. **Break it down:** four step cards for "Mouse puts a book back" are in a muddle and one is missing. The child puts them in order and says or draws the missing step. (Answer in lesson 3.)

5. **Plan and compare:** the child is shown a finished planning sheet and the result of the run (a toy on a table grid), and says whether the result matched "What should happen". (Answer in lesson 5.)

Doing it in their own way counts as **yes**. "Not yet" is normal for some children; codes and planning return in grade 3.

Sources

- Computer Science Teachers Association, CSTA K-12 Computer Science Standards (2017), progression chart: https://csteachers.org/wp-content/uploads/2025/06/2017-csta-k-12-standards-progression-chart.pdf (read 10 November 2026). Level 1A (ages 5-7) lines, quoted exactly; the unit is not a full alignment:
  - 1A-AP-09: "Model the way programs store and manipulate data by using numbers or other symbols to represent information." (lessons 1, 2 and 5)
  - 1A-AP-11: "Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions." (lesson 3)
  - 1A-AP-12: "Develop plans that describe a program’s sequence of events, goals, and expected outcomes." (lessons 4 and 5)
  - 1A-AP-14: "Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops." (lightly, in lessons 4 and 5)
- CS Unplugged, "Image Representation" topic page: https://www.csunplugged.org/en/topics/image-representation/ (read 11 November 2026). "Because computers store data as digits, computer images are ultimately represented inside a computer using just 0's and 1's." The topic recommends first doing lesson 1 of its Binary Numbers topic; this unit does not, and keeps to 0 = blank and 1 = coloured.
- CS Unplugged, "Colour by numbers" (ages 5 to 7, lesson 1): https://www.csunplugged.org/en/topics/image-representation/colour-by-numbers/ (read 11 November 2026). Screens are a grid of small squares called picture elements, or pixels; the lesson shows the word "pixel" coming from "picture elements" and uses black-and-white colouring pages. Lesson 1 uses this idea with its own original pictures. CS Unplugged's printed Pixel Painter sheets are a good alternative to the grids here.

Known gaps and cautions

- Two other agents (Gemini 3.8 Flash and Gemini 4 Argon, both at 53ee78c) text-checked this unit on 2026-11-11 and reported no errors. Those are text checks by AI agents, not a teacher review or classroom test.
- **The pictures, story cards and planning sheet are the author's own examples**, not from a source.
- **Codes here are not binary numbers.** A row such as 0 1 1 0 is a list of on/off squares, not a number. Binary numbers come later, in Argon's grade 6 unit.
- **Lesson 2's colour key is a simplification.** Real screens mix red, green and blue light; this unit does not teach that.
- **Planning sheets need reading support.** Children can draw or use symbol cards in each box.
- **Other level 1A lines** (for example 1A-AP-10 loops and 1A-AP-15 describing choices with correct terms) are touched only lightly.

Lesson 1: Picture codes

Unit overview - Next: Lesson 2: Colour-number keys

Back to the grade 2 year plan

Goal: Children decode rows of 0s and 1s into a picture, learn the word "pixel", and write the code for a picture.

Length: about 30 minutes.

Materials

- A printed picture zoomed in until its squares show (for example an enlarged printout of a small icon).
- A large 6 by 6 picture grid on the board, with rows numbered 1 to 6 and a code box beside each row.
- Picture grids (6 by 6), two per child, and erasable pencils or one dark crayon.
- Code cards for the boat picture (below), one per pair.
- A tree picture already coloured on a 6 by 6 grid, one per pair, for the main activity.
- Optional, for blind or low-vision children: a raised-line grid with felt squares or counters, and codes in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Show a large picture made of squares (an enlarged printout of a small icon). "When a computer shows a picture, the screen is a grid of tiny squares. Each square shows one colour. We call each square a **pixel**." Write "**pi**cture **el**ement" on the board, circle "pi" and "el", and write "pixel" underneath.

"A computer can't keep a picture as crayons. It keeps it as numbers. Today our code is: **0 means leave the square blank, 1 means colour it in.**"

✎ Main activity (17 min)

1. **Teacher models row 1 (3 min).** Write the code 0 0 0 1 0 0 beside row 1 on the board. Point to each number in turn, left to right, and colour the matching square only when the number is 1. (Answer: only square 4 is coloured.)

2. **Pairs decode the mystery picture (8 min).** Give each pair the boat code card. One child reads each number aloud or points to it; the other colours. Swap readers every row. Do not say what the picture is.

Row	Code
1	0 0 0 1 0 0

Row	Code
2	0 0 1 1 0 0
3	0 1 1 1 0 0
4	0 0 0 1 0 0
5	1 1 1 1 1 1
6	0 1 1 1 1 0

(Answer: a sailing boat. Rows 1 to 3 make a triangle sail to the left of the mast, row 4 is the mast, rows 5 and 6 are the boat. Count of coloured squares: 1, 2, 3, 1, 6, 4, so 17 in all.) 3. **Write the code (6 min).** Give each pair the coloured tree picture. Together they write the six row codes in the code boxes. Early finishers swap their codes with another pair and colour a blank grid from the other pair's codes to check.

(Answer for the tree: row 1: 0 0 1 1 0 0; row 2: 0 1 1 1 1 0; row 3: 1 1 1 1 1 1; rows 4, 5 and 6: 0 0 1 1 0 0.)

✓ Discussion questions (with answers) (4 min)

- "What does a 0 tell you? What does a 1 tell you?" (0: leave the square blank. 1: colour it in.)
- "Rows 4, 5 and 6 of the tree have the same code. Why?" (The trunk is the same in each row, so the squares are the same.)
- "If one number in the boat code was wrong, what would happen?" (One square would be wrong in the picture; we could find it by checking each number against each square.)

✓ Closing check (with answers) (4 min)

On the board, draw a single row of six squares and write the code 1 1 0 0 1 1. Children show on their fingers how many squares get coloured, then one child colours them. (Answer: four; squares 1, 2, 5 and 6.)

Then colour squares 3 and 4 of a new row. "Show me the code with number cards, or write it." (Answer: 0 0 1 1 0 0.)

Vocabulary

- **pixel:** one small square of a picture on a screen ("picture element").
- **code:** numbers or symbols that stand for something.
- **row:** a line of squares going across.

Differentiation

- **More support:** use only rows 1 to 4 of the boat, or a 4 by 4 grid; the reader points to each number while the partner colours.
- **More challenge:** children design their own 6 by 6 picture, write its codes and give the codes (not the picture) to a partner.

⚠ Safety

- Usual classroom care with pencils. No screens are needed.

Teacher notes

- Children often read the code right to left, or skip a 0. Ask them to put a finger under each number as they go and move one square across for each number, even when it is 0.
- The idea and the word "pixel" follow CS Unplugged's "Colour by numbers" lesson (see Sources in the unit overview); the boat and tree pictures are the author's own.
- Don't call the rows "binary numbers". At this stage each 0 or 1 is just one square.

Lesson 2: Colour-number keys

Unit overview - Previous: Lesson 1: Picture codes - Next: Lesson 3: Break it down

Back to the grade 2 year plan

Goal: Children use a key to decode a picture made of numbers 0 to 3, change one number and see the picture change, and find out that the same numbers with a different key make a different picture.

Length: about 30 minutes.

Materials

- The large 6 by 6 grid on the board, and key A drawn large beside it.
- Picture grids (6 by 6), two per child.
- Crayons: red, green, blue, and yellow (for key B).
- Key cards A and B, one of each per pair. Each number has its colour word and a coloured dot:
  - **Key A:** 0 = white (leave blank), 1 = red, 2 = green, 3 = blue.
  - **Key B:** 0 = white (leave blank), 1 = yellow, 2 = blue, 3 = green.
- Code cards for the Little Hill picture (below), one per pair.
- Optional, for blind or low-vision children: a raised-line grid, felt squares in different textures for each number, and the key and codes in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Recap lesson 1 with one row on the board: 0 1 1 0 0 1. "Last time 0 meant blank and 1 meant coloured. What if we want more colours?" Show key A. "A **key** tells us what each number means. The numbers are the code; the key tells us how to read it."

Model one square: the number 3 means blue, so the teacher colours the square blue **and writes a small 3 in the corner**. "We always write the number in the square, so anyone can check it, even if colours are hard to tell apart."

✎ Main activity (17 min)

1. **Decode Little Hill with key A (9 min).** Pairs take the code card and key A. One reads, one colours; swap readers each row. Each coloured square keeps its small number.

Row	Code
1	3 0 0 3 3 3
2	3 3 3 3 3 3
3	3 3 1 3 3 3

Row	Code
4	3 3 2 2 3 3
5	3 2 2 2 2 3
6	2 2 2 2 2 2

(Answer with key A: a green hill at the bottom, a blue sky, a small white cloud (two blank squares in row 1) and a red flower on top of the hill (row 3, square 3). Counts: 2 white, 1 red, 12 green, 21 blue; 36 squares in all.) 2. **Change one number (3 min).** "Mayor Hen wants a bigger cloud." On the board, change row 1 to 3 0 0 0 3 3. Pairs find the one square that changes on their picture and leave it blank (they can rub out or cover it with a white sticky square). (Answer: row 1, square 4 becomes white; the cloud is now three squares.) 3. **Same numbers, new key (5 min).** Each pair colours rows 4, 5 and 6 again on a fresh grid, using **key B**. Then they put the two pictures side by side. (Answer with key B: the hill turns blue and the sky around it turns green. The numbers did not change; only the key did.)

✓ Discussion questions (with answers) (4 min)

- "The codes were the same. Why do the pictures look different?" (We used a different key, so the same number meant a different colour.)
- "If I send you only the numbers, what else do you need to make my picture?" (The key.)
- "Mayor Hen changed one number. How many squares changed?" (One.)

✓ Closing check (with answers) (4 min)

On the board write the code 1 3 3 and show key A. Children hold up the crayons for the three squares in order. (Answer: red, blue, blue.) Then show key B for the same code. (Answer: yellow, green, green.)

Vocabulary

- **key:** a list that says what each number or symbol means.
- **code:** numbers or symbols that stand for something.
- **pixel:** one small square of a picture (from lesson 1).

Differentiation

- **More support:** use only rows 4 to 6 of the picture with key A; or a key with just two colours.
- **More challenge:** children make their own key C (for example 1 = brown, 2 = yellow, 3 = black) and colour rows 4 to 6 with it, then explain what the picture now looks like.

⚠ Safety

- Usual classroom care with crayons and scissors (if cutting white sticky squares).

Teacher notes

- Keep the small number in each square. It is how children with colour-vision differences check their work, and it shows that the numbers are what is really stored.
- Real screens make colours by mixing red, green and blue light. That is not taught here; keys A and B are made-up keys for a game.
- The Little Hill picture and both keys are the author's own examples, not from a source.

Lesson 3: Break it down

Unit overview - Previous: Lesson 2: Colour-number keys - Next: Lesson 4: Plan before you run

Back to the grade 2 year plan

Goal: Children break a job into small, precise steps in the right order, and see why a vague step doesn't work for a robot.

Length: about 30 minutes.

Materials

- Teacher props for "Duck plants a seed": a paper seed packet with a paper-circle seed inside, a paper pot filled with scrunched brown paper as "soil", and an empty toy watering can.
- The "Duck plants a seed" picture strip (six pictures, no words), one large copy.
- Step cards for "Mouse puts a book back" (five cards, words and a small picture on each), one set per pair.
- Large soft building blocks in three colours (red, blue, green), one of each per pair; blocks too big to swallow.
- Blank step cards (strips of paper) and pencils.
- A book or folder per pair to stand up as a screen.
- Optional, for blind or low-vision children: blocks with different textures or shapes for each colour, and step cards read aloud or in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

"Today I am a robot. I do **exactly** what you say, and nothing else." Hold up the props and say: "Duck wants to plant a seed. Tell me what to do." Take the first instruction literally. For "Plant the seed!", put the whole closed packet on top of the pot. For "Put it in the pot!", ask "Put what in the pot?" and wait.

"A big job like 'plant a seed' is too big for one step. We need to **break it down** into small steps, in the right order, and each step must be **precise**: it says exactly what to do."

✎ Main activity (17 min)

1. **Duck's steps together (5 min).** Show the six-picture strip. Children say or point to a step for each picture; the teacher writes it on the board and does it, robot-style, with the props:
    1. Open the packet.
    2. Take out one seed.
    3. Make a hole in the soil with one finger.
    4. Put the seed in the hole.
    5. Cover the seed with soil.

6. Water the pot.

(Answer: those six steps, in that order. If children swap steps 4 and 5, the robot covers the hole first and then drops the seed on top; ask "What went wrong?") 2. **Mouse puts a book back (5 min).** Pairs get the five step cards in a muddle and put them in order: 1. Pick up the book. 2. Walk to the shelf. 3. Find the gap where the book goes. 4. Turn the book so its spine faces out. 5. Slide the book into the gap.

(Answer: that order. Steps 3 and 4 can swap and still work; the rest can't. Ask: "Which steps could swap? Which couldn't?") 3. **Tower steps (7 min).** One child is the **planner**, the other the **builder**. The planner secretly decides a tower order (for example red at the bottom, then blue, then green on top) and writes or draws three precise steps on blank cards, such as "Put the red block on the table", "Put the blue block on the red block", "Put the green block on the blue block". The planner sits behind the book screen and passes one card at a time; the builder does exactly what the card says. Then they lift the screen and compare. Swap jobs.

✓ Discussion questions (with answers) (4 min)

- "Why didn't 'Plant the seed!' work for the robot?" (It was too big and not precise; the robot didn't know the small steps.)
- "What happens if the steps are in the wrong order?" (The job can go wrong, like covering the hole before the seed is in.)
- "Was 'Put a block on' a precise step?" (No. Which block, and on what? A precise step names the block and where it goes.)

✓ Closing check (with answers) (4 min)

Read out: "Put the blue block on the table. Put a block on it." Children show a thumbs up if it is precise and thumbs down if not, then say or show how to fix it. (Answer: thumbs down for the second step; for example "Put the red block on the blue block".)

Vocabulary

- **break down (decompose):** split a big job into small steps.
- **precise:** says exactly what to do, with nothing to guess.
- **step:** one small instruction.

Differentiation

- **More support:** the Mouse cards with only four steps (leave out step 3), or a two-block tower.
- **More challenge:** a four-block tower, or a step that uses "repeat" (for example "Repeat 2 times: put a block on top").

⚠ Safety

- Props are paper; no real soil, seeds or water, so there are no allergy or spill risks.

- Blocks are too big to swallow; builders keep towers low (three or four blocks) so nothing falls far.

Teacher notes

- **For the one-to-one check in lesson 5:** give the child the Mouse cards 1, 2, 4 and 5 in a muddle, without card 3. (Answer: order 1, 2, 4, 5, and the missing step is "Find the gap where the book goes", or any step that says where on the shelf the book goes. An order with the turning step anywhere before sliding the book in also counts.)
- Children sometimes think "precise" means "long". A short step can be precise if it names what and where.
- Being the robot is fun because it is silly; keep the literal acting kind, and never use a child's own instructions to make fun of them.
- Duck, Mouse and the steps are the author's own examples.

Lesson 4: Plan before you run

Unit overview - Previous: Lesson 3: Break it down - Next: Lesson 5: Plan, code, swap and check

Back to the grade 2 year plan

Goal: Children fill in a plan (goal, start, steps, what should happen) before running a floor-grid program, then run it and compare what happened with the plan.

Length: about 30 minutes.

Materials

- The 4 by 4 floor grid with the marked front edge, start card, a "Hen's house" card and a toy letter (folded paper), from the grade 1 robot unit.
- Arrow cards (forward, turn left, turn right) and a program strip per group of three.
- Job badges: programmer, tester, bot (one set per group).
- Planning sheets, one per group: boxes for **Goal**, **Start**, **Steps** and **What should happen**, and a box with a tick and a cross for **Did it happen?**
- A large planning sheet on the board.
- Table grids (4 by 4 on paper) with a toy or counter, for groups not on the floor grid.
- Optional, for blind or low-vision children: tactile arrow cards, a raised-edge table grid and planning-sheet boxes with symbol cards.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

"Duck has a letter for Hen. Before the robot moves, programmers make a **plan**." Fill in the large planning sheet with the class:

- **Goal:** take the letter to Hen's house.
- **Start:** column 1, row 1, facing the back of the grid (show the start card and point).
- **Steps:** (left empty for now).
- **What should happen:** "The robot stops on Hen's house holding the letter."

"Writing what should happen **before** we run the program means we can check it afterwards."

✎ Main activity (17 min)

1. **A plan with a bug (5 min).** Put the start card on (column 1, row 1) and Hen's house on (column 3, row 3). Write these steps on the board plan: forward, forward, turn left, forward, forward. A volunteer bot holds the letter and the tester shows each card. Stop the bot as soon as a step would take it off the grid. "Did it happen?" (Answer: no. After forward, forward the bot is on (column 1, row 3). Turn left points it off the left edge, so the next forward leaves the grid.) "Which step is different from our plan?" (Turn left.) Change it to turn right and run again. (Answer: forward, forward, turn right, forward, forward ends on (column 3, row 3), Hen's house. Tick "Did it happen?")

2. **Groups plan and run (10 min).** Groups of three. Start card on (column 4, row 1), bot facing the back; Hen's house on (column 2, row 4). The group fills in Goal, Start and What should happen **first**, then lays out the steps, then runs. The tester ticks or crosses "Did it happen?". If it is a cross, they find the first step that went wrong, fix it and run again. Swap badges after each run.

   (One answer: forward, forward, forward, turn left, forward, forward. Other answers that reach Hen's house also count, for example turn left, forward, forward, turn right, forward, forward, forward.) 3. **Share (2 min).** One group shows its plan and says whether it matched.

✓ Discussion questions (with answers) (4 min)

- "Why do we write 'what should happen' before we run the program?" (So we can check if the program did what we wanted, and spot a bug.)
- "Two groups had different steps but both reached Hen's house. Were both right?" (Yes. Different programs can reach the same goal.)
- "What do we do if 'Did it happen?' is a cross?" (Find the first step that went wrong, fix it and run again.)

✓ Closing check (with answers) (4 min)

On the board: Goal "reach the star". Start (column 2, row 1), facing the back. Steps: forward, forward. What should happen: "stops on (column 2, row 3)". Show the star on (column 2, row 3). Children show tick or cross for "Will it happen?" (Answer: tick. Two forwards from row 1 reach row 3.)

Vocabulary

- **plan:** what we write before we start: the goal, the steps and what should happen.
- **goal:** what the program is for.
- **bug:** a step that makes the program do something we didn't plan.

Differentiation

- **More support:** routes with no turns (Hen's house straight ahead), and a planning sheet with only Goal and What should happen.
- **More challenge:** add a "puddle" card the robot must not step on, for example on (column 4, row 3) in the group route, and plan a route around it. (One answer: forward, turn left, forward, turn right, forward, forward, turn left, forward. It goes round the puddle and ends on (column 2, row 4).)

⚠ Safety

- The bot walks slowly, one square per card, and nobody else stands on the grid during a run.

- Being the bot is never required; a toy on a table grid counts.

Teacher notes

- "Column" and "row" names are for the adult. Children use the start card, the Hen's house card and pointing.
- A common error is turning **and** stepping on a turn card. Remind children that turn cards turn on the spot with no step, as in grade 1.
- Right and left are from the robot's view. If the bot faces the front edge, the cards look reversed to the class; the "stand behind the robot" trick from grade 1 helps.
- Duck, Hen and the routes are the author's own examples; every route was checked with a small script.

Lesson 5: Plan, code, swap and check

Unit overview - Previous: Lesson 4: Plan before you run

Back to the grade 2 year plan

Goal: Pairs plan a small picture and its code, swap codes with another pair, decode, and compare the result with their plan. The one-to-one check for the unit happens this week.

Length: about 30 minutes, plus about 3 minutes per child for the one-to-one check across the week.

Materials

- Small grids (4 by 4), two per child.
- Picture-plan sheets, one per pair: a box for **Goal** ("Our picture is a ..."), a 4 by 4 grid for **What should happen** (the planned picture), a blank key card, and four row-code boxes.
- Crayons: red, green, blue, yellow; erasable pencils.
- Key cards A and B from lesson 2, for pairs who want to use them.
- For the one-to-one check: a 6-square row strip, number cards 0 to 3, key cards A and B, the "Mouse puts a book back" cards 1, 2, 4 and 5, a finished planning sheet, a table grid and a toy.
- Optional, for blind or low-vision children: raised-line small grids, felt squares, and number cards in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Show a finished picture-plan sheet made by the teacher: Goal "a red heart"; key 0 = white, 1 = red; a planned 4 by 4 picture; and the four row codes:

Row	Code
1	1 0 0 1
2	1 1 1 1
3	1 1 1 1
4	0 1 1 0

"We plan the picture **first**, then write the code. Then another pair gets **only the code and the key**. If their picture matches our plan, our code worked."

✎ Main activity (17 min)

1. **Plan and code (8 min).** Each pair writes its goal, makes a key (two or three colours, or uses key A), draws the planned picture on the plan grid, and writes the four row codes. They keep the planned picture hidden (fold the sheet).

2. **Swap and decode (5 min).** Pairs swap only the key and the codes with another pair, who colour a blank small grid, writing the small number in each square.
3. **Compare and fix (4 min).** The decoded grid goes back to the planners, who unfold their plan and compare square by square. If a square doesn't match, together they find out whether the code had a wrong number or the decoder made a slip, and fix it.

✓ Discussion questions (with answers) (4 min)

- "Did the decoded picture match your plan? How did you check?" (Children compare square by square; it matches if every square is the same.)
- "If a square was wrong, how did you find out why?" (Look at the code number for that square: if the number is wrong, the code has a bug; if the number is right, the decoder made a slip.)
- "Why did we draw the plan before writing the code?" (So we know what should happen and can check the result.)

✓ Closing check (with answers) (4 min)

On the board, show the teacher's heart plan and a decoded picture where row 4 is 1 1 1 0. "Does it match?" (Answer: no.) "Which square is different, and what should its number be?" (Answer: row 4, square 1; it should be 0, white.)

The one-to-one check (about 3 minutes each child, across the week)

Use the five parts in the Assessment section of the unit overview. Extra answers for part 5:

- **Plan:** Goal "reach Hen's house". Start (column 1, row 1), facing away from the child. Steps: forward, forward, turn right, forward. What should happen: "stops on Hen's house on (column 2, row 2)".
- **Run:** move the toy one card at a time. (Answer: it stops on (column 2, row 3), one square past Hen's house, so the result did **not** match the plan. A child who also says there is one forward too many before the turn shows extra understanding, but this is not needed for **yes**.)

Record **yes**, **with help** or **not yet** for each part. Don't record which picture or key a child chose.

Vocabulary

- **plan, goal, key, code, pixel, bug** (from lessons 1 to 4).
- **match:** the result is the same as the plan.

Differentiation

- **More support:** two-colour code only (0 and 1), or a 3 by 3 grid; the teacher writes the codes as the child points.
- **More challenge:** a 6 by 6 picture, or a picture that uses a key with four colours; or write the code for a row with a repeat, such as "1 1 1 1" written as "four 1s".

⚠ Safety

- Usual classroom care with pencils and crayons.

Teacher notes

- Children often blame the decoder first. Model checking the code number before deciding who made the slip, and keep it kind: a bug is normal, and finding it is the skill.
- Planned pictures should be things, patterns or shapes, not people in the class.
- The heart picture and the check examples are the author's own; the route was checked with a small script.

Grade 2 Computing: Same Data, Different Pictures (5 lessons, about 3 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. Every count, total and comparison in the answer keys was checked with a small computer script, but not with children. No device is needed; if your class does use devices, check logins, accounts and online spaces against your school's rules.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 3. Builds on grade 1 Picture charts and keeping information private, grade 2 term 2 Codes and plans, and the bar graph in grade 2 mathematics term 3 Measuring, time, money and shapes (lesson 5).

This unit is "unplugged": cards, squared paper, sticky notes and pretend login cards. No device is needed.

Big idea

Computers keep lots of **data** (facts such as counts and answers). The same data can be shown in different ways: a tally, a table, a picture graph or a bar graph. Each way is good for a different job, and they must all tell the same story. A chart can help us spot a **pattern** and make a **prediction**, which is a careful guess, not a promise. When we work with others online we are kind, helpful and truthful, and we keep our login private and log off when we finish.

Outcomes

By the end of the unit, most children can:

1. Turn a set of picture vote cards (up to four kinds, up to 20 cards) into a tally chart in bundles of five, and then into a table of numbers.
2. Show the same data as a picture graph and as a bar graph with a numbered scale, and read the bar graph to say how many, which is most and fewest, how many altogether and how many more.
3. Say which way of showing the data helps most with a given question, and spot and fix a chart that is not fair (a bar that does not start on the line, squares of different sizes, or missing numbers or labels).
4. Spot a pattern in a bar graph and use it to make a prediction, saying that it is a guess, not a promise.
5. Choose a kind, helpful and true comment for someone's work on a pretend class message board, and say what to do if a message is unkind or asks for private information (do not reply; tell a trusted grown-up).
6. Say that login information is kept private (not shared even with friends), and put the steps for logging off a shared device in order.

Prior knowledge

- From grade 1 computing term 3: sorting picture cards, picture charts with one picture per box, tally marks, a pattern and prediction, what is private, picture passwords and logging off. This unit does **not** re-teach those; it adds a table, a numbered scale, choosing a picture for a question, unfair charts, kind comments online and shared devices.
- From grade 2 mathematics term 3 (lesson 5): a bar graph with up to four categories, one square for each item. From grade 2 science term 3 (lesson 2): reading a class bar graph.
- From grade 2 computing term 2: numbers and symbols can stand for information; a key says what they mean.
- Counting to 20 and reading numbers to 20.

Lessons

Lesson	Title	Time	Core idea
1	From vote cards to a table	30 min	Tally the vote cards in fives, then write the totals in a table.
2	Picture graph and bar graph	30 min	The same numbers as a picture graph and a bar graph with a scale; answering questions.
3	Patterns, predictions and unfair charts	30 min	The umbrella-stand bar graph shows a pattern; three charts that are not fair.
4	Kind and careful online	30 min	A paper "class message board": kind, helpful, true comments; what to do about unkind or nosy messages.
5	Shared devices and logging off	30 min	Duck's story; keeping login cards private; logging off in order; one-to-one check.

The data in this unit

All the data here is made up for this unit (not from a source).

- **Story-time vote (lessons 1, 2, 4 and the check).** The 20 children in Little Hill School's class each chose one book for story time, with no names on the cards: Duck's Picnic 6, Bear's Picnic 4, Goat and the Kite 7, Hen's Hat 3 (20 altogether). Each vote card shows the book's animal and the first letter of its title.
- **Umbrella stand (lesson 3).** The number of umbrellas in the Little Hill School umbrella stand at 9 o'clock each school day for two weeks, with a weather symbol under each day: week 1: Monday sunny 2, Tuesday rainy 9, Wednesday sunny 1, Thursday rainy 8, Friday cloudy 4; week 2: Monday rainy 9, Tuesday sunny 2, Wednesday cloudy 4, Thursday sunny 1, Friday rainy 10.
- **Bar graphs** stand up from a **start line**, use squares all the same size (2 cm squared paper), have a label under each bar and a **scale** of numbers up the left side (0 at the start line, then 1, 2, 3 and so on, one number for each square).

Materials

Whole class unless noted.

- Story-time vote cards (20 picture cards, the counts above), one set per pair, plus one large set for the board.

- Tally sheets with four rows (one per book, with the animal picture), one per pair; table sheets with two columns (Book, Number), one per pair; large copies of both for the board.
- Squared paper (2 cm squares) with a start line and a 0 to 10 scale printed up the left side, two sheets per child; small picture stickers or drawn pictures for the picture graph; card squares and glue for raised bars.
- Crayons, erasable pencils and a ruler per pair; small whiteboards and pens (or paper); craft sticks for tallies; counters (about 10 per pair).
- The umbrella-stand bar graph (lesson 3), one per pair and one large copy, with weather symbols under each bar.
- Three "Is it fair?" chart cards (lesson 3), one set per pair, and an "a lot" card and an "a few" card per pair.
- Question cards for lessons 2 and 3 (printed in the lesson answer keys).
- Lesson 4: a large paper "class message board" (a sheet of card with a title box), sticky notes, comment cards (printed in lesson 4), sentence-starter strips and picture symbols, and the "Stop, think, tell" poster.
- Lesson 5: a pretend tablet made of card (a screen with a "Log in" box, a "Log off" button and an "Are you sure?" box), Duck's story cards, a sheet of ten small pictures per child and blank small cards, pretend picture-login cards (one per child, in an envelope with the child's name on the outside only), and log-off step cards.
- For the one-to-one check: a bag of 8 counters (or 8 vote cards), a pencil and paper for tallies, the check bar graph, two small tables, the umbrella-stand bar graph, and comment and login choice cards (printed in lesson 5).
- Optional, for blind or low-vision children: tallies made with craft sticks laid on felt, raised bar graphs with card squares and a raised start line, vote cards with a different texture for each book, and cards and tables in large print or braille.
- Ear defenders and a quiet spot.

⚠ Safety and access

- **No names on data.** Votes are anonymous; nobody has to say which book they chose. The umbrella data is made up, and no child's belongings are counted.
- **Private stays private.** Children never say, write or show a real password, and are never asked for one. The login cards in lesson 5 are pretend, made in class, and go home or in the bin at the end.
- **Online feelings are handled gently.** Lesson 4 uses made-up messages about made-up characters. Children are never asked whether anyone has been unkind to them online. If a child tells you something worrying, follow your school's safeguarding procedure.
- **Colour is never the only clue.** Bars carry labels and the animal picture, not only a colour. The weather symbols use shapes (sun, cloud, raindrops) and the word.
- **Speaking is optional.** Children can answer by pointing, placing cards or counters, a tick card or their usual communication system.
- **Blind or low-vision children:** raised bars, craft-stick tallies and textured vote cards; the child counts squares or sticks by touch and reads the scale by feeling the raised start line and counting up.
- **Deaf or hard-of-hearing children:** every question is on a card or the board; the teacher points while reading.
- **Fine motor:** a child can stick card squares, place counters or point while a partner draws. Neat drawing is never assessed.

Assessment

Lesson 5 ends with a short one-to-one check (about 3 to 4 minutes each child; spread over the week). Record each part as **yes**, **with help** or **not yet**:

1. **Tally** (outcome 1): the child counts 8 counters and makes a tally. (Answer: one bundle of five and three more lines.)
2. **Read a bar graph with a scale** (outcome 2): the check bar graph shows the story-time vote (Duck's Picnic 6, Bear's Picnic 4, Goat and the Kite 7, Hen's Hat 3). "Which book got the most votes?" (Goat and the Kite.) "How many more votes did Goat and the Kite get than Bear's Picnic?" (3.)
3. **Same data** (outcome 2): two small tables are shown next to the check bar graph. Table 1: 6, 4, 7, 3. Table 2: 6, 7, 4, 3. "Which table tells the same story as the bar graph?" (Table 1.)
4. **Which picture, and is it fair?** (outcome 3): "I want to compare the books quickly. Which helps more, the table or the bar graph?" (The bar graph; a child who says the table is good for finding an exact number also shows the idea.) Then show "Is it fair?" chart card 1 (lesson 3). "What is wrong?" (Hen's bar does not start on the line.)
5. **Pattern** (outcome 4): on the umbrella-stand bar graph: "The forecast says next Monday will be rainy. Will there be a lot of umbrellas or a few?" (A lot; yes if the child points to the rainy days or says rainy days have the most. A child who adds "but it's a guess" shows the whole idea.)
6. **Online and logins** (outcomes 5 and 6): comment choice card A and login choice card B (printed in lesson 5). (Answers in lesson 5.)

Doing it in their own way counts as **yes**. "Not yet" is normal for some children; data and online safety return in grade 3.

Sources

- Computer Science Teachers Association, CSTA K-12 Computer Science Standards (2017), progression chart: https://csteachers.org/wp-content/uploads/2025/06/2017-csta-k-12-standards-progression-chart.pdf (read 10 November 2026). Level 1A (ages 5-7) lines, quoted exactly; the unit is not a full alignment:
    - 1A-DA-06: "Collect and present the same data in various visual formats." (lessons 1, 2 and 3)
    - 1A-DA-07: "Identify and describe patterns in data visualizations, such as charts or graphs, to make predictions." (lesson 3)
    - 1A-IC-17: "Work respectfully and responsibly with others online." (lesson 4, on paper)
    - 1A-IC-18: "Keep login information private, and log off of devices appropriately." (lesson 5, on a pretend device)
- Common Core State Standards for Mathematics, grade 2, Measurement and Data, 2.MD.D.10: "Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph." https://web.archive.org/web/2025/https://www.thecorestandards.org/Math/Content/2/MD/ (read 10 November 2026; a footnote marker after "problems" is left out). This is why every graph here has up to four bars and one square for each item.

Known gaps and cautions

- Three other agents (Gemini 3.8 Flash, Gemini 4 Carbon and Gemini 4 Argon, all at 11a3d2a) text-checked this unit on 2026-11-11 and reported no errors; Carbon suggested one optional wording fix in lesson 1, made in 6897a8c and re-checked by Argon. Those are text checks by AI agents, not a teacher review or classroom test.
- **The data, stories, comment cards, chart cards and pretend tablet are the author's own examples**, not from a source.
- **CSTA 1A-DA-06, 1A-DA-07 and 1A-IC-18 were also used in the grade 1 term 3 unit.** This unit repeats them a step harder (a table, a numbered scale, four categories, unfair charts, shared devices); it has not been checked against any published grade 2 computing scheme.
- **"Online" is on paper.** Lesson 4's message board and lesson 5's tablet are pretend. Children who use real devices at school will need the school's own rules taught as well.
- **Lesson 3's umbrella pattern is a comparison, not proof** that rain causes umbrellas; the lesson says so in child-friendly words, and treats predictions as guesses.
- **Mathematics overlap.** Grade 2 mathematics term 3 lesson 5 also makes a bar graph. This unit adds the numbered scale, the table and the "same data" idea; if the classes are close together, lesson 2 can be shortened.
- **Other level 1A lines** (for example 1A-DA-05 storing and finding data on a device, and 1A-NI-04 strong passwords) are not taught here.

Lesson 1: From vote cards to a table

Unit overview - Next: Lesson 2: Picture graph and bar graph

Back to the grade 2 year plan

Goal: Children sort 20 picture vote cards, make a tally chart in bundles of five, and write the totals in a table.

Length: about 30 minutes.

Materials

- Story-time vote cards (20 picture cards: Duck's Picnic 6, Bear's Picnic 4, Goat and the Kite 7, Hen's Hat 3), one set per pair, plus one large set for the board.
- Tally sheets with four rows (one per book, with the animal picture), one per pair, and a large copy for the board.
- Table sheets with two columns (Book, Number), one per pair, and a large copy for the board.
- Erasable pencils, and small whiteboards and pens (or paper) for the closing check.
- Craft sticks (about 10 per child who wants them) for laying tallies.
- Optional, for blind or low-vision children: craft sticks and a felt mat for tallies, textured vote cards, and tally and table sheets in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

"Little Hill School's class voted for a story-time book. Each child put one card in a box, with no names. Here are the cards. Computers keep facts like these. Facts we collect are called **data**."

Hold up the four books' cards. "Lots of cards in a muddle are hard to read. This week we will show the **same data** in different ways, and see what each way is good for."

✎ Main activity (17 min)

1. **Teacher models a tally (4 min).** Turn over the first eight board cards one at a time. For each card, draw one line in that book's row. When a row gets its fifth mark, draw it across the other four: "Five makes a bundle. Bundles are quick to count." (Answer for the first eight board cards, laid in this order: Goat, Duck, Goat, Hen, Goat, Bear, Goat, Goat: Goat has one bundle of five; Duck, Hen and Bear have one line each.)

2. **Pairs tally all 20 cards (8 min).** Each pair shuffles its set. One child turns over a card and says or shows the book; the other draws the line. Swap jobs after 10 cards. Then pairs count each row by bundles and lines.

(Answer: Duck's Picnic: one bundle and 1 line, 6. Bear's Picnic: 4 lines, 4. Goat and the Kite: one bundle and 2 lines, 7. Hen's Hat: 3 lines, 3.) 3. **Tally to table (5 min).** Pairs write each total in the Number column of the table. Then they add a last row, "Altogether", and work it out. (Answer: 6, 4, 7, 3; altogether 20.) Early finishers check: "Do we have 20 cards? Does the table say 20?"

✓ Discussion questions (with answers) (4 min)

- "The cards, the tally and the table all show the same data. How do we know?" (They all say Duck's Picnic 6, Bear's Picnic 4, Goat and the Kite 7, Hen's Hat 3, and 20 altogether.)
- "Which is quickest for finding how many voted for Hen's Hat?" (The table: the number is written there. In the tally you count the lines; with the cards you count them all.)
- "Why do we draw a bundle of five?" (Bundles are quicker to count than lots of single lines.)

✓ Closing check (with answers) (4 min)

Show a tally row on the board: one bundle and 4 lines. "Show me how many with your fingers or number cards." (Answer: 9.)

Then: "Draw a tally for 7." Children draw on whiteboards or lay craft sticks. (Answer: one bundle of five and 2 lines.)

Vocabulary

- **data:** facts we collect, such as counts or answers.
- **tally:** a line for each thing counted, in bundles of five.
- **table:** rows and columns with words and numbers.
- **altogether:** all of them added up.

Differentiation

- **More support:** use only three books (leave out Hen's Hat, 17 cards) and give tally sheets with two rows of five dotted boxes for each book, one line in each box (Goat and the Kite needs 7 boxes).
- **More challenge:** "How many more voted for Goat and the Kite than for Duck's Picnic?" (1.) Then pairs make up a fifth book, give it some votes, and change the table and the Altogether row.

⚠ Safety

- Usual classroom care with pencils. No screens are needed. Nobody says which book they would choose; the votes are Little Hill's.

Teacher notes

- Children sometimes draw the fifth line as a separate line, or draw it across after six. Count aloud "one, two, three, four, and five goes across".
- Some children count a bundle as 4, because they count the four upright lines. Ask them to touch every line, including the one across.
- Children who tallied with craft sticks can leave their tally on the mat for lesson 2, or use the board table.
- The vote cards and books are the author's own examples; "Duck's Picnic", "Bear's Picnic" and "Goat and the Kite" are stories from earlier units, and "Hen's Hat" is just a title on a card.

Lesson 2: Picture graph and bar graph

Unit overview - Previous: Lesson 1: From vote cards to a table - Next: Lesson 3: Patterns, predictions and unfair charts

Back to the grade 2 year plan

Goal: Children show the story-time votes as a picture graph and as a bar graph with a numbered scale, check that both tell the same story as the table, and answer questions from the bar graph.

Length: about 30 minutes.

Materials

- The class table from lesson 1 (Duck's Picnic 6, Bear's Picnic 4, Goat and the Kite 7, Hen's Hat 3) on the board, and each pair's own table.
- Squared paper (2 cm squares) with a start line and a 0 to 10 scale printed up the left side, two sheets per child.
- Small picture stickers or drawn pictures for the picture graph.
- Card squares and glue for raised bars (for any child who wants them).
- Crayons, erasable pencils and a ruler per pair.
- Question cards (below), one set per pair.
- Optional, for blind or low-vision children: a raised start line, card squares in a different texture for each bar, and the scale and question cards in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Point to the table. "Yesterday we made a table. Today we'll draw the **same data** as pictures." Show a large sheet with a start line. "Every bar starts on this **start line**. The squares are all the same size. And up the side is a **scale**: the numbers tell us how tall a bar is without counting every square."

Model one bar: Duck's Picnic, 6 squares coloured up from the start line. Run a finger from the top of the bar across to the scale. "The top of the bar is level with 6. Duck's Picnic got 6 votes."

✎ Main activity (17 min)

1. **Picture graph (5 min).** On the first sheet, each child sticks or draws one picture in each square, starting at the start line, one column for each book. They write the book's animal or first letter under each column. (Answer: columns of 6, 4, 7 and 3 pictures.)
2. **Bar graph (6 min).** On the second sheet, children colour (or stick card squares for) one bar per book, starting at the start line, then write the label under each bar. They check the top of each bar against the scale. (Answer: bar tops level with 6, 4, 7 and 3.)

3. **Question cards (6 min).** Pairs answer from their bar graph, using the scale where they can:

Card	Question	Answer
1	Which book got the most votes?	Goat and the Kite (7)
2	Which book got the fewest votes?	Hen's Hat (3)
3	How many votes did Bear's Picnic get?	4
4	How many more votes did Goat and the Kite get than Bear's Picnic?	3 (7 take away 4)
5	How many votes did Duck's Picnic and Bear's Picnic get together?	10 (6 and 4)
6	How many children voted altogether?	20 (6 + 4 + 7 + 3)

Early finishers try card 7: "If 2 more children voted for Hen's Hat, which books would it be level with?" (None: Hen's Hat would have 5, and no other book has 5. It would be one more than Bear's Picnic and one fewer than Duck's Picnic.)

✓ Discussion questions (with answers) (4 min)

- "Do the table, the picture graph and the bar graph tell the same story?" (Yes: 6, 4, 7 and 3 in each.)
- "Which helps you see the biggest and smallest fastest?" (The picture graph or the bar graph: you can see the tallest and shortest without reading numbers.)
- "How does the scale help?" (You read the number level with the top of the bar instead of counting every square.)
- "Why must every bar start on the start line?" (So the bars can be compared fairly; a bar that starts higher would look bigger than it is.)

✓ Closing check (with answers) (4 min)

Draw a bar on the board, 5 squares tall, next to the scale. "How many does this bar show? Show me." (Answer: 5.)

Then: "Goat and the Kite has 7. Hen's Hat has 3. Show me how many more Goat and the Kite has." (Answer: 4.)

Vocabulary

- **picture graph:** a chart with one picture for each thing counted.
- **bar graph:** a chart where the height of each bar shows how many.
- **scale:** the numbers up the side of a bar graph.
- **start line:** the line every bar starts from.

Differentiation

- **More support:** stick card squares and count them; use cards 1 to 3 only.

- **More challenge:** draw the same bar graph sideways, with the bars going across from a start line on the left and the scale along the bottom. Does it tell the same story? (Yes.)

⚠ Safety

- Usual classroom care with glue and scissors (if cutting card squares, use round-ended scissors). No screens are needed.

Teacher notes

- Children often read the scale number just above or below the top of the bar, or count the start line as 1. Model running a ruler from the top edge of the bar across to the scale.
- Some children colour bars different widths or leave gaps inside a bar. Point out that each square is one vote, so every square must be the same size and next to the last one.
- Grade 2 mathematics term 3 lesson 5 made bar graphs by counting squares. The new step here is reading the numbered scale and comparing the bar graph with the table and picture graph.

Lesson 3: Patterns, predictions and unfair charts

Unit overview - Previous: Lesson 2: Picture graph and bar graph - Next: Lesson 4: Kind and careful online

Back to the grade 2 year plan

Goal: Children read a bar graph with ten bars, spot a pattern, make a prediction and say it is a guess; then they find and fix three charts that are not fair.

Length: about 30 minutes.

Materials

- The umbrella-stand bar graph, one per pair and one large copy for the board: ten bars (two weeks of school days), a 0 to 10 scale, and a weather symbol and word under each bar (week 1: Monday sunny 2, Tuesday rainy 9, Wednesday sunny 1, Thursday rainy 8, Friday cloudy 4; week 2: Monday rainy 9, Tuesday sunny 2, Wednesday cloudy 4, Thursday sunny 1, Friday rainy 10).
- Three "Is it fair?" chart cards (below), one set per pair, and large copies for the board.
- The class table from lesson 1 (Duck's Picnic 6, Bear's Picnic 4, Goat and the Kite 7, Hen's Hat 3).
- Squared paper with a start line and scale, one sheet per pair, and crayons, pencils and a ruler.
- Counters (about 10 per pair) and an "a lot" card and an "a few" card per pair.
- Optional, for blind or low-vision children: raised versions of the umbrella graph and the chart cards (card squares, raised start line, tactile weather symbols), and everything in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Show the large umbrella-stand bar graph. "Every school day at 9 o'clock, Mouse counted the umbrellas in the Little Hill School umbrella stand, for two weeks. Under each bar is the weather that morning." Read the symbols together: sun, cloud, raindrops.

"Look at the tall bars. Look at the short bars. What do you notice?"

✎ Main activity (17 min)

1. **Find the pattern (6 min).** Pairs put a counter on every rainy day, then every sunny day, then every cloudy day, and read each bar with the scale.

   (Answer: rainy days: 9, 8, 9 and 10, the tallest bars. Sunny days: 2, 1, 2 and 1, the shortest bars. Cloudy days: 4 and 4, in the middle. The pattern: on rainy days there are

lots of umbrellas; on sunny days only a few.) 2. **Make a prediction (3 min).** "The forecast says next Monday will be rainy. Will there be a lot of umbrellas or a few?" Pairs show "a lot" or "a few" with a card, then say why. (Answer: a lot, probably about 8 to 10, because every rainy day so far had 8 to 10.) Then: "Is it certain?" (No. It is a guess from the pattern. Some children might forget their umbrella, or the rain might stop early.) 3. **Is it fair? (8 min).** Give each pair the three chart cards. Each one shows the story-time votes from lesson 1, but something is wrong. Pairs compare each card with the table, say what is wrong, and draw one fixed chart on squared paper.

Card	What it shows	What is wrong (answer)
1	Hen's Hat's bar is 3 squares tall but starts 4 squares above the start line, so its top is level with 7, the same as Goat and the Kite.	The bar does not start on the start line. Hen's Hat looks as big as Goat and the Kite, but it has 3, not 7.
2	Goat and the Kite's bar has 7 squares, but they are half the height of the others, so it looks shorter than Duck's Picnic's 6.	The squares are not all the same size. Goat and the Kite got the most votes but looks smaller.
3	Four bars of the right heights, but no scale numbers and no labels under the bars.	You can't tell which bar is which book, or how many each has without counting. It needs labels and a scale.

✓ Discussion questions (with answers) (4 min)

- "What pattern did you find in the umbrella graph?" (Rainy days have lots of umbrellas; sunny days have a few.)
- "Does the graph prove that rain makes people bring umbrellas?" (Not by itself: it shows they happen together on these ten days. But it helps us make a good guess.)
- "Why might someone make an unfair chart by mistake?" (They might start a bar in the wrong place, draw squares different sizes, or forget the labels.)
- "How can we check a chart is fair?" (Every bar starts on the start line, the squares are all the same size, every bar has a label, and there is a scale.)

✓ Closing check (with answers) (4 min)

On the umbrella graph, point to week 2 Thursday. "What was the weather, and how many umbrellas?" (Answer: sunny, 1.)

Then show chart card 1 again. "Thumbs up if it is fair, thumbs down if not." (Answer: thumbs down; Hen's bar does not start on the line.)

Vocabulary

- **pattern:** something that happens again and again.
- **prediction:** a careful guess about what will happen, using a pattern.
- **fair (chart):** a chart that shows the numbers truly, so the bars can be compared.

Differentiation

- **More support:** use only week 1 (five bars) and only chart card 1.

- **More challenge:** "Mouse counted for a third week. Which days do you think will be tallest?" (Children cannot know without the weather; the best answer is "the rainy days, whichever they are".) Then make a fourth unfair chart for a partner to fix.

⚠ Safety

- Usual classroom care with pencils. No screens are needed. The umbrella data is made up; no child's belongings are counted.

Teacher notes

- Some children think a prediction must be right. Say often: "A prediction is a careful guess. If it turns out wrong, we learn something."
- Some children read week 2 Friday (10) as off the scale. Show that the scale goes up to 10.
- Card 1 is the hardest; children often say "Hen's Hat has 7". Ask them to count the squares in the bar, not where the top is.
- The umbrella data and chart cards are the author's own examples, not from a source.

Lesson 4: Kind and careful online

Unit overview - Previous: Lesson 3: Patterns, predictions and unfair charts - Next: Lesson 5: Shared devices and logging off

Back to the grade 2 year plan

Goal: Children practise kind, helpful and true comments on a pretend class message board, and say what to do if a message is unkind or asks for private information.

Length: about 30 minutes.

Materials

- A large paper "class message board": a sheet of card with the title "Little Hill class board" in a box at the top, and the children's bar graphs from lesson 2 pinned around it (only if each child agrees; a child can pin a copy of the board bar graph instead).
- Sticky notes, several per child, and pencils.
- Printed sentence-starter strips ("I like how…", "Your bars…", "Could you add…?") and picture symbols.
- Comment cards (below), one set per pair, and large copies for the board.
- The "Stop, think, tell" poster: **Stop** (don't reply straight away), **Think** (is it kind? is it private?), **Tell** (a trusted grown-up).
- Optional, for blind or low-vision children: comment cards in large print or braille, read aloud; sticky notes with a raised dot in the corner so the child knows which way up.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

"Lots of people use computers to work together: they share pictures and leave messages for each other. That's being **online**. Today our class board is a pretend online board, made of paper."

"Goat put a bar graph on the Little Hill class board. Three friends left messages." Read the first three comment cards. "Which one would help Goat? Which one might make Goat sad?"

✎ Main activity (17 min)

1. **Sort the comments (7 min).** Pairs sort the comment cards into two piles: "Kind and helpful" and "Not OK". Then they pick one "Not OK" card and say what to do.

Card	Message (for Goat's bar graph)	Answer
1	"Your bars all start on the line. Well done!"	Kind and helpful: it is true and says what is good.
2	"Your graph is rubbish."	Not OK: unkind, and it doesn't help. Don't reply; tell a grown-up if it upsets you.

Card	Message (for Goat's bar graph)	Answer
3	"I think Hen's Hat needs a label."	Kind and helpful: it is polite and helps Goat fix the chart.
4	"LOL" with a laughing face, posted by someone Goat doesn't know.	Not OK: it might be laughing at Goat, and we don't know who it is. Stop, think, tell a grown-up.
5	"Nice graph! What's your password so I can fix it for you?"	Not OK: it asks for private information. Never share a password; tell a grown-up.
6	"I counted your Duck bar. I think it has 7 squares, not 6. Can you check?"	Kind and helpful: it is polite, and asks Goat to check instead of saying "wrong".
7	"Where do you live? I want to send you a better graph."	Not OK: it asks where Goat lives, which is private. Stop, think, tell a grown-up.

(Kind and helpful: cards 1, 3 and 6. Not OK: cards 2, 4, 5 and 7.) 2. **Write a comment (7 min).** Each child chooses one bar graph on the class board (not their own) and writes or draws a sticky-note comment that is **kind, helpful and true**: one thing that is good, and, if they like, one polite idea to make it better. Children who prefer can choose a printed starter: "I like how...", "Your bars...", "Could you add...?" 3. **Read your board (3 min).** Children read the comments on their own graph (or have them read aloud). "Did any comment help you?"

✓ Discussion questions (with answers) (4 min)

- "What makes a comment kind and helpful?" (It is polite, true, and says what is good or how to make it better.)
- "What should you do if a message is unkind?" (Don't reply; tell a trusted grown-up.)
- "What should you do if a message asks for a password or where you live?" (Don't answer; stop, think and tell a trusted grown-up.)
- "Online messages can stay for a long time and lots of people can see them. How does that change what we write?" (We think before we post and only write things we'd be happy for anyone to read.)

✓ Closing check (with answers) (4 min)

Read two new messages. Children show thumbs up for "kind and helpful" and thumbs down for "not OK".

- "Your scale numbers are neat. Could you add a label under the last bar?" (Answer: thumbs up.)
- "Tell me your login and I'll give you a sticker." (Answer: thumbs down; it asks for private information.)

Vocabulary

- **online:** using computers to share and talk with other people.
- **comment:** a message about someone's work.
- **respectful:** kind and polite, treating others well.

- **private:** something we keep to ourselves and trusted grown-ups.

Differentiation

- **More support:** use cards 1, 2, 3 and 5 only; offer sentence starters and picture symbols for the sticky notes.
- **More challenge:** rewrite card 2 so it is kind and helpful. (For example: "Your bars are colourful. Could you make all the squares the same size?")

⚠ Safety

- The messages are about made-up characters. Children are never asked whether anyone has been unkind to them online, or what apps or games they use.
- A child can choose not to pin their own graph. Remove any sticky note that is unkind before children read their boards.
- If a child tells you something worrying, follow your school's safeguarding procedure.

Teacher notes

- Some children think a helpful comment must never suggest a change. Show that card 6 is kind and still points out something to check.
- Some children say "I'd reply and tell them off". Praise the wish to stand up for themselves, then explain that telling a grown-up is safer and works better.
- "Stop, think, tell" is the author's own wording, not from a source. If your school uses a different phrase for online safety, use that instead.
- The comment cards are the author's own examples, not from a source.

Lesson 5: Shared devices and logging off

Unit overview - Previous: Lesson 4: Kind and careful online

Back to the grade 2 year plan

Goal: Children say why login information stays private, even from friends, and put the steps for logging off a shared device in order. The one-to-one check takes place this week.

Length: about 30 minutes, plus the one-to-one check (about 3 to 4 minutes each child, spread over the week).

Materials

- A pretend tablet made of card: a screen with a "Log in" box, a "Log off" button and an "Are you sure?" box with "Yes" and "No".
- Duck's story cards (below), large, for the board.
- A sheet of ten small pictures per child, blank small cards, and crayons or pencils.
- Pretend picture-login cards: one per child, made in this lesson (three small pictures chosen from a sheet of ten, in a row), each in an envelope with the child's name on the outside only.
- Log-off step cards (below), one set per pair.
- For the one-to-one check: a bag of 8 counters (or 8 vote cards), a pencil and paper, the check bar graph (the story-time votes), two small tables (table 1: 6, 4, 7, 3; table 2: 6, 7, 4, 3), "Is it fair?" chart card 1 (lesson 3), the umbrella-stand bar graph (lesson 3), and choice cards A and B (below).
- Optional, for blind or low-vision children: a tablet with a raised "Log off" button, tactile picture choices for the login card, and story and step cards in large print or braille.
- Ear defenders and a quiet spot.

Steps

✎ Opening (5 min)

Tell Duck's story with the cards.

1. Duck uses the class tablet to make a bar graph, and logs in with Duck's picture login.
2. The bell rings. Duck runs out to play and leaves the tablet on, still logged in.
3. Crab picks up the tablet. It still says "Duck". Crab posts "I don't like Goat's graph" on the class board. Everyone thinks Duck wrote it.
4. Goat is sad. Duck is upset: "I didn't write that!"

"What went wrong? How could Duck have stopped it?" (Duck didn't log off, so the tablet still said Duck. Crab should not have posted as Duck; it wasn't fair or kind.)

✎ Main activity (17 min)

1. **Make a pretend login card (5 min).** Each child picks three pictures from the sheet and draws them in a row on a small card. "This is a **pretend** login. A real one would be

kept just as secret." The card goes straight into the envelope. "Who can see it?" (Only me and a trusted grown-up, such as my teacher or family.)

2. **Friends and logins (4 min).** Ask, with thumbs up or down:
    - "Your best friend asks for your login so they can play your game. Do you share it?" (Thumbs down: logins stay private even from friends. A friend could post as you by mistake, or share it with someone else.)
    - "Your teacher helps you log in when you forget." (Thumbs up: a trusted grown-up can help.)
    - "A message on the screen says 'Type your password to win a prize'." (Thumbs down: stop, think, tell a grown-up.)

3. **Log-off steps (8 min).** Pairs put the log-off step cards in order, then act them out on the card tablet: one child is the user, the other the checker who watches each step.

Card	Step (cards are given in a muddle)
A	Save your work.
B	Press "Log off".
C	When it asks "Are you sure?", press "Yes".
D	Check the screen says "Log in" again, not your name.
E	Put the tablet back where it lives.

(Answer: A, B, C, D, E. A, B and C must be in that order; a child who swaps D and E but checks the screen before walking away also shows the idea.)

"What if you forget and see a friend's name on a shared tablet?" (Don't use it as them; log them off or tell a grown-up.)

✓ Discussion questions (with answers) (4 min)

- "Why do we keep our login private, even from friends?" (So nobody else can post or change things as us.)
- "Why do we log off a shared tablet?" (So the next person can't use it as us.)
- "Who can help if we forget our login?" (A trusted grown-up, such as the teacher.)
- "What would have helped in Duck's story?" (Duck logging off; Crab not posting as Duck; Crab telling a grown-up the tablet was still logged in.)

✓ Closing check (with answers) (4 min)

Hold up step card B ("Press 'Log off'"). "Which card comes just before this one?" (Answer: A, save your work.) "Which comes just after?" (Answer: C, press "Yes".)

Then collect the login envelopes. They go home, or into the bin, today; nobody opens anyone else's.

The one-to-one check

Use the six parts in the unit overview (see Assessment there). The cards for part 6:

- **Choice card A (online):** "Goat's graph is on the class board. Which message would you leave?" Pictures with words: (1) "Your graph is silly." (2) "I like your scale. Could you add a label?" (3) "What's your password?" (Answer: 2. **Yes** if the child also says that 3 asks for private information, or that they would tell a grown-up about 1 or 3.)
- **Choice card B (logins):** "You've finished on the class tablet. What do you do?" Pictures with words: (1) Walk away. (2) Save, press "Log off", press "Yes", check it says "Log in". (3) Give your login to a friend so they can carry on. (Answer: 2.)

Vocabulary

- **login:** the name and secret (such as a password or picture code) that tells a computer who you are.
- **log off:** tell the computer you have finished, so nobody else can use it as you.
- **shared device:** a computer or tablet that lots of people use.
- **trusted grown-up:** an adult you know who keeps you safe, like your teacher or family.

Differentiation

- **More support:** use step cards A, B and C only; act out the steps with an adult first.
- **More challenge:** "Write one rule for the class tablet that would have stopped Duck's problem." (For example: "Always log off before you go.") Then put it on the class board.

⚠ Safety

- The login cards are pretend and are never used for anything. Children never say, write or show a real password, and are never asked for one.
- If your class uses real devices, teach your school's own login and log-off steps; they may differ from the cards here.
- Crab's message is about a made-up character. Children are not asked about anything that has happened to them online.

Teacher notes

- Some children think it's fine to share a login with a best friend. Use Duck's story: even a kind friend can make a mistake, and everyone would think it was you.
- Some children think closing the lid is logging off. On many devices it isn't; the screen might still show your name when someone opens it.
- Picture logins were introduced in grade 1; the new step here is shared devices, friends and the order of logging off.
- Duck's story and the step cards are the author's own examples, not from a source.

Grade 2 Second Language: Things in the Classroom (5 lessons, about 3 weeks)

> **Unreviewed AI draft.** Written by Claude Opus 5.5 (AI Village), 10 November 2026. No educator has reviewed or classroom-tested this unit. It is not aligned to any official standard. Children are never asked what they own or have at home: every "have" question is about a game card or a made-up character's bag.
>
> Text-checked by one other agent (Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 1. Builds on grade 1: Food Words and "I Like / I Don't Like", Weather, Clothes and Days of the Week and A Picture Story with Yes/No and "Who?" Questions.

It goes back to words from kindergarten (Hello, My Name Is, and Classroom Words and Numbers to Ten, Colours and Animals Through Games) and extends them: six more classroom objects, four more colours, numbers from eleven to twenty, and the pair **[I have ___]** / **[Do you have ___?]**. In grade 1 term 3 children heard **[___ has ___]** in a story; now they use "have" about cards in their own hands.

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 **[a red crayon]**, mean "say this in the language you are teaching".

English meaning	Your language	Gesture or picture to go with it
(review from kindergarten) book, chair, table, door, window, pencil		point to the real object
crayon, ruler, eraser, glue stick, bag, paper		hold up the real object or its picture card
(review from kindergarten) red, blue, yellow, green, black, white		point to the colour card
orange, pink, purple, brown		point to the colour card
(review) one to ten		fingers or dot cards, as in kindergarten
eleven to twenty		the number card; ten fingers, then the extra fingers
How many?		palms up, then wiggle all ten fingers
I have ___		one hand flat on the chest, then show the card
Do you have ___?		point an open hand towards the other person, eyebrows up
Does ___ have ___?		the same open-hand gesture, towards the bag card
yes, no, thank you		as in grade 1 (or the tick and cross cards)

Grammar warning: languages differ a lot here. Colour words may come before or after the object, and may change with it ("a red crayon", "a crayon red", or a different ending). Numbers

may change the object word ("twelve crayons"), or the language may need a counting word between the number and the object. "Have" may be a verb, a phrase such as "with me is", or a word that changes with the thing. Say every phrase the way the language really says it. Children only need to **understand** the phrases and **show** their answers; saying them is invited, never required.

Gesture warning: as in grade 1, if thumbs up or thumbs down is rude where you live, use the tick and cross cards (or the school's usual signs) everywhere this unit says "yes or no".

Little Hill school bags

The made-up characters of Little Hill (who appear in other units of these drafts) are getting ready for school. These four **bag cards** are used in lessons 4 and 5 and in the check. Draw each bag open, with its things clearly drawn and the crayons in a neat row so they can be counted (an example, not from a source; CC0, free to change):

Bag card	What is in the bag
Duck's bag	a book, a ruler and **12 yellow crayons**
Hen's bag	a glue stick, an eraser and **15 red crayons**
Mouse's bag	a pencil, paper and **18 green crayons**
Goat's bag	a book, an eraser and **20 orange crayons**

Big idea

We can **name the things around us**, say **what colour** they are and **how many** there are, and **ask someone whether they have something**, using a few practised words, numbers and questions.

Outcomes

By the end of the unit, most children can:

1. Point to, hold up or name twelve classroom objects (six from kindergarten and six new ones) when the teacher names them.
2. Point to or name ten colours (six from kindergarten and four new ones), and pick out an object by its colour (for example **[the blue crayon]**).
3. Count along from **[one]** to **[twenty]**, point to the number card for a number from eleven to twenty, and count out that many cubes.
4. Answer **[Do you have ___?]** about cards they are holding with **[yes]** or **[no]**, and ask it (by saying, signing or showing) in a pair game.
5. Answer simple questions about a picture: what is in a character's bag, and **[How many?]** for a number up to twenty.

Prior knowledge

- Hello, My Name Is, and Classroom Words (kindergarten): **[book]**, **[chair]**, **[table]**, **[door]**, **[window]**, **[pencil]**.
- Numbers to Ten, Colours and Animals Through Games (kindergarten): **[one]** to **[ten]**; **[red]**, **[blue]**, **[yellow]**, **[green]**, **[black]**, **[white]**.

- Food Words and "I Like / I Don't Like" (grade 1): **[yes]**, **[no]**, **[thank you]**, the tick and cross cards.
- A Picture Story with Yes/No and "Who?" Questions (grade 1): **[___ has ___]**, and the characters Duck, Hen and Mouse.
- In mathematics, grade 2 children usually count to twenty and beyond in the school language, so the numbers are new **words**, not new ideas.
- Children who missed earlier units can still take part; every word has a card, an object or an action.

Lessons

Keep the 1-minute greeting chant at the start of each day.

Lesson	Title	Time	Core idea
1	What is it?	30 min	Twelve classroom objects: six old, six new; the mystery bag
2	A red crayon, a blue ruler	30 min	Ten colours; picking out an object by its colour
3	Counting to twenty	30 min	Eleven to twenty; **[How many?]** with cubes and number cards
4	Do you have a red crayon?	30 min	**[I have ___]** and **[Do you have ___?]** with bag cards and a pair card game
5	Packing Mouse's bag	30 min	A listening task with bag mats; one-to-one check

Timings: lessons 1-4 are 30 minutes (3 + 7 + 12 + 3 + 5); lesson 5 is 30 minutes (3 + 5 + 14 + 3 + 5, with the check spread over the week).

Materials

- The filled-in word card (above), kept where the teacher can see it.
- **Twelve large object picture cards:** book, chair, table, door, window, pencil, crayon, ruler, eraser, glue stick, bag, paper. Drawn by the teacher is fine; draw the objects in black outline so they are not told apart by colour.
- **An object basket** with the real things: a crayon, a ruler, an eraser (large, at least the size of a matchbox), a glue stick with its lid on, a cloth bag and a sheet of paper. A book and a pencil from the classroom go in too.
- **Ten large colour cards:** a big patch of each colour (red, blue, yellow, green, black, white, orange, pink, purple, brown). Make the colours strong and clearly different.
- **Ten crayons**, one of each of the ten colours, kept with the colour cards (lesson 2).
- **Large number cards 1 to 20**, one number each, big enough to read from the back of the room, with the number shown as dots on the back (ten dots in two rows of five, plus the extra dots below).
- **A counting tub per pair:** 20 linking cubes (or other counters too big to swallow).
- **Small number cards 11 to 20:** one set of ten per pair (lessons 3 and 5).
- **The four Little Hill bag cards** (see above), large enough to see from the back of the room.
- **Pair card sets** for the "Do you have?" game: per pair, twelve small cards, two each of **red crayon**, **blue crayon**, **yellow crayon**, **book**, **ruler** and **eraser** (lessons 4 and 5). Each crayon card shows a crayon in a strong patch of its colour, and also has the colour word

written small in the school language on the card, so children who confuse colours can still play.
- **Bag mats:** one per child, an A4 sheet with a large empty bag outline and a box at the bottom labelled "How many crayons?" (lesson 5).
- A pencil for each child and a box of crayons per table (lesson 5).
- **Tick and cross cards:** one of each per child, as in grade 1.
- **Check things** (lesson 5): the six object picture cards crayon, ruler, eraser, glue stick, book and pencil; the ten colour cards; the small number cards 11 to 20; 20 linking cubes; one red crayon card, one book card and one ruler card from a pair set; Hen's bag card; 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 number cards 11 to 20** (raised dots in the same pattern as the large cards, plus the braille or raised numeral if the child reads it) and **tactile bag cards** (the real objects, or felt shapes, glued in a shallow tray, with the crayons as a row of raised sticks that can be counted).
- Optional, for blind children: a **tactile pair card set** (the real objects, or felt shapes on card; crayon colours told apart by raised dots: one dot red, two dots blue, three dots yellow) for lesson 4, and a **real-object tray** (ruler, glue stick, paper, book, eraser and a row of crayons) for lesson 5.
- Optional: a fluent speaker's recording of the word card.

Access and inclusion

- **Speaking is optional.** Pointing, holding up cards, signs and actions all count. Never make a child speak alone in front of others.
- **"Have" is about game cards only.** Never ask children what is in their own bag or pencil case, what they have at home, or what they have brought. Children do not bring things from home for this unit; everything is supplied. If a child talks about their own things, listen kindly and move on.
- **Colour vision:** some children cannot tell some colours apart (most often red from green, and sometimes purple from blue or brown from green). If a child mixes up only those colours, do not record it as a language gap; note it privately and tell the class teacher. Never make a game of it. The pair cards carry a small written colour word for this reason.
- **Blind children:** colour words are learned as words in the chants, and the colour part of the check (part 2) is recorded as "not applicable". Objects, numbers and "have" use the real objects, the tactile number cards and the tactile bag cards. Say each word as you hand the object over.
- **Low-vision children:** large, high-contrast cards; let them hold the real objects; seat them near the board.
- **Deaf or hard-of-hearing children:** keep your face visible; hold up the object or card every time you say its word.
- **If the language is a sign language:** the signs are the words. Number signs may not match finger counting; teach the language's own number signs. In checks, if a sign looks like its answer (for example a number sign shaped like a finger count), ask the child to point to the number card or count out cubes instead, so the sign does not show the answer.
- **Movement and fine motor:** children who find small cards or cubes hard use the large cards, point while a partner moves the cubes, or count by touching a row of cubes that is already joined.
- **Children new to the school language:** keep gestures identical every time and accept answers in any language.
- **Noise:** quiet spot and ear defenders allowed.

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. Record each part as **yes**, **with help** or **not yet**:

1. **Objects:** lay out the six object picture cards (crayon, ruler, eraser, glue stick, book, pencil) shuffled in a row. Ask the child to point to **[ruler]**, **[eraser]**, **[glue stick]** and **[crayon]**. Yes = four of four.
2. **Colours:** lay out the ten colour cards shuffled. Ask for **[orange]**, **[purple]**, **[blue]** and **[brown]**. Yes = three of four. (Not applicable for blind children; see Access.)
3. **Numbers:** lay out the small number cards 11 to 20 shuffled. Ask the child to point to **[thirteen]**, **[seventeen]** and **[twenty]**; then give the 20 cubes and ask for **[twelve]**. Yes = all four (the cubes may be counted in any way).
4. **Do you have?:** give the child the red crayon card, the book card and the ruler card to hold so you cannot see them. Ask **[Do you have a ruler?]** (yes), **[Do you have an eraser?]** (no), **[Do you have a red crayon?]** (yes). Yes = three of three, by saying, signing, nodding or the tick and cross cards.
5. **Bag card:** show Hen's bag card. Ask **[How many crayons?]** (fifteen: the child says or signs it, or points to the number card 15) and **[Does Hen have an eraser?]** (yes). Yes = both.

Doing it in their own way (pointing, signs, the child's usual access) counts as **yes**. "Not yet" is normal for some children; the games can be played again any time. Saying **[I have ___]** aloud is a stretch and is **not** recorded.

Sources

- NCSSFL-ACTFL Can-Do Statements, Novice: https://www.actfl.org/uploads/files/general/Resources-Publications/Can-Do-Novice.pdf (read 10 November 2026; the quoted lines were checked against the rendered PDF pages). These are performance indicators and examples, not a curriculum. Lines used for this unit:
  - 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"; examples "I can name items I see every day." and "I can say numbers from 1-10." (outcomes 1 to 3; this unit goes on to twenty).
  - Interpersonal, Novice Low (PDF page 19): "I can provide information by answering a few simple questions", context "on very familiar topics, with the help of gestures, facial expressions, and visuals", text type "using practiced or memorized words and phrases"; example "I can respond to a basic math question using numbers." (outcomes 4 and 5).
  - Interpersonal, Novice Mid (PDF page 19): "I can request and provide information by asking and answering simple questions" (asking **[Do you have ___?]** in the pair game, a stretch for some children).
  - Presentational, Novice Mid example (PDF page 23): "I can give some simple information about my classroom or school." (the unit topic).
- 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 card game in lesson 4 is an information gap: each child cannot see the partner's cards, so they need to ask.

- 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.

Known gaps

- One other agent (Gemini 4 Argon, at 6b9fa92) text-checked this unit on 2026-11-10 and reported no errors. That is a text check by an AI agent, not a teacher review or classroom test.
- **No pronunciation help**, as in earlier units. Use a fluent speaker's recording if needed.
- **Grammar differs:** this unit cannot say how colours, numbers with objects, or "have" work in your language (see the grammar warning). Check with a fluent speaker.
- **Word choices are the author's.** The Can-Do Statements describe what learners can do; they do not list words for a grade 2 class. The six new objects and four new colours were chosen because they are common in classrooms and easy to show; swap them for local ones if needed.
- **Numbers above twenty** and number patterns (twenty-one, thirty...) are left for later; in some languages the teens are irregular and the twenties are easier, in others the reverse.
- The pair card game uses only three colours and three objects, to keep it short; a fuller game is a possible extension.

The lesson order matters: children meet the objects (lesson 1) before describing them by colour (lesson 2), learn the numbers (lesson 3) before counting a character's crayons, and use **[Do you have ___?]** with cards (lesson 4) before the listening task and the check (lesson 5).

Lesson 1: What is it?

Unit overview - Next: Lesson 2: A red crayon, a blue ruler

Goal: Children point to, hold up or name twelve classroom objects: six from kindergarten (book, chair, table, door, window, pencil) and six new ones (crayon, ruler, eraser, glue stick, bag, paper).

Length: about 30 minutes.

Materials

- The word card.
- The twelve large object picture cards.
- The object basket (a crayon, a ruler, an eraser, a glue stick with its lid on, a cloth bag, a sheet of paper, a book and a pencil).
- Ear defenders and a quiet spot.
- Optional: for blind or low-vision children, let them hold each real object from the basket as it is named.

Steps

✎ Opening (3 min)

Greeting chant. Then, in the school language: "In kindergarten we learned some classroom words in our new language. Let's see what we remember, and learn some more."

Warm-up: touch the chair! (7 min)

Play the kindergarten game. Say **[Touch the chair!]**, **[Touch the door!]**, **[Touch the window!]**, **[Touch the table!]**, then the book and the pencil from the basket (held up at the front). Children point to or touch the object (from their seat is fine). Go faster as they remember. Then hold up each of the six old picture cards and invite the class to say or sign the word together.

✎ Main activity: six new things and the mystery bag (12 min)

1. **Meet the new words (5 min).** Take the crayon, ruler, eraser, glue stick and paper out of the basket one at a time, then hold up the cloth bag. For each: say the word three times, put its picture card on the board, and invite the class to say or sign it after you. Then point to the cards in a new order and let the class say or sign each one.
2. **Mystery bag (7 min).** Put the seven small objects (crayon, ruler, eraser, glue stick, paper, book, pencil) into the cloth bag while children close their eyes. Ask a volunteer to put a hand in the bag and feel one object without looking. The class asks **[What is it?]** (teacher models it first). The volunteer names it, signs it, or points to the picture card on the board; then pulls it out to see. The class says the word together. Take turns until every object has come out. Nobody has to have a turn; a child who would rather not can choose a card from the board instead.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "In the mystery bag, how did you know what it was without looking?" (By its shape, size and how it felt: the ruler is long and flat, the eraser is soft, the glue stick has a lid.)
- "Which new word was easiest to remember? Why?" (Any answer; for example a word that sounds like the school-language word, or one with a good picture.)

✓ Closing check (with answers) (5 min)

Put the twelve picture cards on the board in a new order. Say each word with no gesture and without looking at the card. Children point to the right card (from their seat), or name it:

- **[ruler]**
- **[eraser]**
- **[glue stick]**
- **[window]**

Answers: the ruler card; the eraser card; the glue stick card; the window card (or the real window).

Vocabulary

[crayon], **[ruler]**, **[eraser]**, **[glue stick]**, **[bag]**, **[paper]**, **[What is it?]**; review **[book]**, **[chair]**, **[table]**, **[door]**, **[window]**, **[pencil]**, **[Touch ___!]**.

Differentiation

- **Support:** in the mystery bag, the volunteer may peek, or choose between two picture cards that the teacher holds up.
- **Stretch:** the volunteer describes the object before pulling it out, in the new language if they can (for example **[It is a ruler]**), or gives the school-language clue "long and flat".

⚠ Safety

- The glue stick keeps its lid on. Nothing sharp goes in the mystery bag (no scissors, no pencil sharpener); use a blunt pencil, or leave the pencil out.
- Objects are too big to swallow.

Teacher notes

- Six new words is a lot for one lesson; the other lessons repeat all twelve, so children do not need to know them all today.
- The mystery bag is fun because nobody (not even the class) knows what will come out. Keep it light; guessing wrong is part of the game.

- Blind children can take a full turn in the mystery bag: it is a touch game. Say the word as they hold up the object.

Lesson 2: A red crayon, a blue ruler

Unit overview - Previous: Lesson 1: What is it? - Next: Lesson 3: Counting to twenty

Goal: Children point to or name ten colours (six from kindergarten and four new: orange, pink, purple, brown), and pick out an object by its colour.

Length: about 30 minutes.

Materials

- The word card.
- The ten large colour cards.
- The ten crayons, one of each colour.
- The twelve large object picture cards.
- The object basket.
- Ear defenders and a quiet spot.

Steps

✎ Opening (3 min)

Greeting chant. Hold up five object picture cards one at a time; the class says or signs each word.

Warm-up: colours we know (7 min)

Put the six kindergarten colour cards (red, blue, yellow, green, black, white) on the board. Say a colour; children point to the card. Then play **[Touch something ___!]** as in kindergarten: **[Touch something blue!]** Children point to or touch something of that colour in the room (from their seat is fine; pointing counts). Use only colours that are easy to find in your classroom.

✎ Main activity: four new colours and the crayon line (12 min)

1. **New colours (4 min).** Add the orange, pink, purple and brown cards to the board, one at a time: say each word three times and invite the class to say or sign it. Then point to all ten cards in a new order; the class says or signs each colour.
2. **The crayon line (8 min).** Lay the ten crayons in a line along the board ledge (or on a table at the front). Say the colour and the object together, the way your language says it: **[the orange crayon]**, **[the purple crayon]**. A volunteer comes and picks up that crayon and holds it up; the class says the phrase together. After a few turns, mix in other objects of clear colours from the basket or room (for example **[the blue book]** if you have one). Then swap: the volunteer picks up any crayon and the class names its colour.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "When I said 'the orange crayon', which word told you which crayon to take?" (The colour word; all of them were crayons.)
- "In our new language, does the colour word come before or after the thing, or does it change?" (Depends on the language; the teacher answers from the word card.)

✓ Closing check (with answers) (5 min)

Keep the ten colour cards on the board, in a new order. Say each colour with no gesture. Children point to the right card from their seat, or name it:

- **[purple]**
- **[orange]**
- **[brown]**
- **[pink]**

Answers: the purple, orange, brown and pink cards.

Vocabulary

[orange], **[pink]**, **[purple]**, **[brown]**, **[the ___ crayon]**; review **[red]**, **[blue]**, **[yellow]**, **[green]**, **[black]**, **[white]**, **[Touch something ___!]**, the twelve objects.

Differentiation

- **Support:** in the crayon line, the teacher points to two crayons and asks the volunteer to choose one of them.
- **Stretch:** the volunteer says a colour and an object for someone else to pick up (for example **[the green crayon]**).

⚠ Safety

- Nothing to note beyond the usual classroom rules. Children stay in their seats or walk to the front one at a time.

Teacher notes

- **Colour vision:** see Access in the unit overview. If a child mixes up only red and green (or purple and blue, or brown and green), note it privately, do not correct them in front of others, and tell the class teacher.
- Blind children learn the colour words in the chant; in the crayon line, they can choose a crayon by position ("the third crayon") while the class says its colour.

- This lesson uses a colour and an object together, which is where the grammar of many languages changes. Say it the real way every time; children will copy the pattern without needing a rule.

Lesson 3: Counting to twenty

Unit overview - Previous: Lesson 2: A red crayon, a blue ruler - Next: Lesson 4: Do you have a red crayon?

Goal: Children count along from **[one]** to **[twenty]**, point to the number card for a number from eleven to twenty, and count out that many cubes when asked **[How many?]**.

Length: about 30 minutes.

Materials

- The word card.
- The large number cards 1 to 20.
- A counting tub per pair (20 linking cubes).
- The small number cards 11 to 20, one set of ten per pair.
- Ear defenders and a quiet spot.
- Optional: the tactile number cards 11 to 20 for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. Count from **[one]** to **[ten]** together on fingers, as in kindergarten, twice: once slowly, once fast.

Warm-up: one to ten (7 min)

Put the large number cards 1 to 10 in a row on the board. Say a number with no gesture; children show it on their fingers or point to the card. Then turn a few cards round to show the dots and ask **[How many?]**; children say, sign or show the number.

✎ Main activity: eleven to twenty (12 min)

1. **New numbers (5 min).** Put the cards 11 to 20 on the board after the first ten. Say each new number while showing it: ten fingers, then the extra fingers (for **[thirteen]**: ten fingers, then three). Invite the class to say or sign each number after you. Then count from **[one]** to **[twenty]** together, pointing along the row, twice.
2. **Show me with cubes (7 min).** Each pair has a counting tub and a set of small number cards 11 to 20, spread face up. Say a number from eleven to twenty with no gesture. Each pair points to the number card, then builds a tower with that many cubes: one child joins cubes while the other counts in the new language (or both count together). Hold up the large card so pairs can check. Swap jobs each round. Use about six numbers, for example **[fourteen]**, **[eleven]**, **[nineteen]**, **[sixteen]**, **[twelve]**, **[twenty]**.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How did you check your tower had the right number of cubes?" (Counted again; put it next to another tower; made a ten and counted on.)
- "Do the numbers from eleven to twenty in our new language sound like 'ten and one, ten and two'? Or are they different words?" (Depends on the language; the teacher answers from the word card. In many languages the teen numbers are built from ten.)

✓ Closing check (with answers) (5 min)

Each pair keeps its small number cards 11 to 20 face up, shuffled. Say each number with no gesture. Each child points to the card (partners take turns to point first):

- **[fifteen]**
- **[eighteen]**
- **[eleven]**
- **[twenty]**

Answers: cards 15, 18, 11, 20.

Vocabulary

[eleven] to **[twenty]**, **[How many?]**; review **[one]** to **[ten]**.

Differentiation

- **Support:** a pair builds a tower of ten first, then adds the extra cubes; the teacher points to the large card as well as saying the number.
- **Stretch:** a child says a number for their partner to build, or counts backwards from **[twenty]** to **[ten]**.

⚠ Safety

- Cubes are too big to swallow and stay on the table. Nothing to note beyond the usual classroom rules.

Teacher notes

- Children usually know these numbers in the school language already (see Prior knowledge), so the new learning is the words. Keep the counting easy and the words frequent.
- **Number signs:** if the language is a sign language, teach its own number signs; some do not match finger counting.

- Blind children use the tactile number cards and build towers by touch; the partner can say the number again as they finish.

Lesson 4: Do you have a red crayon?

Unit overview - Previous: Lesson 3: Counting to twenty - Next: Lesson 5: Packing Mouse's bag

Goal: Children understand **[I have ___]** and answer **[Do you have ___?]** with **[yes]** or **[no]**, and ask it (by saying, signing or showing) in a pair card game.

Length: about 30 minutes.

Materials

- The word card.
- The four Little Hill bag cards (Duck, Hen, Mouse, Goat).
- The large number cards 11 to 20.
- One pair card set per pair (twelve small cards: two each of red crayon, blue crayon, yellow crayon, book, ruler, eraser).
- A tick card and a cross card for each child.
- Ear defenders and a quiet spot.
- Optional: the tactile bag cards for blind or low-vision children; a tactile pair card set (the real objects, or felt shapes on card, with the crayon colours told apart by a raised dot pattern: one dot red, two dots blue, three dots yellow).

Steps

✎ Opening (3 min)

Greeting chant. Count from **[one]** to **[twenty]** together, pointing along the large number cards 11 to 20 for the second half.

Warm-up: what's in Duck's bag? (7 min)

Hold up Duck's bag card. Speak as Duck (a duck voice or the duck action from earlier units), with the **[I have ___]** gesture (hand on chest): **[I have a book. I have a ruler. I have yellow crayons.]** Ask the class **[How many crayons?]** Count the crayons together on the card: **[twelve]**. Then ask the class yes/no questions; children answer with the tick or cross card, or say or sign **[yes]** or **[no]**:

1. **[Does Duck have a ruler?]** (yes)
2. **[Does Duck have a glue stick?]** (no)
3. **[Does Duck have a book?]** (yes)

Do the same with Hen's bag card: **[I have a glue stick. I have an eraser. I have red crayons.]** Count: **[fifteen]**.

✎ Main activity: the "Do you have?" card game (12 min)

1. **Model it (3 min).** Play one round at the front with a volunteer, using a pair card set. Teacher asks with the gesture (open hand towards the volunteer, eyebrows up): **[Do**

you have a ruler?] The volunteer looks at their cards and says, signs or shows **[yes]** or **[no]**. If yes, they give the card and may say **[Yes, I have a ruler]** (a stretch, never required); the teacher says **[Thank you!]** and puts the two rulers down as a pair.

2. **Play in pairs (9 min).** Shuffle the twelve cards and deal six each. Children hold their cards so the partner cannot see them (or keep them face down on the table and peek). Any pairs a child already holds go face up on the table. Children take turns: ask for a card **you already hold one of**: **[Do you have a ___?]** If the partner has it, they hand it over (**[yes]**); the asker says **[Thank you!]** and puts the pair down. If not, the partner says or shows **[no]**, and it is the partner's turn. The game ends when all six pairs are down. Play again if there is time. Walk round and listen; help with words, not with the cards.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why did you need to ask your partner?" (Because I couldn't see their cards: only they knew what they had.)
- "Which card did you ask for most? How did you say it?" (Any answer; let a few children say or show their question.)

✓ Closing check (with answers) (5 min)

Hold up Mouse's bag card. Ask with no gesture. Children answer with the tick or cross card, or say or sign the answer:

- **[Does Mouse have a pencil?]**
- **[Does Mouse have a ruler?]**
- **[Does Mouse have paper?]**

Then ask **[How many crayons?]**; children count the crayons on the card (the teacher points along them without saying the numbers) and say, sign or hold up the right number of fingers in two goes (ten, then eight), or point to the large number card.

Answers: yes; no; yes; eighteen.

Vocabulary

[I have ___], **[Do you have ___?]**, **[Does ___ have ___?]**; review **[yes]**, **[no]**, **[thank you]**, **[How many?]**, the objects, colours and numbers.

Differentiation

- **Support:** play with only six cards (three pairs: red crayon, book, ruler); the asker may hold up their own card instead of naming it.
- **Stretch:** answer in a full sentence, **[Yes, I have a red crayon]** or **[No, I don't have a red crayon]** (the teacher models the "no" sentence the way the language says it).

⚠ Safety

- Nothing to note beyond the usual classroom rules.

Teacher notes

- **"Have" is about the cards only.** Never ask a child what they have in their own bag, pencil case or home. If a child starts telling you, listen kindly and go back to the game.
- The card game is a small information gap: only the partner knows what is in their hand, so asking is really needed.
- Children who confuse some colours can read the small colour word on the crayon cards, or ask for the book, ruler and eraser pairs only.
- Blind children play with the tactile pair cards; the partner says the card's name as they hand it over.

Lesson 5: Packing Mouse's bag

Unit overview - Previous: Lesson 4: Do you have a red crayon?

Goal: Children listen to a short description of what a character packs, draw the things on a bag mat and write how many crayons; the teacher does the one-to-one check over the week.

Length: about 30 minutes (the one-to-one check is spread over the week, about 3 minutes per child).

Materials

- The word card.
- The four Little Hill bag cards.
- The twelve large object picture cards and the large number cards 11 to 20.
- A bag mat for each child.
- A pencil for each child, and a box of crayons per table.
- One pair card set per pair (for children waiting for the check).
- A tick card and a cross card for each child.
- **Check things:** the six object picture cards crayon, ruler, eraser, glue stick, book and pencil; the ten colour cards; a set of small number cards 11 to 20; 20 linking cubes; one red crayon card, one book card and one ruler card from a pair set; Hen's bag card; the record sheet (class list with five columns).
- Ear defenders and a quiet spot.
- Optional: the tactile bag cards and tactile number cards for blind or low-vision children; a real-object tray and the cloth bag from the object basket (see Teacher notes).

Steps

✎ Opening (3 min)

Greeting chant. Count from **[one]** to **[twenty]** together.

Warm-up: quick quiz (5 min)

Hold up Goat's bag card. Ask: **[Does Goat have a book?]** (yes), **[Does Goat have a pencil?]** (no), **[Does Goat have orange crayons?]** (yes), **[How many crayons?]** (twenty). Children answer with the tick or cross card, by pointing to a number card on the board, or by saying or signing the answer.

✎ Main activity: packing Mouse's bag (14 min)

1. **Listen and draw (8 min).** Give out the bag mats. In the school language: "It's a new day, and Mouse is packing a new bag. Listen, and draw what Mouse puts in." Say each sentence twice, slowly, with no gesture and no pictures, as Mouse (whiskers action only at the start): **[I have a ruler.] [I have a glue stick.] [I have paper.] [I have blue crayons. Fourteen blue crayons!]** Children draw each thing in the bag outline (a quick picture is fine), colour one crayon blue, and write **14** in the "How many crayons?"

box (or show it with cubes or fingers if writing is hard). After the second reading, hold up the object picture cards one by one so everyone can check; children add anything missing.

2. **Partner check (6 min).** Pairs compare mats and use the new language to point and name: **[a ruler]**, **[a glue stick]**... Then pairs play the "Do you have?" card game from lesson 4 while the teacher starts the one-to-one checks.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How did you remember what Mouse said?" (Listened twice; knew the words from the cards; drew as I went.)
- "What can you now say or understand in our new language that you could not at the start of the unit?" (Any answer, for example new things, new colours, numbers to twenty, asking "Do you have?")

✓ Closing check (with answers) (5 min)

Children hold up their bag mats. Say a word or ask a question in the new language, with no gesture; children point to the right drawing on their own mat, or answer with the tick or cross card:

- **[ruler]** (children point to their ruler drawing)
- **[Does Mouse have a book?]**
- **[How many crayons?]**
- **[Does Mouse have blue crayons?]**

Answers: the ruler drawing; no; fourteen; yes.

The one-to-one check

Use the five-part check in the unit overview (Assessment), over the week, while others play the card game or finish their mats. About 3 minutes per child. Record yes, with help or not yet. Saying **[I have ___]** aloud is not recorded.

Vocabulary

Review of the whole unit: the twelve objects, ten colours, **[one]** to **[twenty]**, **[How many?]**, **[I have ___]**, **[Do you have ___?]**, **[Does ___ have ___?]**.

Differentiation

- **Support:** give the child the four object picture cards (ruler, glue stick, paper, crayon) mixed with two others (book, eraser), and let them pick out the cards they hear instead of drawing.
- **Stretch:** a second round: **[Goat has a book, a pencil and sixteen purple crayons]**; or the child tells a partner what Mouse has, using **[Mouse has ___]**.

⚠ Safety

- Nothing to note beyond the usual classroom rules.

Teacher notes

- The check is one-to-one so nobody answers in front of the class; keep it calm and quick, and stop if a child is upset.
- **"Have" is about Mouse and the cards only.** Never ask what children have in their own bags.
- Blind children: use a **real-object tray** instead of drawing. Put a ruler, a glue stick, a sheet of paper, a book, an eraser and a short row of crayons in a tray; the child picks out what Mouse packs and puts it in the cloth bag, and shows **[fourteen]** with cubes or the tactile number card.

Grade 2 Second Language: Animals and Where They Live (5 lessons, about 3 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 it against your school's rules before use. Children are never asked about their own pets, their homes or where they live: every "where does it live?" question is about an animal card in a game.
>
> Text-checked by two other agents (Gemini 4 Carbon, Gemini 4 Argon); see Known gaps.

Back to the grade 2 year plan - Term 2. Builds on grade 2 term 1: Things in the Classroom, and on kindergarten: Numbers to Ten, Colours and Animals Through Games.

In kindergarten children learned six animal words with actions. In term 1 of grade 2 they learned ten colours and the pair **[I have ___]** / **[Do you have ___?]**. This unit adds six more animals, four places, the size words **[big]** and **[small]**, and short describing sentences: **[It lives in the ___]**, **[It is big]**, **[It is brown]** and **[It has wings]**. At the end, children put the sentences together into animal riddles.

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 **[a big brown bear]**, mean "say this in the language you are teaching".

English meaning	Your language	Gesture or picture to go with it
(review from kindergarten) cat, dog, bird, fish, frog, duck		the kindergarten actions (cat licks a paw, dog wags a tail, bird flaps, fish swims with one hand, frog hops, duck waddles)
horse, cow, sheep, pig, rabbit, bear		the actions in lesson 1, plus the picture card
house, farm, forest, pond		the place card
It lives in the ___ / Where does ___ live?		point to the animal card, then sweep the hand to the place card
big, small		hands wide apart; finger and thumb close together
(review from term 1) the ten colours		the colour cards
It is ___		point to the animal card
It has wings / a tail / four legs / two legs		flap both hands; wiggle one hand behind your back; four fingers walking on the table; two fingers walking on the table
What is it?		palms up, shoulders up
(review) yes, no		as in earlier units (or the tick and cross cards)

Grammar warning: languages differ a lot here. "In the forest" and "on the farm" may use different little words, or a word ending instead. Size and colour words may come before or after the animal and may change with it. "It" may be a different word for different animals, or may be left out. Say every phrase the way the language really says it. Children only need to **understand** the phrases and **show** their answers; saying them is invited, never required.

Gesture warning: if thumbs up or thumbs down is rude where you live, use the tick and cross cards (or the school's usual signs) everywhere this unit says "yes or no".

The Little Hill animal cards

Twelve animal picture cards are used in every lesson. In this game each animal has **one** place, one size and one main colour, so that every riddle has one answer (an example, not from a source; CC0, free to change):

Animal	Lives in (this game)	Size	Colour	It has
cat	house	small	black	four legs, a tail
dog	house	big	brown	four legs, a tail
horse	farm	big	brown	four legs, a tail
cow	farm	big	black and white	four legs, a tail
sheep	farm	small	white	four legs, a tail
pig	farm	small	pink	four legs, a tail
rabbit	forest	small	brown	four legs, a tail
bear	forest	big	brown	four legs
bird	forest	small	blue	wings, two legs, a tail
fish	pond	small	orange	a tail
frog	pond	small	green	four legs
duck	pond	small	yellow	wings, two legs, a tail

Real animals live in many places (ducks live on farms, cats in barns), and "big" and "small" are only big or small next to each other. Say this to the class in lesson 2; the table is the rule **of the game**, not a fact about the world. A bear's short tail is left out on purpose so the riddles stay clear.

Big idea

We can **name animals**, say **where they live**, and **describe them** by size, colour and body parts, using a few practised words and short sentences, and we can use those sentences to make and solve riddles.

Outcomes

By the end of the unit, most children can:

1. Point to, act out or name twelve animals (six from kindergarten and six new ones) when the teacher names them.
2. Point to the right place card (house, farm, forest, pond) when asked **[Where does the ___ live?]** about an animal card.

3. Pick out an animal picture by size and colour, for example **[the small black bear]**.
4. Show which animals match **[It has wings]**, **[It has a tail]**, **[It has four legs]** or **[It has two legs]**.
5. Solve a spoken riddle of two short sentences (for example **[It lives in the forest. It is big.]**) by pointing to the animal; some children also make a riddle with cards for a partner.

Prior knowledge

- Numbers to Ten, Colours and Animals Through Games (kindergarten): **[cat]**, **[dog]**, **[bird]**, **[fish]**, **[frog]**, **[duck]** and their actions; **[two]** and **[four]**.
- Things in the Classroom (grade 2 term 1): the ten colours (red, blue, yellow, green, black, white, orange, pink, purple, brown); **[yes]**, **[no]**; asking and answering simple questions in a pair game.
- Children who missed earlier units can still take part; every word has a card or an action.

Lessons

Keep the 1-minute greeting chant at the start of each day.

Lesson	Title	Time	Core idea
1	Six new animals	30 min	Twelve animals with actions: six old, six new
2	Where does it live?	30 min	Four places; **[It lives in the ___]** with place mats
3	A big brown bear	30 min	**[big]**, **[small]** and colours; picking out a picture by size and colour
4	It has wings	30 min	**[It has ___]**; sorting animals; first riddles
5	Little Hill animal riddles	30 min	A class poster, a pair riddle game and the one-to-one check

Timings: lessons 1-4 are 30 minutes (3 + 7 + 12 + 3 + 5); lesson 5 is 30 minutes (3 + 5 + 14 + 3 + 5, with the check spread over the week).

Materials

- The filled-in word card (above), kept where the teacher can see it.
- **Twelve large animal picture cards** (the Little Hill animal cards above), each drawn in its main colour, big enough to see from the back of the room. Draw a black outline round each animal so it can be told apart without colour.
- **Four large place cards:** house, farm, forest, pond.
- **Four place mats:** large sheets of paper, each with one place drawn on it, taped flat to the floor in four corners of the room (lesson 2).
- **Size cards per pair** (lesson 3 and the check): eight small cards: a big brown bear, a small brown bear, a big black bear, a small black bear, a big white rabbit, a small white rabbit, a big brown rabbit, a small brown rabbit. On each card the "big" animal fills the card and the "small" one is clearly smaller.
- **The ten large colour cards** from term 1 (lesson 3).
- **Four large "has" cards:** a wing, a tail, four legs, two legs (simple drawings).

- **A small card set per pair** (lessons 2, 4 and 5): the twelve animals, the four places and the four "has" cards, as small cards.
- **A riddle strip per pair** (lesson 5): a strip of card with two empty boxes, big enough for one small card each.
- **The class animal poster** (lesson 5): a large sheet with the four places drawn on it, and a blank space beside each place, plus one spare set of the twelve small animal cards to stick on it.
- **Word labels** (lesson 5): the twelve animal words written by the teacher in the language, one per strip, with tape or reusable putty.
- **Tick and cross cards:** one of each per child, as in earlier units.
- **Check things** (lesson 5): the six new animal cards (horse, cow, sheep, pig, rabbit, bear); the four place cards; the four bear size cards; the bird, fish and horse cards; the duck, frog, fish, bear, rabbit and bird cards; 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: **toy animals** for the twelve animals (too big to swallow), **tactile place cards** (a different texture for each place, introduced by touch in lesson 2), and **tactile size cards** (a big and a small felt bear shape, and a big and a small felt rabbit shape).
- Optional: a fluent speaker's recording of the word card.

⚠ Safety and access

Safety

- Place mats are taped flat so nobody trips; children walk, not run, between them.
- Toy animals and small pieces are too big to swallow; reusable putty is used by the teacher only.

Privacy

- **"Where does it live?" is about animal cards only.** Never ask children where they live, what their home is like, whether they have pets, or whether they have visited a farm. If a child talks about their own pet or home, listen kindly and go back to the game.
- Some children have lost pets, or are afraid of dogs; no child has to hold or act out an animal they do not want to.

Taking part

- **Speaking is optional.** Pointing, holding up cards, signs and actions all count. Never make a child speak alone in front of others.
- **Movement:** every action has a seated version (hands on the table). In lesson 2 a partner can carry the card to the place mat, or the child points from their seat.
- **Children new to the school language:** keep gestures identical every time and accept answers in any language.
- **Noise:** quiet spot and ear defenders allowed.

Seeing, hearing and colour

- **Colour vision:** some children cannot tell some colours apart (most often red from green, and sometimes brown from green). If a child mixes up only colours, do not record it as a language gap; note it privately and tell the class teacher. The size cards

use only brown, black and white, which are usually easier to tell apart, and every riddle in the check can be solved without colour.
- **Blind children:** colour words are learned as words in the chants, and the colour part of check item 3 is left out (ask only **[the small bear]** and **[the big bear]** with the tactile size cards). Animals, places and "has" use the toy animals and tactile place cards. Say each word as you hand the toy over.
- **Low-vision children:** large, high-contrast cards with black outlines; seat them near the board.
- **Deaf or hard-of-hearing children:** keep your face visible; hold up the card every time you say its word.
- **If the language is a sign language:** the signs are the words. Many animal signs copy the animal's shape or movement. In checks, if a sign looks like its answer, ask the child to point to the card instead, so the sign does not show the answer.

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. Record each part as **yes**, **with help** or **not yet**:

1. **Animals:** lay out the six new animal cards (horse, cow, sheep, pig, rabbit, bear) shuffled in a row. Ask the child to point to **[horse]**, **[rabbit]**, **[bear]** and **[pig]**. Yes = four of four.
2. **Places:** lay out the four place cards. Ask **[Where does the fish live?]** (pond), **[Where does the cow live?]** (farm) and **[Where does the bear live?]** (forest). Yes = three of three.
3. **Size and colour:** lay out the four bear size cards shuffled. Ask for **[the small brown bear]** and **[the big black bear]**. Yes = both. (Blind children: see Safety and access.)
4. **It has:** lay out the bird, fish and horse cards. Say **[It has wings. What is it?]** (bird) and **[It has four legs. What is it?]** (horse). Yes = both.
5. **Riddles:** lay out the duck, frog, fish, bear, rabbit and bird cards. Say **[It lives in the forest. It is big. What is it?]** (bear) and **[It lives in the pond. It has four legs. What is it?]** (frog). Yes = both.

Doing it in their own way (pointing, signs, the child's usual access) counts as **yes**. "Not yet" is normal for some children; the games can be played again any time. Saying a riddle aloud is a stretch and is **not** recorded.

Sources

- NCSSFL-ACTFL Can-Do Statements, Novice: https://www.actfl.org/uploads/files/general/Resources-Publications/Can-Do-Novice.pdf (read 10 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:
  - 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" (outcomes 1 and 2).
  - Interpersonal, Novice Low (PDF page 19): "I can provide information by answering a few simple questions", context "on very familiar topics, with the help of gestures,

facial expressions, and visuals", text type "using practiced or memorized words and phrases" (outcomes 2 to 5).
    - Interpersonal, Novice Mid (PDF page 19): "I can request and provide information by asking and answering simple questions" (the pair riddle game in lesson 5, a stretch for some children).
    - Presentational writing, Novice Low (PDF page 23): "I can label familiar people, places, and objects in pictures and posters." (the class animal poster in lesson 5, where children stick ready-written word labels on the picture).
- 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 riddle game in lesson 5 is an information gap: only the child making the riddle knows the animal.
- 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).

Known gaps and cautions

- Two other agents (Gemini 4 Carbon and Gemini 4 Argon, both at e302480) text-checked this unit on 2026-11-11 and reported no errors. 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.
- **Grammar differs:** this unit cannot say how "in the forest", size and colour words, or "it has" work in your language (see the grammar warning). Check with a fluent speaker.
- **Word choices are the author's.** The Can-Do Statements describe what learners can do; they do not list words for a grade 2 class. The six new animals and four places were chosen because they are easy to draw and act; swap them for local animals and places if needed (and change the riddles to keep one answer each).
- **The animal table is a game rule, not science.** Where real animals live is a science topic; this unit does not teach it, and children who say "ducks live on farms too" are right.
- **Animal sounds are left out**, as in kindergarten, because they differ between languages. A teacher may add the language's own animal sounds.
- Timings are untested. The riddles use only two sentences each; longer riddles are a possible extension.

The lesson order matters: children meet the animals (lesson 1) before placing them (lesson 2), learn size and colour phrases (lesson 3) and "has" (lesson 4) before putting sentences together into riddles and the check (lesson 5).

Lesson 1: Six new animals

Unit overview - Next: Lesson 2: Where does it live?

Goal: Children point to or act out twelve animals (six from kindergarten and six new ones) when the teacher names them.

Length: about 30 minutes.

Materials

- The word card.
- The twelve large animal picture cards.
- Tick and cross cards (not needed today, but keep them to hand).
- Ear defenders and a quiet spot.
- Optional: the toy animals for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. Then say each kindergarten animal word and do its action; children copy: **[cat]** (lick a paw), **[dog]** (wag a tail), **[bird]** (flap), **[fish]** (swimming hand), **[frog]** (hop, or bounce hands on knees), **[duck]** (waddle, or a beak with one hand).

Warm-up: do what I say (7 min)

Hold up the six kindergarten animal cards one by one and say the word; children do the action. Then put the cards down and **only say** the words, in a mixed order, faster and slower; children do the action. Finish with three slow ones so everyone succeeds. This is listening practice: children do not need to say anything.

✎ Main activity: six new animals (12 min)

1. **Meet the new animals (5 min).** Hold up each new card, say the word three times, and show its action. Children copy the action and may say the word:
   - **[horse]**: gallop on the spot (seated: tap hands fast on knees);
   - **[cow]**: two fingers as horns on the head, then chew slowly;
   - **[sheep]**: draw small curly circles on top of your head (the wool);
   - **[pig]**: a loose fist in front of your nose (the snout);
   - **[rabbit]**: two fingers up as ears, small hops (seated: one hand hops on the table);
   - **[bear]**: big slow paws, swaying from side to side.
2. **Animal parade (4 min).** Say the twelve animals in a mixed order, old and new; children do the action. Every few words, hold up the card **after** the children have moved, so they can see if they were right.

3. **Which card? (3 min).** Stick the twelve cards in a row on the board. Say a word; a volunteer comes and points to the card (or the whole class points from their seats). Volunteers may be helped by a friend.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Which animals did we know already from kindergarten?" (Cat, dog, bird, fish, frog, duck.)
- "Which action helped you remember a new animal word? Why?" (Any answer; for example, the rabbit ears, because they look like a rabbit.)

✓ Closing check (with answers) (5 min)

Hold up two cards, one in each hand. Say one word with **no action**. Children point to the hand with that animal (or say "this hand" by tapping the left or right side of their table). Do four rounds:

1. Left hand horse, right hand cow; say **[horse]**.
2. Left hand cat, right hand rabbit; say **[rabbit]**.
3. Left hand bear, right hand dog; say **[bear]**.
4. Left hand sheep, right hand pig; say **[pig]**.

Answers: left; right; left; right.

Vocabulary

[horse], **[cow]**, **[sheep]**, **[pig]**, **[rabbit]**, **[bear]**; review **[cat]**, **[dog]**, **[bird]**, **[fish]**, **[frog]**, **[duck]**.

Differentiation

- **Support:** in the parade and the check, use only the six new animals; let the child copy a partner's action first.
- **Stretch:** a child says a word and the class does the action (the child is the "teacher").

⚠ Safety

- Actions are done on the spot, with space between children. Every action has a seated version.

Teacher notes

- **Never ask about pets.** If a child says "I have a dog", smile, say **[dog]** with the action, and go on.

- No child has to act out an animal they do not want to (some children are frightened of dogs or bears); they can point to the card instead.
- Blind children hold the toy animal while you say its word, and do the action with the class.
- If the language is a sign language, the animal signs are the words; the actions above are only for hearing classes and may be left out.

Lesson 2: Where does it live?

Unit overview - Previous: Lesson 1: Six new animals - Next: Lesson 3: A big brown bear

Goal: Children understand **[It lives in the ___]** and point to the right place (house, farm, forest, pond) when asked **[Where does the ___ live?]** about an animal card.

Length: about 30 minutes.

Materials

- The word card.
- The twelve large animal picture cards.
- The four large place cards: house, farm, forest, pond.
- The four place mats, taped flat to the floor in four corners of the room before the lesson.
- The small animal cards from the pair card sets: one animal card per child (with 24 or more children, each animal is used two or three times).
- Ear defenders and a quiet spot.
- Optional: the toy animals and the tactile place cards for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. A quick animal parade: say six animals (three old, three new); children do the actions.

Warm-up: four places (7 min)

1. Hold up each place card, say the word three times and do the gesture (point to the card): **[house]**, **[farm]**, **[forest]**, **[pond]**. Children may say the words.
2. Stick the four place cards on the board in this order and write a large number above each: **1** house, **2** farm, **3** forest, **4** pond. Say a place; children hold up that many fingers (or point).
3. In the school language, explain the game rule: "In our game, every animal has **one** home. Real animals can live in lots of places: ducks live on farms and in parks too. But in our game, the duck's place is the pond."

✎ Main activity: walk to the place (12 min)

1. **Hear it (4 min).** Hold up each large animal card and say where it lives, with the gesture (point to the animal, then sweep your hand to the place card): **[The horse lives on the farm.]** Do all twelve, following the table in the unit overview. Children only listen and watch.
2. **Walk to the place (5 min).** Give each child one small animal card. Say a sentence, for example **[The rabbit lives in the forest.]** Children holding a rabbit walk to the forest mat (or point from their seat, or a partner carries the card). Do all twelve

animals; children stay on their mat. At the end, each mat has its animals: walk round and say them together, **[On the farm: horse, cow, sheep, pig.]**

3. **Point to it (3 min).** Children go back to their seats. Hold up a large animal card and ask **[Where does the ___ live?]** with the open-hand gesture; children point to the right corner of the room or hold up the number of the place card.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Do ducks only live on ponds?" (No. Real ducks live on farms, in parks and in many places. In our game the duck's place is the pond.)
- "Which word helped you find your corner?" (The place word: house, farm, forest or pond.)

✓ Closing check (with answers) (5 min)

Hold up an animal card and ask, with no gesture, **[Where does the ___ live?]** Children hold up the number of the place card on the board (1 house, 2 farm, 3 forest, 4 pond), or say or sign the place:

1. frog
2. cow
3. rabbit
4. cat

Answers: 4 (pond); 2 (farm); 3 (forest); 1 (house).

Vocabulary

[house], **[farm]**, **[forest]**, **[pond]**, **[It lives in the ___]**, **[Where does ___ live?]**; review the twelve animals and the numbers one to four.

Differentiation

- **Support:** use only two places (farm and pond) and their animals; the child walks with a partner.
- **Stretch:** a child says a sentence for the class, **[The pig lives on the farm]**, and the others check by pointing.

⚠ Safety

- Children walk, not run. Keep the mats taped flat and the paths between them clear.

Teacher notes

- **"Where does it live?" is about the cards only.** Never ask children where they live, what their home is like or whether they have pets. If a child tells you, listen kindly and go back to the game.
- "In the forest", "on the farm" and "at the pond" may use different little words, or none, in your language. Say each sentence the way the language says it; children only need to understand it.
- Blind children hold a toy animal and are guided to the right mat by a partner; they learn the places by touching the tactile place cards while you say the words.

Lesson 3: A big brown bear

Unit overview - Previous: Lesson 2: Where does it live? - Next: Lesson 4: It has wings

Goal: Children understand **[big]**, **[small]**, **[It is big]** and **[It is brown]**, and pick out an animal picture by size and colour, for example **[the small black bear]**.

Length: about 30 minutes.

Materials

- The word card.
- The twelve large animal picture cards.
- The ten large colour cards from term 1.
- One set of eight size cards per pair (big brown bear, small brown bear, big black bear, small black bear, big white rabbit, small white rabbit, big brown rabbit, small brown rabbit).
- Ear defenders and a quiet spot.
- Optional: the tactile size cards (big and small felt bear and rabbit shapes) for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. Stick the ten colour cards on the board. Say colours in a mixed order; children point. Finish with **[brown]**, **[black]** and **[white]**, the colours used today.

Warm-up: big or small? (7 min)

1. Say **[big]** with hands wide apart and **[small]** with finger and thumb close together. Children copy. Say the words in a mixed order; children show the gesture.
2. Hold up animal cards and say **[It is big]** or **[It is small]**, following the table in the unit overview (horse, cow, bear and dog big; cat, rabbit, frog and duck small). Children copy the gesture. Then hold up a card and only ask with the gesture of a question (palms up); children show big or small.
3. Hold up the bear card and say **[It is big. It is brown.]** pointing to the brown colour card. Do the same with the sheep (**[It is small. It is white.]**) and the cat (**[It is small. It is black.]**).

✎ Main activity: which bear? (12 min)

1. **Model it (2 min).** Lay out one set of size cards where the class can see (on a table with children around, or under a document camera if you have one). Say **[the big black bear]** and pick up that card. Do one more: **[the small white rabbit]**.
2. **Find it in pairs (6 min).** Each pair lays out its eight size cards face up. Say a phrase, for example **[the small brown bear]**; pairs point to the card together and hold it up. Look round, then put it back. Do all eight cards in a mixed order.

3. **Partner turn (4 min).** One child chooses a card in their head and shows it to the partner with the size gesture and the colour word (said, signed, or by pointing to the colour card on the board), then the word **[bear]** or **[rabbit]** (said, signed or with the rabbit-ears or big-paws action). The partner picks up the card. Swap.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why did you need two words to find the right bear?" (Because two bears are brown and two bears are small; only size **and** colour together tell you which one.)
- "Is a small bear smaller than a big rabbit in real life?" (No, a real bear is much bigger than any rabbit. "Big" and "small" in our game only compare the pictures with each other.)

✓ Closing check (with answers) (5 min)

Each pair lays out only the four rabbit size cards. Say each phrase with no gesture; pairs hold up the card:

1. **[the big white rabbit]**
2. **[the small brown rabbit]**
3. **[the small white rabbit]**

Answers: the big white one; the small brown one; the small white one. Note which pairs hesitate; play the main activity again with them later.

Vocabulary

[big], **[small]**, **[It is ___]**; review **[brown]**, **[black]**, **[white]**, **[bear]**, **[rabbit]** and the other colours.

Differentiation

- **Support:** use only the four bear cards; or say only the size or only the colour, with two cards to choose from.
- **Stretch:** describe a card in a full phrase for the partner, **[the big brown rabbit]**, said or signed.

⚠ Safety

- Nothing to note beyond the usual classroom rules.

Teacher notes

- In many languages size and colour words come after the animal, or change their ending with it. Say the phrase the way the language says it; children only need to understand it.
- Brown, black and white were chosen because they are usually easy to tell apart. If a child mixes up only colours, note it privately (see the unit overview); do not count it as a language gap.
- Blind children use the tactile size cards: they find **[the big bear]** and **[the small rabbit]** by touch, and hear the colour words without being asked to use them.

Lesson 4: It has wings

Unit overview - Previous: Lesson 3: A big brown bear - Next: Lesson 5: Little Hill animal riddles

Goal: Children understand **[It has wings]**, **[It has a tail]**, **[It has four legs]** and **[It has two legs]**, sort animals by them, and solve their first two-sentence riddles.

Length: about 30 minutes.

Materials

- The word card.
- The twelve large animal picture cards and the four large place cards.
- The four large "has" cards: a wing, a tail, four legs, two legs.
- One small card set per pair (only the twelve animal cards are needed today).
- Ear defenders and a quiet spot.
- Optional: the toy animals for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. Hold up three animal cards (horse, frog, rabbit) and ask **[Where does the ___ live?]**; children point to the place card on the board.

Warm-up: it has... (7 min)

1. Hold up each "has" card and say the phrase with its gesture: **[It has wings]** (flap both hands), **[It has a tail]** (wiggle one hand behind your back), **[It has four legs]** (four fingers walking on the table), **[It has two legs]** (two fingers walking). Children copy.
2. Hold up the duck card: **[It has wings. It has two legs.]** Then the horse: **[It has four legs. It has a tail.]** Then the fish: **[It has a tail.]** Children copy the gestures.
3. Say a "has" phrase without a card; children do the gesture.

✎ Main activity: sort and solve (12 min)

1. **Sort (6 min).** Each pair lays out its twelve small animal cards. Hold up a "has" card and say the phrase; pairs push forward every animal that has it. Check together, then push them back. Do three rounds:

    - **[It has wings]**: bird, duck.
    - **[It has two legs]**: bird, duck.
    - **[It has four legs]**: cat, dog, horse, cow, sheep, pig, rabbit, bear, frog.

    (Leave "a tail" out of the sorting: a bear's tail is very short, and the frog card has none, so it starts arguments. It stays as a word.) 2. **First riddles (6 min).** Stick the twelve large animal cards on the board. Say each riddle slowly, twice, with the gestures; pairs find the animal among their small cards and hold it up. Then a volunteer points to it on

the board. 1. **[It lives in the pond. It has wings. What is it?]** (duck) 2. **[It lives in the forest. It has wings. What is it?]** (bird) 3. **[It lives on the farm. It is pink. What is it?]** (pig) 4. **[It lives in the house. It is big. What is it?]** (dog) 5. **[It lives in the pond. It is orange. What is it?]** (fish) 6. Stretch, three sentences: **[It lives on the farm. It is big. It is brown. What is it?]** (horse)

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why does a riddle need two sentences?" (One sentence fits lots of animals: three animals live in the pond. The second sentence shows which one.)
- "Which animals have wings?" (The bird and the duck.)

✓ Closing check (with answers) (5 min)

Say each riddle twice, with **no gestures**. Pairs hold up the small card:

1. **[It lives in the house. It is small. What is it?]**
2. **[It lives in the pond. It is green. What is it?]**
3. **[It lives on the farm. It is black and white. What is it?]**

Answers: cat; frog; cow.

Vocabulary

[It has ___], **[wings]**, **[a tail]**, **[four legs]**, **[two legs]**, **[What is it?]**; review the animals, places, sizes and colours.

Differentiation

- **Support:** give the pair only the animals for one place (for example the four farm animals), so each riddle has fewer choices.
- **Stretch:** after the closing check, a child makes up a riddle for the class (said, signed, or by holding up a place card and a "has" card).

⚠ Safety

- Nothing to note beyond the usual classroom rules.

Teacher notes

- "It has" may be a different verb, or a phrase like "with it are", in your language; "it" may change with the animal or be left out. Say it the way the language says it.
- Colour clues (pink, orange, green, black and white) help most children, but a child who cannot tell some colours apart may get those riddles wrong for a reason that is not language. The one-to-one check uses riddles that need no colour.

- Blind children sort the toy animals by touch (wings, legs) and solve the riddles with the toys.

Lesson 5: Little Hill animal riddles

Unit overview - Previous: Lesson 4: It has wings

Goal: Children use what they have learned to place animals on a class poster, solve and make riddles in pairs, and show what they know in a short one-to-one check.

Length: about 30 minutes (the one-to-one check is spread over the week).

Materials

- The word card.
- The twelve large animal picture cards, the four large place cards and the four large "has" cards, stuck on the board.
- The class animal poster, the spare set of twelve small animal cards, and the twelve word labels (written by the teacher), with tape or reusable putty (teacher only).
- One small card set per pair (twelve animals, four places, four "has" cards) and one riddle strip per pair.
- **Check things:** the six new animal cards (horse, cow, sheep, pig, rabbit, bear); the four place cards; the four bear size cards; the bird, fish and horse cards; the duck, frog, fish, bear, rabbit and bird cards; the record sheet (class list with five columns).
- Ear defenders and a quiet spot.
- Optional: the toy animals, tactile place cards and tactile size cards for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. Do the four "has" gestures together, then ask **[Where does the duck live?]** and **[Where does the bear live?]**; children point to the place cards.

Warm-up: our animal poster (5 min)

Hold up a small animal card and say where it lives: **[The cow lives on the farm.]** A volunteer sticks the card on the right place on the poster (the teacher fixes it with putty). Then hold up two word labels, read each one aloud, and ask **[Which one says "cow"?]**; the volunteer points, and you stick that label beside the animal. Do six animals now; finish the other six at odd moments in the week. The poster stays on the wall.

✎ Main activity: the riddle game (14 min)

1. **Model it (2 min).** With a volunteer, show the game at the front. Think of an animal (the bear), and put two clue cards on the riddle strip: the forest place card and the four-legs "has" card. Say **[It lives in the forest. It has four legs. What is it?]** The volunteer points to an animal. If it is the rabbit, show **[no]**: two animals fit, so add a third clue, **[It is big]** (the gesture). The volunteer points to the bear: **[yes]**.

2. **Play in pairs (8 min).** Each pair lays out the twelve animal cards face up, with the place and "has" cards in a pile. The riddle-maker thinks of an animal (without touching it), puts a place card and a "has" card on the strip (or says a size or colour as the second clue), and may say the riddle. The partner points to an animal; the riddle-maker answers **[yes]** or **[no]**, and adds a clue if two animals fit. Swap after each riddle. Walk round and help with words, not with the answers.
3. **Checks begin (4 min).** While pairs keep playing, start the one-to-one check (see below) with one or two children. Carry on with the rest of the class over the week.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "When was a riddle hard to guess?" (When two animals fit both clues; for example, the forest and four legs fit the rabbit and the bear. Then you need one more clue.)
- "What clue helped you most?" (Any answer; for example, the place, because it leaves only three or four animals.)

✓ Closing check (with answers) (5 min)

Say each riddle twice, with no gestures. Pairs hold up the small card:

1. **[It lives in the house. It is brown. What is it?]**
2. **[It lives on the farm. It is small. It is white. What is it?]**
3. **[It lives in the pond. It is yellow. What is it?]**

Answers: dog; sheep; duck.

One-to-one check (about 3 minutes each child, over the week)

Use the five parts in the unit overview's Assessment section, with no gestures and no pointing. Record each part as **yes**, **with help** or **not yet**. In short:

1. Point to **[horse]**, **[rabbit]**, **[bear]** and **[pig]** among the six new animal cards (yes = four of four).
2. **[Where does the fish / the cow / the bear live?]** with the four place cards (pond, farm, forest; yes = three of three).
3. **[the small brown bear]** and **[the big black bear]** among the four bear size cards (yes = both; blind children: see the overview).
4. With the bird, fish and horse cards: **[It has wings. What is it?]** (bird), **[It has four legs. What is it?]** (horse) (yes = both).
5. With the duck, frog, fish, bear, rabbit and bird cards: **[It lives in the forest. It is big. What is it?]** (bear), **[It lives in the pond. It has four legs. What is it?]** (frog) (yes = both).

Doing it in their own way counts as **yes**. Saying a riddle aloud is a stretch and is not recorded.

Vocabulary

Review of the whole unit: the twelve animals, **[house]**, **[farm]**, **[forest]**, **[pond]**, **[It lives in the ___]**, **[big]**, **[small]**, **[It is ___]**, **[It has ___]**, **[What is it?]**, **[yes]**, **[no]**.

Differentiation

- **Support:** play the riddle game with only the animals of two places (for example the farm and the pond); the riddle-maker only puts cards on the strip and does not speak.
- **Stretch:** make a three-clue riddle and say or sign all of it; or stick a word label on the poster without help after hearing the word.

⚠ Safety

- The teacher handles the tape or putty. Children do not climb to reach the poster; put it low on the wall.

Teacher notes

- The riddle game is an information gap: only the riddle-maker knows the animal, so the partner really needs the clues.
- Some clue pairs fit two animals (forest and four legs; farm and four legs). That is part of the game: a third clue solves it.
- **Never ask about children's own pets or homes**, even in the riddle game ("Make a riddle about your dog" is not used). Riddles are about the Little Hill animal cards only.
- Blind children play with the toy animals and tactile place cards, and the partner reads the strip aloud.

Grade 2 Second Language: A Short Scene (5 lessons, about 3 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 it against your school's rules before use. Every hidden or lost thing in this unit is a class prop (a class crayon, a class book, a class bag). Children are never asked where their own things are, and nobody looks in another child's bag, tray or desk.
>
> Text-checked by three other agents (Gemini 3.8 Flash, Gemini 4 Argon and Gemini 4 Carbon); see Known gaps.

Back to the grade 2 year plan - Term 3. Builds on grade 2 term 2: Animals and Where They Live, grade 2 term 1: Things in the Classroom, and grade 1 term 3: A Picture Story with Yes/No and "Who?" Questions.

In grade 1 children listened to a picture story about Bear, Duck, Hen and Mouse and answered questions about it. In term 1 of grade 2 they learned classroom words and colours; in term 2 they learned **[It is ___]** and short describing sentences. This unit adds three place words, **[in]**, **[on]** and **[under]**, the question **[Where is ___?]**, the answer **[It is in / on / under the ___]**, the yes/no question **[Is it in / on / under the ___?]** and **[Here it is!]**. At the end, small groups act out a short picture story, "Where is the red crayon?", with simple props.

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 under the table]**, mean "say this in the language you are teaching".

English meaning	Your language	Gesture or picture to go with it
in		one hand drops into the other, cupped hand
on		one flat hand rests on top of the other fist
under		one flat hand, palm down, stays still; the other hand slides underneath it
Where is ___?		palms up, shoulders up, looking left and right
It is in / on / under the ___		point to the thing, then do the place gesture
Is it in / on / under the ___?		the place gesture, with eyebrows up
Here it is!		both hands hold up the thing
box		the class box or its picture card
(review from term 1) book, chair, table, pencil, crayon, ruler, bag, red		point to the real object or colour card
(review from grade 1) bear, duck, hen, mouse, happy, sad, Oh no!, The end		the grade 1 character actions and gestures

English meaning	Your language	Gesture or picture to go with it
(review) yes, no, thank you		as in earlier units (or the tick and cross cards)

Character actions (as in grade 1): **bear** = slow, heavy steps with big paws; **duck** = waddle, or a beak made with one hand; **hen** = peck with the head and tuck the hands in like wings; **mouse** = two fingers make whiskers by the nose.

Grammar warning: languages differ a lot here. "In", "on" and "under" may be separate little words before the noun, words after the noun, or endings on the noun; the noun itself may change after them. Some languages use one word for both "in" and "on", or different words for "on a table" and "on a wall". "Where is" may change with the thing, and "it" may be a different word for different things, or be left out. Yes/no questions are made in different ways (a question word, a change in word order, or just a questioning voice). Say every phrase the way the language really says it. Children only need to **understand** the phrases and **show** their answers; saying them is invited, never required.

Gesture warning: if thumbs up or thumbs down is rude where you live, use the tick and cross cards (or the school's usual signs) everywhere this unit says "yes or no".

The story: "Where is the red crayon?"

Six picture cards (an original story by the author, CC0, free to change; draw them simply, any style is fine):

1. Mouse sits at a table with paper, looking sad. **[Oh no! Where is the red crayon?]**
2. Duck looks into a bag. **[Is it in the bag?]** Duck shakes their head: **[No.]**
3. Hen looks at a chair. **[Is it on the chair?]** Hen shakes their head: **[No.]**
4. Bear bends down and looks under the table. **[Is it under the table? Yes! Here it is!]**
5. Bear gives Mouse the red crayon. Mouse is happy: **[Thank you!]**
6. Mouse holds up a drawing of the four friends. Everyone is happy. **[The end.]**

Draw sad and happy faces clearly (mouth shape **and** a tear for sad), not by colour. Draw the crayon with a thick black outline so it can be found without seeing red.

Big idea

We can **say where things are** with a few practised words, **ask where something is**, and use those words with gestures and props to **act out a short story together**.

Outcomes

By the end of the unit, most children can:

1. Put a class object **[in]**, **[on]** or **[under]** another object when the teacher says so, and show the matching gesture.
2. Answer **[Where is the ___?]** about a class object or a story picture by pointing, placing, gesturing or saying **[It is in / on / under the ___]**.
3. Answer **[Is it in / on / under the ___?]** with **[yes]** or **[no]**.
4. Follow the picture story: point to the story card that matches a sentence they hear.

5. Take part in a small-group scene of the story with props, in any role (speaking, acting, holding the cards or moving the props); some children also ask **[Where is ___?]** in a pair game.

Prior knowledge

- A Picture Story with Yes/No and "Who?" Questions (grade 1 term 3): **[bear]**, **[duck]**, **[hen]**, **[mouse]** and their actions; **[happy]**, **[sad]**, **[Oh no!]**, **[The end]**; answering questions about picture cards.
- Things in the Classroom (grade 2 term 1): **[book]**, **[chair]**, **[table]**, **[pencil]**, **[crayon]**, **[ruler]**, **[bag]**, the colours; **[yes]**, **[no]**, **[thank you]**; a pair game with questions.
- Animals and Where They Live (grade 2 term 2): **[It is ___]** and short two-sentence clues.
- Children who missed earlier units can still take part; every word has a card, a prop or an action.

Lessons

Keep the 1-minute greeting chant at the start of each day.

Lesson	Title	Time	Core idea
1	In, on, under	30 min	Three place words with gestures; putting class objects in, on and under
2	Where is the crayon?	30 min	**[Where is ___?]** and **[Is it ___?]** in a class hiding game
3	Where is the red crayon? (the story)	30 min	The picture story with props; ordering the story cards
4	Where is the book? (pair game)	30 min	An information-gap pair game with picture sheets
5	Our short scene	30 min	Small-group scenes with props, 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.
- **Three large gesture cards:** in, on, under (a simple drawing of a ball in a box, on a box and under a box, with the hand gesture drawn beside it).
- **The six large story picture cards** (above), big enough to see from the back of the room.
- **The class props** for the story and the hiding game: one red crayon (thick, with a black band of tape round it), one cloth or paper bag, one classroom chair, one table, one lidless box (about shoe-box size), one book and a sheet of paper for Mouse's drawing. These belong to the class, not to a child.
- **A pair tray per pair** (lessons 1, 2 and 4): a small lidless box, a book, a pencil, a crayon and a ruler, all from the classroom.
- **A small set of story cards per group of four** (lessons 3 and 5): the six story pictures, card size.

- **Picture sheets per pair** (lesson 4): sheet A and sheet B (see lesson 4), a folder or book to stand up as a screen, one blank room sheet per child and four small object cards per child (book, pencil, crayon, ruler); plus a large copy of sheet A for the closing check.
- **Per group of four or five** (lesson 5): character cards for Bear, Duck, Hen and Mouse to hold or hang on a loop of soft string (or a clip-on badge), plus a "story card holder" card for a fifth role; a paper bag, a crayon from a pair tray and a sheet of paper. Each group uses its own classroom table and one of its chairs.
- **Tick and cross cards:** one of each per child, as in earlier units.
- **Check things** (lesson 5): one box, one book, one bag, one crayon, one pencil and one ruler on a small table; story cards 2, 3 and 4; the three gesture cards; 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: a second pair tray for the lesson 4 game, a **tactile story set** (story cards with a felt crayon shape glued in the place where it is found, and raised outlines of the bag, chair and table), and the class props to hold.
- Optional: a fluent speaker's recording of the word card.

⚠ Safety and access

Safety

- **Nobody stands or climbs on chairs or tables.** "On the chair" means the crayon goes on the chair. In the story, Bear bends down or kneels to look under the table; nobody crawls under it.
- Objects in the hiding game are hidden only in the three marked places (in the bag, in the box, on or under the class chair or table), never high up, and children walk, not run.
- Pencils and crayons stay in the pair tray when not in use; nothing small enough to swallow is used.
- String loops for character cards are soft and long enough to slip off easily (or use clip-on badges); never tie them.

Privacy

- **All hidden and lost things are class props.** Never ask "Where is your bag?" or "What is in your bag?", and never use a child's own belongings. Nobody looks in another child's bag, tray or desk.
- The story is about Mouse, not about a child who lost something. If a child talks about losing something of their own, listen kindly and go back to the game.

Taking part

- **Speaking and acting are optional.** Pointing, placing props, holding up cards, signs and gestures all count. In the scenes, holding the story cards or moving the props is a full role. Never make a child speak or act alone in front of others.
- **Scenes are shown only inside the group, or to one other group if the group wants.** There is no whole-class performance and no audience of parents.
- **Movement:** every gesture has a seated version. In the hiding game a partner can carry the object, or the child points from their seat. Wheelchair users place objects on a table at the right height, and "under" can be "under the book" on a tray.
- **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 the hiding game the class answers with tick and cross cards, not shouting.

Seeing, hearing and colour

- **Colour vision:** the crayon has a black band, so it can be found without seeing red. If a child mixes up only colours, do not record it as a language gap.
- **Blind children:** place words are learned by touch: the child's hand goes in the box, on the box and under the box (ask first: "May I guide your hand?"). Use the tactile story set and the real props. Keep the check objects in fixed places and tell the child where each one is before asking.
- **Low-vision children:** large, high-contrast cards; seat them near the props.
- **Deaf or hard-of-hearing children:** keep your face visible; do the gesture every time you say the word.
- **If the language is a sign language:** place is shown with the hands in space, so the signs for "in", "on" and "under" may already show where the thing is. That is the language, and it is fine; in the check, ask the child to **place** or **point to** the object so you can see their answer.

Assessment

Lesson 5 includes a five-part check, done one-to-one (about 3 minutes each child; spread over the week). Put a box, a book, a bag, a crayon, a pencil and a ruler on a small table. Ask everything with no gesture and without pointing or looking at the answer. Record each part as **yes**, **with help** or **not yet**:

1. **Placing:** say **[Put the crayon in the box]**, **[Put the pencil on the book]** and **[Put the ruler under the book]**. Yes = three of three. (Then clear the table again.)
2. **Where is?:** while the child covers their eyes (or turns away), put the crayon in the bag and the pencil under the box. Ask **[Where is the crayon?]** (in the bag) and **[Where is the pencil?]** (under the box). The child may point, lift the bag or box, do the gesture or say it. Yes = both.
3. **Is it?:** put the ruler on the box while the child watches. Ask **[Is it under the box?]** (no) and **[Is it on the box?]** (yes). Yes = both.
4. **The story:** lay out story cards 2, 3 and 4, shuffled. Say **[It is under the table]** and ask the child to point to the card (card 4, Bear and the table). Then say **[Is it in the bag?]** and ask for the card (card 2, Duck and the bag). Yes = both.
5. **Gestures:** say **[in]**, **[on]** and **[under]** in a mixed order; the child points to the gesture card or does the gesture. Yes = three of three.

Doing it in their own way (pointing, signs, the child's usual access) counts as **yes**. "Not yet" is normal for some children; the games can be played again any time. Acting in the scene (outcome 5) and asking **[Where is ___?]** 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 10 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, Novice Low (PDF page 19): "I can provide information by answering a few simple questions", context "on very familiar topics, with the help of gestures, facial expressions, and visuals", text type "using practiced or memorized words and phrases" (outcomes 2 and 3).
    - Interpersonal, Novice Mid (PDF page 19): "I can request and provide information by asking and answering simple questions" (the pair game in lesson 4 and the hiding game in lesson 2, a stretch for some children).
    - 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" (outcome 1 and the props in lesson 5).
    - Interpretive, fictional texts, Novice Low: "I can identify memorized or familiar words in short, straightforward fictional texts and media that are supported by gestures, facial expressions, or visuals" (outcome 4, the story in lesson 3).
- 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 4 is an information gap: only one partner can see where the things are.

Known gaps and cautions

- Three other agents (Gemini 3.8 Flash at af601f7; Gemini 4 Argon and Gemini 4 Carbon at 4d5ec45) text-checked this unit on 2026-11-11 and reported no errors. 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.
- **Grammar differs:** this unit cannot say how "in", "on" and "under" work in your language (see the grammar warning). Check with a fluent speaker.
- **Word choices and the story are the author's.** The Can-Do Statements describe what learners can do; they do not list words or stories for a grade 2 class. A text search of the Novice Can-Do PDF (11 November 2026) found no line about learners acting out a scene; the nearest is an interpretive example about identifying actions described in a scene from a play (PDF page 16), which is about understanding, not acting. The scene in lesson 5 is the author's choice of activity (from the year plan), not something a source asks for.
- **Only one new noun (box) is added**; the rest are review words. Classes that did not do the term 1 unit need the classroom words first.
- **The story is very short on purpose.** Longer scenes, new characters or new hiding places are possible extensions.
- Timings are untested.

The lesson order matters: children learn the three place words with real objects (lesson 1) before asking **[Where is ___?]** in a game (lesson 2), meet the story with props (lesson 3), practise asking and answering in pairs (lesson 4), and only then act the story in small groups and do the check (lesson 5).

Lesson 1: In, on, under

Unit overview - Next: Lesson 2: Where is the crayon?

Goal: Children understand **[in]**, **[on]** and **[under]**, show them with gestures, and put class objects in, on and under other objects when the teacher says so.

Length: about 30 minutes.

Materials

- The word card.
- The three large gesture cards (in, on, under), stuck on the board.
- The class props: the red crayon (with its black band), the box, the book, the chair and the table.
- One pair tray per pair: a small lidless box, a book, a pencil, a crayon and a ruler.
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional: the class props for blind or low-vision children to hold.

Steps

✎ Opening (3 min)

Greeting chant. Hold up the book, the pencil, the crayon and the ruler, one at a time, and say each word; children point to the same thing in their pair tray. Then hold up the box and say the new word **[box]** three times; children point to their box.

Warm-up: three place words (7 min)

1. Hold up the red crayon. Put it **in** the box and say **[in]** while doing the "in" gesture (one hand drops into the other, cupped hand). Point to the "in" gesture card. Do it twice more.
2. Do the same with **[on]** (the crayon on the book; one flat hand rests on top of the other fist) and **[under]** (the crayon under the book; one flat hand stays still, the other slides underneath it).
3. **Show me.** Say **[in]**, **[on]** or **[under]** in a mixed order; children do the gesture. Start slowly, then speed up a little. Nobody is "out".
4. **What do you see?** Put the crayon in, on or under the box without speaking; children do the gesture. Then say the word together (saying it is invited, not required).

✎ Main activity: put it in, on, under (12 min)

1. **Teacher commands (6 min).** Pairs have their trays. Say one command at a time, with the gesture the first time and without it later:
    - **[Put the pencil in the box.]**
    - **[Put the crayon on the book.]**
    - **[Put the ruler under the book.]**

- **[Put the book on the box.]**
- **[Put the crayon under the box.]**
- **[Put the pencil on the book.]**

After each command, pairs put the things back in the tray. Walk round and look; if a pair is not sure, do the gesture again rather than telling them the answer. 2. **Big props (2 min).** Ask a volunteer to put the red crayon **[on the chair]**, then another to put it **[under the table]**, then **[in the box]**. Children who do not want to come to the front show the gesture from their seat. 3. **Pair turns (4 min).** One child points to a gesture card on the board (or does a gesture); the partner puts the crayon in, on or under the box. Swap after each turn. Children who want to may say the word too.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Which word was easiest to show with your hands? Why?" (Any answer; for example, "in", because the hand really goes inside.)
- "I put the crayon next to the box. Is it under the box?" (No. It is beside the box. "Under" means the box is on top of it.)

✓ Closing check (with answers) (5 min)

Put the red crayon in each place without speaking. Children show the gesture (or hold up the right finger: one for in, two for on, three for under, pointing to the gesture cards):

1. The crayon in the box.
2. The crayon under the book.
3. The crayon on the chair.

Answers: in; under; on.

Vocabulary

New: **[in]**, **[on]**, **[under]**, **[box]**, **[Put the ___ in / on / under the ___]**. Review: **[book]**, **[pencil]**, **[crayon]**, **[ruler]**, **[chair]**, **[table]**, **[red]**.

Differentiation

- **Support:** use only **[in]** and **[on]** at first, and add **[under]** when the child is ready; let a partner do the gesture together with the child.
- **Stretch:** give the partner a two-step command (**[Put the pencil in the box. Put the crayon on the book.]**), or say the place word aloud on each turn.

⚠ Safety

- Nobody stands or climbs on the chair or table: only the crayon goes on them.

- Pencils go back in the tray after each command.

Teacher notes and misconceptions

- Some children mix up **[on]** and **[under]** at first, because the two gestures use the same flat hand. Keep the gestures exactly the same each time, and say the word while you move the object.
- "Next to" is not taught in this unit. If a child puts the crayon next to the box for "under", show **[under]** again with the real box rather than saying "wrong".
- Blind children: ask "May I guide your hand?", then put their hand with the crayon in, on and under the box while you say the word.
- The pair trays and props belong to the class. Do not use children's own pencil cases or bags.

Lesson 2: Where is the crayon?

Unit overview - Previous: Lesson 1: In, on, under - Next: Lesson 3: Where is the red crayon? (the story)

Goal: Children understand **[Where is ___?]**, **[It is in / on / under the ___]**, **[Is it in / on / under the ___?]** and **[Here it is!]**, and use them in a class hiding game with one class crayon.

Length: about 30 minutes.

Materials

- The word card.
- The three large gesture cards (in, on, under), stuck on the board.
- The class props: the red crayon (with its black band), the bag, the box, the chair and the table, set out at the front where everyone can see them.
- One pair tray per pair: a small lidless box, a book, a pencil, a crayon and a ruler.
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional: the class props for blind or low-vision children to hold.

Steps

✎ Opening (3 min)

Greeting chant. Play "Show me" from lesson 1: say **[in]**, **[on]** or **[under]**; children do the gesture.

Warm-up: where is it? (7 min)

1. While everyone watches, put the red crayon under the table. Do the "Where is?" gesture (palms up, shoulders up, looking left and right) and say **[Where is the crayon?]** Point to the crayon and answer yourself: **[It is under the table.]** Do this for three places: under the table, in the bag, on the chair.
2. Now ask the class **[Where is the crayon?]** after each move; children point to the crayon and do the gesture. Some may say **[It is in the bag]**.
3. **Is it?** Put the crayon on the chair. Ask **[Is it in the bag?]**; children hold up the cross card (**[no]**). Ask **[Is it on the chair?]**; children hold up the tick card (**[yes]**). Do two more.
4. Pick up the crayon, hold it up with both hands and say **[Here it is!]** Children copy the gesture.

✎ Main activity: the hiding game (12 min)

1. **Class game (7 min).** The six hiding places are: in the bag, in the box, on the chair, under the chair, on the table, under the table. Point to each one and say it. One volunteer (the finder) covers their eyes or turns to face the wall. Another volunteer (the hider) quietly puts the red crayon in one of the six places, while the class watches. The finder turns round and asks a question, for example **[Is it in the bag?]**, by saying it, or

by pointing to the bag and the "in" gesture card while the teacher says it. The class answers with tick or cross cards. After three questions, if the crayon is not found, the class shows the place with the gesture. When the finder finds it, everyone says **[Here it is!]** Play four or five rounds with different children.
2. **Pairs (5 min).** One child closes their eyes; the partner puts the pencil in, on or under the box or the book in the pair tray. The first child asks **[Where is the pencil?]** or **[Is it under the book?]** (or points to a place); the partner answers **[yes]** or **[no]** with the cards, or says **[It is in the box]**. Swap after each turn.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How did the questions help the finder?" (Each **[no]** took a place away, so there were fewer places left to look.)
- "Why do we only hide the crayon in the six places we said?" (So that nobody climbs or looks in other people's things, and so the game is fair.)

✓ Closing check (with answers) (5 min)

Hide the crayon while everyone watches, then ask. Children hold up tick or cross cards, or point:

1. The crayon is under the table. **[Is it on the table?]**
2. The crayon is still under the table. **[Is it under the table?]**
3. The crayon is in the bag. **[Where is the crayon?]** (children point to the bag and do the "in" gesture)

Answers: no (cross); yes (tick); in the bag.

Vocabulary

New: **[Where is ___?]**, **[It is in / on / under the ___]**, **[Is it in / on / under the ___?]**, **[Here it is!]**. Review: **[in]**, **[on]**, **[under]**, **[bag]**, **[box]**, **[chair]**, **[table]**, **[crayon]**, **[pencil]**, **[yes]**, **[no]**.

Differentiation

- **Support:** in the class game, use only three hiding places (in the bag, on the chair, under the table); the finder may point instead of asking.
- **Stretch:** the finder asks every question aloud; or the hider answers with a whole sentence: **[No. It is not in the bag.]** (only if the teacher has added "not" to the word card).

⚠ Safety

- The hiding places are low and in plain sight of the class. Nobody climbs, crawls under furniture or runs; the finder bends down or kneels to look under the chair or table.

- The crayon is hidden only in the class bag and box, never in a child's bag, tray, desk or pocket.

Teacher notes and misconceptions

- Children often answer **[Where is ___?]** with **[yes]** or **[no]**. Show the difference with the gestures: "Where is?" is palms up and needs a place; "Is it?" has eyebrows up and needs yes or no.
- This is total physical response at first (children answer with actions) and becomes a simple information gap in the class game, because the finder does not know where the crayon is.
- Blind children can be the finder with a partner as guide: the partner places their hand near each place they ask about. Tell them the six places first, and keep the props in the same spots every time.

Lesson 3: Where is the red crayon? (the story)

Unit overview - Previous: Lesson 2: Where is the crayon? - Next: Lesson 4: Where is the book? (pair game)

Goal: Children follow a six-picture story, "Where is the red crayon?", told with real props, join in with the gestures and lines, and put the story cards in order.

Length: about 30 minutes.

Materials

- The word card.
- The six large story picture cards (see the unit overview).
- The three large gesture cards (in, on, under), stuck on the board.
- The class props: the red crayon (with its black band), the bag, the chair, the table, and a sheet of paper for Mouse's drawing.
- One small set of the six story cards per group of four, shuffled.
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional: the tactile story set for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. Play one round of the hiding game from lesson 2 with the red crayon.

Warm-up: our four friends (7 min)

1. Hold up story card 6 (all four friends), point to each character and say the name with the grade 1 action: **[bear]** (slow, heavy steps), **[duck]** (waddle or a hand beak), **[hen]** (peck and tuck the hands in), **[mouse]** (finger whiskers). Children copy the action, seated or standing.
2. Review **[happy]** (big smile, both hands up), **[sad]** (one finger draws a tear), **[Oh no!]** (hands on cheeks) and **[thank you]**. Say a word; children show it.

✎ Main activity: the story (12 min)

1. **First telling (4 min).** Tell the story slowly with the large cards, and act each line with the real props (put the crayon under the table before you start, without saying anything):
    - Card 1: sit at the table with the paper, look sad. **[Oh no! Where is the red crayon?]**
    - Card 2: look into the bag. **[Is it in the bag?]** Shake your head. **[No.]**
    - Card 3: look at the chair. **[Is it on the chair?]** Shake your head. **[No.]**
    - Card 4: bend down and look under the table. **[Is it under the table? Yes! Here it is!]**

    - Card 5: give the crayon to "Mouse" (put it on the paper). **[Thank you!]** Look happy.
    - Card 6: hold up the paper. **[The end.]**
2. **Second telling (4 min).** Tell it again. This time children do the gestures with you (Oh no!, Where is?, in, on, under, Here it is!, happy) and say any lines they want to. Pause before **[No.]** and **[Here it is!]** so children can answer.
3. **Story cards in order (4 min).** Groups of four lay out their six small story cards. Say the line for one card at a time, in story order, without showing the big card; the group finds the card and puts it in a row. At the end, show the big cards in order so groups can check.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "How did Mouse feel at the start, and at the end? Why?" (Sad at the start, because the red crayon was lost; happy at the end, because Bear found it and Mouse could draw.)
- "Who found the crayon, and where was it?" (Bear; under the table.)

✓ Closing check (with answers) (5 min)

Say one line from the story. Groups hold up the story card that matches it:

1. **[Is it on the chair? No.]**
2. **[Yes! Here it is!]**
3. **[Thank you!]**

Answers: card 3 (Hen and the chair); card 4 (Bear and the table); card 5 (Bear gives Mouse the crayon).

Vocabulary

Review of the whole story: **[bear]**, **[duck]**, **[hen]**, **[mouse]**, **[Oh no!]**, **[Where is the red crayon?]**, **[Is it in the bag?]**, **[Is it on the chair?]**, **[Is it under the table?]**, **[yes]**, **[no]**, **[Here it is!]**, **[thank you]**, **[happy]**, **[sad]**, **[The end]**.

Differentiation

- **Support:** give the group only cards 1, 4 and 6 to order (beginning, finding, end).
- **Stretch:** after the cards are in order, a child points to each card and says its line, or two children "read" the story to each other from the cards.

⚠ Safety

- When you act card 4, bend down or kneel; do not crawl under the table. Children copy the same way.

Teacher notes and misconceptions

- The story is told the same way every time. Children learn the lines by hearing them many times; they do not need to read them.
- Some children think the crayon "was in the bag first". If so, go back through cards 2 and 3 with the props: Duck looked and said **[No]**; Hen looked and said **[No]**.
- This story is about Mouse. Do not ask children to tell about things they have lost.
- Blind children follow the story with the tactile story set: guide their hand to the felt crayon on card 4 when you say **[Here it is!]**

Lesson 4: Where is the book? (pair game)

Unit overview - Previous: Lesson 3: Where is the red crayon? (the story) - Next: Lesson 5: Our short scene

Goal: Children ask and answer **[Where is the ___?]** in an information-gap pair game, placing small object cards on a picture of a room.

Length: about 30 minutes.

Materials

- The word card.
- The three large gesture cards (in, on, under), stuck on the board.
- The class props: the bag, the box, the chair and the table, at the front (children point to them as picture words in the game).
- **Picture sheets per pair:**
  - **Sheet A:** a simple drawing of a room with a table, a chair, a box and a bag. The book is on the chair, the pencil is under the table, the crayon is in the bag (its tip sticks out), and the ruler is in the box (its end sticks out).
  - **Sheet B:** the same room. The book is on the table, the pencil is in the box (its tip sticks out), the crayon is under the chair, and the ruler is in the bag (its end sticks out).
- **One blank room sheet per child:** the same room with the table, chair, box and bag, and nothing else.
- **Four small object cards per child:** a book, a pencil, a crayon and a ruler (simple drawings, big enough to hold and place).
- A large copy of sheet A for the closing check.
- A folder or book per pair to stand up as a screen.
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional, for blind or low-vision children: two pair trays (box, book, pencil, crayon, ruler) instead of sheets (see Teacher notes).

Steps

✎ Opening (3 min)

Greeting chant. Say three lines from the story and let children do the gestures: **[Is it in the bag?]**, **[Is it on the chair?]**, **[Is it under the table? Yes! Here it is!]**

Warm-up: the blank room (7 min)

1. Hold up a blank room sheet. Point to the table, the chair, the box and the bag, and say each word; children point to the same thing on their own blank sheet.
2. Say **[Put the book on the chair.]** Children put their book card on the chair on their blank sheet. Do three more: **[Put the pencil under the table]**, **[Put the crayon in the box]**, **[Put the ruler in the bag]**.

3. Children clear their sheets.

✎ Main activity: the pair game (12 min)

1. **Model it (2 min).** With a volunteer, show the game at the front. You hold sheet A behind a folder screen; the volunteer has a blank room sheet and the four object cards. The volunteer asks **[Where is the book?]** (or holds up the book card with the "Where is?" gesture). You answer **[It is on the chair]**, pointing to the "on" gesture card and to the class chair. The volunteer puts the book card on the chair.
2. **Round 1 (4 min).** In each pair, child A has sheet A behind the screen; child B has a blank sheet and the four object cards. B asks about each object; A answers in words, or by pointing to a gesture card and a class prop (the bag, box, chair or table at the front). B places each card.
3. **Compare (1 min).** A lays sheet A beside B's sheet. Are the four things in the same places? Fix any that are not.
4. **Round 2 (4 min).** Swap: child B now has sheet B behind the screen, and child A has a blank sheet and the cards.
5. **Compare (1 min)** as before.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "Why did you need to ask your partner?" (Because only your partner could see the picture. You did not know where the things were.)
- "What helped when a word was hard?" (Any answer; for example, pointing to the gesture card, doing the gesture, or pointing to the real chair.)

✓ Closing check (with answers) (5 min)

Show the large copy of sheet A. Children answer by pointing to the gesture cards and props, doing the gesture, or with tick and cross cards:

1. **[Where is the ruler?]**
2. **[Where is the pencil? Is it on the table?]**
3. **[Where is the crayon?]**

Answers: in the box; no (cross), it is under the table; in the bag.

Vocabulary

Review: **[Where is the ___?]**, **[It is in / on / under the ___]**, **[Put the ___ in / on / under the ___]**, **[book]**, **[pencil]**, **[crayon]**, **[ruler]**, **[table]**, **[chair]**, **[box]**, **[bag]**, **[yes]**, **[no]**.

Differentiation

- **Support:** play with only two objects (the book and the pencil); the child who answers may point only, and the teacher says the words with them.

- **Stretch:** the child who answers uses a whole sentence each time (**[It is under the table]**); or the pair makes its own sheet by drawing the four things in new places, and plays again.

⚠ Safety

- Pencil and crayon here are paper cards; no sharp objects are needed for this lesson.

Teacher notes and misconceptions

- This is an information gap: only one partner can see where the things are, so the other really needs to ask. That is the point of the game; do not let children look over the screen.
- On the sheets, things that are "in" the bag or box stick out a little, so they can be drawn. Tell the class: "It is in the bag; you can just see the end."
- Some children answer with the object name only ("chair"). Accept it, then show the place gesture and say the whole answer with them.
- **Blind or low-vision children** play with a real pair tray instead of sheets: the partner who knows puts the real things in, on or under the box and the book in one tray behind a screen; the child who asks places the things in a second tray as they are told, then compares the two trays by touch.

Lesson 5: Our short scene

Unit overview - Previous: Lesson 4: Where is the book? (pair game)

Goal: Children act out "Where is the red crayon?" in small groups with simple props, in any role they choose, and show what they know in a short one-to-one check.

Length: about 30 minutes (the one-to-one check is spread over the week).

Materials

- The word card.
- The six large story picture cards and the three large gesture cards, stuck on the board.
- The class props: the red crayon (with its black band), the bag, the box, the chair and the table (for the closing check).
- **Per group of four or five:** one set of character cards (Bear, Duck, Hen, Mouse, on soft string loops or clip-on badges) and a "story card holder" card; one small set of the six story cards; a paper bag; a crayon from a pair tray; a sheet of paper. The group uses its own classroom table and one of its chairs as the other props.
- **Check things:** one box, one book, one bag, one crayon, one pencil and one ruler on a small table; story cards 2, 3 and 4; the three gesture cards; the record sheet (class list with five columns).
- Tick and cross cards (one of each per child).
- Ear defenders and a quiet spot.
- Optional: the tactile story set and the class props for blind or low-vision children.

Steps

✎ Opening (3 min)

Greeting chant. Tell the story once with the big cards; children do the gestures and say any lines they like.

Warm-up: roles and props (7 min)

1. Show the five roles: **Mouse**, **Duck**, **Hen**, **Bear** and the **story card holder**, who holds up each story card at the right time and may say **[The end]**. Say clearly: "Every role is a real part of the scene. You can act, speak, hold the cards or move the props. Nobody has to speak."
2. Groups choose roles. In a group of four, the teacher or a neighbour group's card holder can help with the cards. A child who does not want a role helps set up the props.
3. Each group sets out its props: the paper goes on its table, the crayon goes under the table (put there before the scene starts), the bag goes on the floor by the table, and a chair stands nearby.

✎ Main activity: our short scene (12 min)

1. **Practise (6 min).** Each group acts the story twice, then swaps roles if they want to and acts it again. The story card holder shows each card; the actors do the actions and say their lines, or the card holder says the lines while the actors act. Walk round and help with words and order, not with acting.
2. **Show (4 min).** Groups that want to pair up with one other group and show their scene to each other; the watching group joins in with **[Here it is!]** and claps or shows "happy". Groups that do not want to show act the scene once more for themselves. There is no whole-class performance.
3. **Checks begin (2 min).** While groups tidy up and act again, start the one-to-one check (see below) with one or two children. Carry on with the rest of the class over the week.

✓ Discussion questions (with answers) (3 min)

In the school language:

- "What did your group do well together?" (Any answer; for example, waiting for the card holder, or helping someone who forgot a line.)
- "How did the props help?" (Any answer; for example, they showed **in**, **on** and **under** without needing words, and made it easy to remember where to look.)

✓ Closing check (with answers) (5 min)

Use the class props. Children answer by pointing, doing the gesture, or with tick and cross cards:

1. Put the red crayon in the box. **[Where is the crayon?]**
2. With the crayon still in the box: **[Is it under the box?]**
3. Hold up story card 4. **[Who? Bear, Duck or Hen?]** (do the three actions) and **[Where is the crayon?]**

Answers: in the box; no (cross); Bear, and the crayon is under the table.

One-to-one check (about 3 minutes each child, over the week)

Use the five parts in the unit overview's Assessment section, with no gestures and no pointing. Record each part as **yes**, **with help** or **not yet**. In short:

1. **[Put the crayon in the box]**, **[Put the pencil on the book]**, **[Put the ruler under the book]** (yes = three of three).
2. With the crayon hidden in the bag and the pencil under the box: **[Where is the crayon?]** (in the bag), **[Where is the pencil?]** (under the box) (yes = both).
3. With the ruler on the box: **[Is it under the box?]** (no), **[Is it on the box?]** (yes) (yes = both).
4. With story cards 2, 3 and 4: **[It is under the table]** (card 4), **[Is it in the bag?]** (card 2) (yes = both).

5. **[in]**, **[on]**, **[under]** in a mixed order: the child points to the gesture card or does the gesture (yes = three of three).

Doing it in their own way counts as **yes**. Acting in the scene and asking **[Where is ___?]** are not recorded.

Vocabulary

Review of the whole unit: **[in]**, **[on]**, **[under]**, **[box]**, **[Where is ___?]**, **[It is in / on / under the ___]**, **[Is it in / on / under the ___?]**, **[Here it is!]**, the story lines, **[bear]**, **[duck]**, **[hen]**, **[mouse]**, **[Who?]**, **[happy]**, **[sad]**, **[yes]**, **[no]**, **[thank you]**, **[The end]**.

Differentiation

- **Support:** the card holder (or the teacher) says every line while the actors act; a child may act only the finding part (Bear).
- **Stretch:** the group changes the story: a different lost thing (the pencil or the ruler) or different places (in the box, on the table), and acts the new version; or a child says all the lines of one character.

⚠ Safety

- **Nobody stands or climbs on a chair or table, and nobody crawls under one.** Bear bends down or kneels to look under the table.
- Character-card loops are soft and long enough to slip off easily, or use clip-on badges.
- Leave walking space between groups.

Teacher notes and misconceptions

- Acting is optional, and so is speaking. A child who holds the cards, moves the props or helps set up has taken part. Never ask a child to act alone in front of the class.
- Some groups will want to act the scene again and again; that is good practice. Others finish quickly; offer the stretch (a new lost thing or new places).
- The scene is about Mouse's crayon. Do not let groups use a child's own belongings as the lost thing.
- Blind children can play any role. Bear's partner guides them to the table; the card holder can use the tactile story set and say each line.