

Mathematics Level 1

Chapter 4 — Measurement: comparing, measuring length, and time · 3 subtopics · 3 CDs

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Comparing and ordering length, mass, capacity and duration

Mathematics 1 · Level 1 · Chapter 4 — Measurement · Subtopic 4A. Teaching order: 9 of 15, after 2C.

Owens: VC2M1M01 — “compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning”. Quoted verbatim. Source: Victorian Curriculum F–10 Version 2.0, Mathematics (VCAA), Level 1, Measurement, VC2M1M01, via `maths_1.json` (VCAA export retrieved 2026-07-29).

Achievement standard (extract): “Students compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating their reasoning.” Quoted verbatim from the same source.

Elaborations drawn on: VC2M1M01.E01, .E02, .E03, .E04. VC2M1M01.E05 is not used — see the Teacher note.

Linked bank: 240 MCQs keyed to VC2M1M01 — digital asset only, not printed (TOC D12).

All task wording is read aloud by the teacher; responses are an order made with real objects, a drawing, or a short sentence (TOC D17). Student-facing text runs from “What we are learning” to “Answers”; the front matter above and the Teacher note at the end are for the teacher.

What we are learning

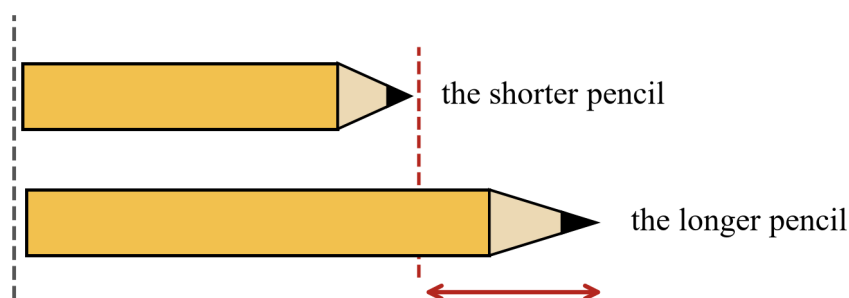
First we look at two things. Then we compare them. Then we put things in order.

Four things to compare. They are attributes. Attributes are things you can see or feel about a thing.

- **Length** — how long something is. A train is long. A spoon is short.
- **Mass** — how heavy something is. A rock is heavy. A leaf is light.
- **Capacity** (say: kuh-PAS-i-tee) — how much a container can hold. A bucket holds a lot. A spoon holds a little.
- **Duration** (say: dyoo-RAY-shun) — how much time something takes. Lunch takes a long time. A clap takes a short time.

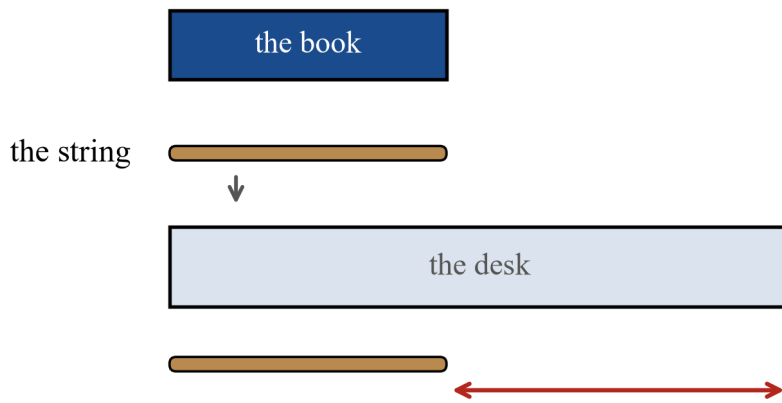
Two ways to compare.

1. Put the things side by side. Look. Now you can see which is longer and which is shorter.



Two pencils side by side, lined up at one end.

2. Use something to help. A piece of string can hold a length. Then you can take the length to another place.

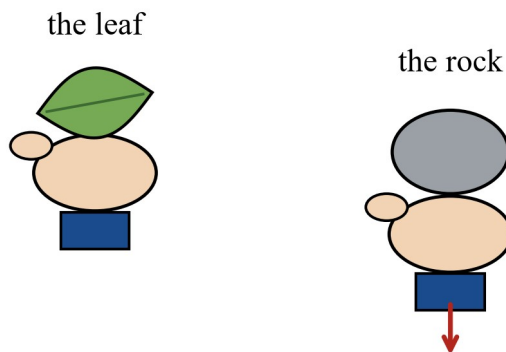


A piece of string is the same length as the book. Then the string is put next to the desk.

Put things in order. Order 3 or more things: shortest to longest. Lightest to heaviest. From the one that holds the least to the one that holds the most.

New words:

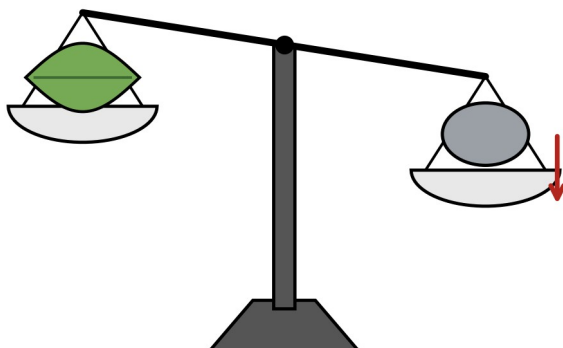
- **Hefting** — hold one thing in each hand. Feel which one is heavier.



the rock goes down

One hand holds a leaf. The other hand holds a rock. The rock goes down.

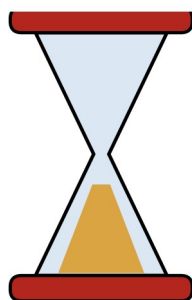
- **Balance scales** — a thing with two sides. Put one object on each side. The heavy side goes down.



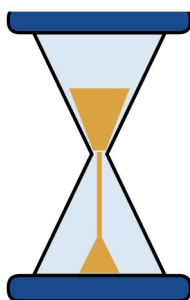
the heavy side goes down

Balance scales with one thing on each side. The heavier side goes down.

- A **sand timer** has sand that runs from the top to the bottom. When all the sand is at the bottom, the timer is done.



the red timer
done



the blue timer
not done

Two sand timers. The red timer is done. The blue timer is not done.

Give a reason. Say how you know. “The B side went down, so B is heavier.” That is a reason.

Worked examples

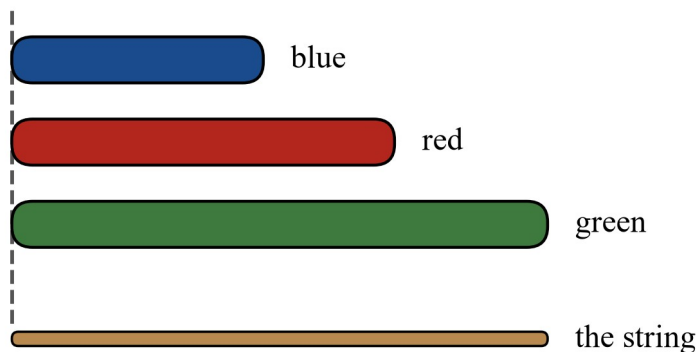
Example 1 — order ribbons by length, with a piece of string

Find out: Which ribbon is the longest? Will it fit in the box?

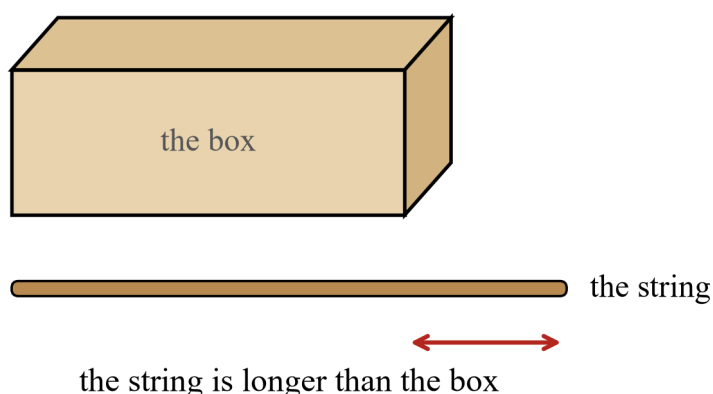
The green ribbon is on the art table. The red ribbon is on the reading table. The blue ribbon is on the teacher’s desk. The ribbons are not together. You have a piece of string and a box.

You need: a piece of string, 3 ribbons, a box.

What we do	Why
1. The ribbons are not together, so we cannot line them up.	We need a helper to compare the lengths.
2. Hold the string on the green ribbon. Put your finger on the end of the ribbon.	The string is now the same length as the green ribbon. The string holds the length.
3. Take the string to the red ribbon. The string is longer than the red ribbon.	The green ribbon is longer than the red ribbon.
4. Take the string to the blue ribbon. The blue ribbon is shorter than the string.	The green ribbon is longer than the blue ribbon. The green ribbon is the longest.
5. Put the string on the red ribbon, then hold it next to the blue ribbon. The red ribbon is longer than the blue ribbon.	Now we know the whole order.
6. Order the ribbons: blue, red, green.	Blue is the shortest. Green is the longest. Red is in between.
7. Will the green ribbon fit in the box? Hold the string next to the box. The string is longer than the box.	The green ribbon is longer than the box. It will not fit.



Three ribbons lined up at one end: blue, red and green. The string is as long as the green ribbon.



The string is next to the box. The string is longer than the box.

Reason: “We could not line up the ribbons, so we used the string. The string showed that green is the longest and blue is the shortest. The string was longer than the box, so the green ribbon will not fit.”

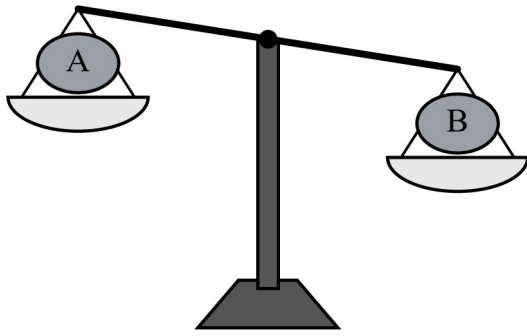
Example 2 — order rocks by mass, with hefting and balance scales

Find out: Which rock is the heaviest? Put the rocks in order.

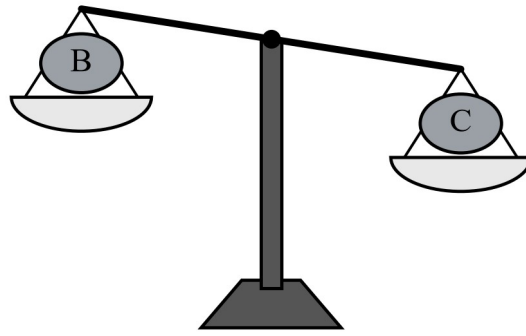
You have 3 rocks: A, B and C.

You need: 3 rocks, balance scales.

What we do	Why
1. Heft the rocks, two at a time. Heft A and B. Then B and C. Then A and C.	Hefting uses your hands. You feel which is heavier.
2. Your hands say C is the heaviest and A is the lightest. But hands can be wrong.	We need a sure way to check.
3. Put rock A on one side of the balance scales. Put rock B on the other side. The B side goes down.	The side that goes down is the heavier side. B is heavier than A.
4. Put rock B on one side and rock C on the other side. The C side goes down.	C is heavier than B.
5. Order the rocks: A, B, C.	A is the lightest. C is the heaviest. B is in between.



B is heavier than A



C is heavier than B

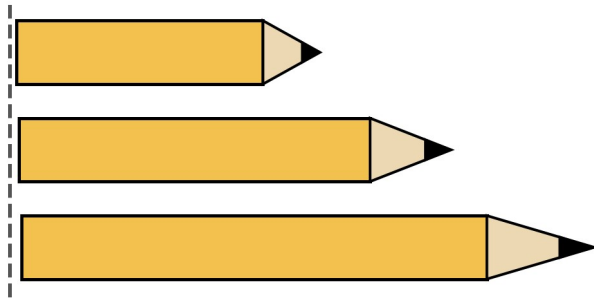
Two balance scales. In one, the B side goes down. In the other, the C side goes down.

Reason: “We put A and B on the scales. The B side went down, so B is heavier than A. We put B and C on the scales. The C side went down, so C is heavier than B. So the order is A, then B, then C.”

Now you try

With your teacher

Q1. Take 3 pencils. Line them up on the desk at one end.



Three pencils lined up at one end.

- Which pencil is the shortest?
- Which pencil is the longest?
- Say how you know.

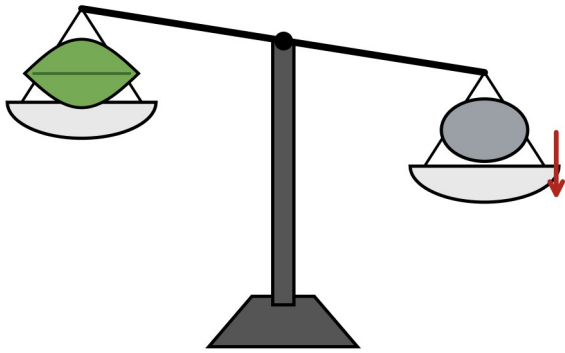
Q2. Your teacher gives you a piece of string.

- Find 2 things in the room that are shorter than the string.
- Find 1 thing that is longer than the string.
- Show a friend how you know.

Q3. Heft an eraser, a book and a shoe.

- Put them in order from lightest to heaviest.
- How did you decide?

Q4. Look at the balance scales your teacher shows you.

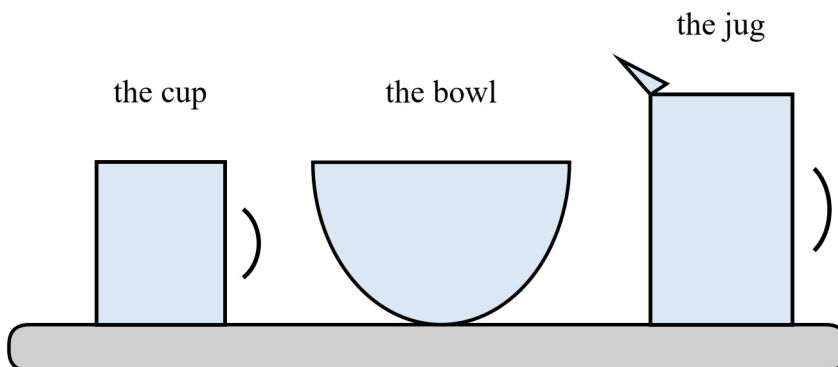


the heavy side goes down

Balance scales with one thing on each side. The heavier side goes down.

- (a) Which object is heavier?
- (b) Which object is the lightest?
- (c) Say: “The ___ side went down, so ___ is heavier.”

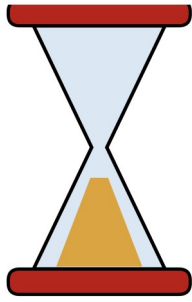
Q5. You need: a cup, a bowl, a jug, water and a tray.



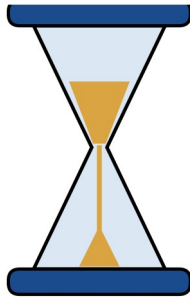
A cup, a bowl and a jug on a tray.

- (a) Think first: which container will hold the most? Which will hold the least?
- (b) Fill the cup with water. Pour the water into the bowl. Does the bowl hold it all?
- (c) Fill the bowl with water. Pour the water into the jug. Does the jug hold it all?
- (d) Put the containers in order: holds the most to holds the least. Say how you decided.

Q6. You need: 2 sand timers.



the red timer
done



the blue timer
not done

Two sand timers. The red timer is done. The blue timer is not done.

- (a) Turn both sand timers over at the same time.
- (b) Which timer is done first?
- (c) Which timer takes more time? Say how you know.

On your own

Q7. Take 3 crayons or 3 sticks.

- (a) Put them in order from shortest to longest.
- (b) Draw the order.
- (c) Write: “The ___ is the longest.”

Q8. Your desk and the teacher’s desk are not together. Use a piece of string. Which desk is longer? Say how you know.

Q9. Find 3 rocks on the ground.

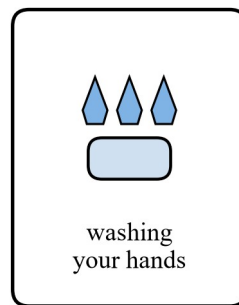
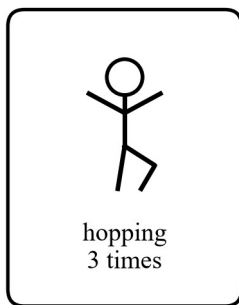
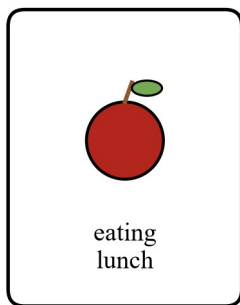
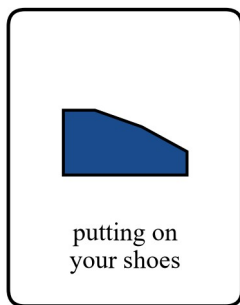
- (a) Heft them. Put them in order from lightest to heaviest.
- (b) Say how you decided.

Q10. Ben says: “The big box is heavier than the small rock.” Is Ben right? How can you find out?

Q11. You need: a cup, a jar and a bowl.

- (a) Pour water to find out which one holds the most.
- (b) Draw the order: holds the most to holds the least.
- (c) Write: “The ___ holds the most.”

Q12. Putting on your shoes. Eating lunch. Hopping 3 times. Washing your hands.



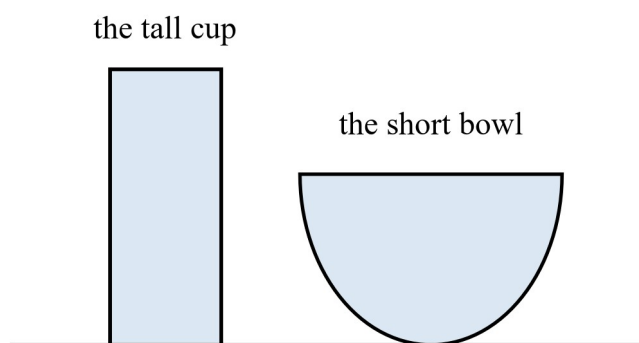
Putting on your shoes, eating lunch, hopping 3 times, washing your hands.

- (a) Which takes the most time?
- (b) Which takes the least time?
- (c) Talk about your answers with a friend.

Q13. Match each word to one of the attributes. Draw a line.

longer mass heavier duration holds more length takes more time capacity

Q14. Mia says: “The tall cup holds the most.” Is Mia right? Test it with water. What do you find?



A tall cup and a short bowl.

Answers

- Q1.** (a), (b) Answers will not all be the same. Check: the pencils are lined up at one end. (c) One answer: I lined them up at one end. The shortest pencil does not go as far.
- Q2.** Answers will not all be the same. Check: each thing is put next to the string. (c) One answer: I put the string next to each thing and looked.
- Q3.** (a) Answers will not all be the same. One order: eraser, shoe, book. (b) One answer: I hefted them in my hands.
- Q4.** (a) The object on the side that went down. (b) The object on the side that went up. (c) The ____ side went down, so ____ is heavier.
- Q5.** (a) Answers will not all be the same. (d) Answers will not all be the same. One order: jug, bowl, cup. Check: the water was poured from one container to the next.
- Q6.** (b), (c) Answers will not all be the same. Check: both timers were turned over together. One answer: The red timer was done first, so the blue timer takes more time.
- Q7.** Answers will not all be the same. Check: the crayons are lined up at one end, and the drawing matches the order.
- Q8.** One answer: Hold the string next to your desk. Put your finger on the end. Then hold the string next to the teacher's desk. See which desk is longer than the string.
- Q9.** Answers will not all be the same. Check: the rocks were hefted two at a time, or balance scales were used.
- Q10.** Not always. A big box can be empty and light. A small rock can be heavy. Find out: heft them, or put them on balance scales.
- Q11.** Answers will not all be the same. Check: the water was poured to test each one.
- Q12.** Answers may not all be the same. One answer: Eating lunch takes the most time. Hopping 3 times takes the least time.
- Q13.** longer — length; heavier — mass; holds more — capacity; takes more time — duration.
- Q14.** Not always. A tall cup can hold less than a short bowl. Test: fill the cup and pour the water into the bowl. Look at which one holds more.
-

Teacher note

Curriculum map. This subtopic owns VC2M1M01 in full (TOC §3, §4). The content description is delivered through comparisons of real objects and everyday events, not through the elaborations one by one (D11): E01 (a piece of string used to indirectly compare the lengths of several objects, deciding which will fit within a space, comparative language for the order — shortest, short, longer, longest) → Example 1, Q1, Q2, Q7, Q8; E02 (ordering the mass of 3 or more objects using hefting and balance scales, comparative language, and how the order was decided) → Example 2, Q3, Q4, Q9, Q10; E03 (pouring from one container to another to compare and order the capacity of 3 or more containers, which holds the most/least and those in between) → Q5, Q11, Q14; E04 (sand timers compared to order duration) → Q6; E05 is not used — see the E05 exclusion below. Both halves of the CD are delivered: direct comparison (objects side by side — Q1, Q3, Q4) and indirect comparison through a third object (the string in Example 1, Q2 and Q8; the balance scales in Example 2; the water carried between containers in Q5 and Q11); and events are ordered as well as objects (duration — Q6, Q12). The CD ends “communicating reasoning”, so every item scores the explanation as well as the order (TOC §3 Chapter 4 note; TOC §7) — reason prompts appear in Q1c, Q2c, Q3b, Q4c, Q5d, Q6c, Q8, Q9b, Q10, Q12c and Q14, and both worked examples close with a spoken reason.

4A is comparison, not measurement (TOC §3). No units are counted anywhere in this subtopic: counting informal units is 4B (VC2M1M02), next in the teaching sequence, and metric units are not taught at all (D7 — they are Level 3 content). Duration is ordered by watching events start and finish together (Q6, Q12); clock faces are Level 2 (VC2M2M04) and named time units belong to 4C (VC2M1M03), so neither appears here (D3).

E05 exclusion. VC2M1M01 .E05 (investigating situations where Aboriginal and Torres Strait Islander Peoples estimate, compare and communicate measurements — for example the duration of seasons, the length of animal tracks, or capacity through water management such as water-carrying vessels and rock holes) is not covered, per CONTENT_POLICY Rule 1 (DJB 2026-08-15): Aboriginal and Torres Strait Islander content is deliberately excluded from ClassBasics books because accuracy cannot be guaranteed. This is an ACCEPTED exclusion, not a coverage gap: the CD itself is delivered in full through E01–E04 and class contexts (D11). This note stands in for the §2A entry TOC.md must carry; TOC.md is read-only from this authoring seat.

Materials. Pieces of string; 3 or more ribbons or strips of paper; balance scales; rocks; small everyday objects for hefting (erasers, books, shoes); containers of different sizes (cups, bowls, jugs, jars); water and trays; 2 sand timers that run for different times; pencils, crayons, sticks; a box for the fit test in Example 1.

Assumed Foundation skill, rehearsed only: attributes and direct comparison (VC2MFM01) — rehearsed in the opening side-by-side step, not taught as new and not assessed as a Level 1 outcome (D3).

No calculation is required. This subtopic uses no number sentences and no operation symbols; orders are read off the comparisons themselves. Numbers appear only as small counts (3 rocks, hopping 3 times) well inside the Level 1 ranges (D8, D9).

Level 2 destination (named only, not taught — D3): VC2M2M01 (measure and compare objects based on length, capacity and mass using uniform informal units). The comparing and ordering secured here is what that unit work stands on; the informal unit itself is taught next in 4B (VC2M1M02), which carries the measurement chain forward (TOC §5).

Assessment. Chapter checkpoint T4 (18 marks across VC2M1M01, VC2M1M02, VC2M1M03): part practical and teacher-observed (comparison and measuring), part teacher-read (TOC §7). This subtopic’s share of T4 should be practical and teacher-observed, and must score the reasoning as well as the order.

Data note. Every context in this section is a real everyday object (ribbons, string, rocks, cups, bowls, jugs, jars, shoes, erasers, books, crayons, desks, sand timers) or a routine event of a child’s day (lunch, putting on shoes, washing hands, hopping); no external datum is asserted, so no source line is required beyond the curriculum quotation in the front matter (TOC §6). Children’s names (Ben, Mia) are invented, per §6. Level checks: no metric units (D7), no chance language (D6), no numbers beyond the CD’s range and no operation symbols (D8, D9), no clock faces (D3).

Vocabulary gate record (DJB 2026-08-18). Student-facing text — everything from “What we are learning” to “Answers” — is at or below the Yr1 ladder ceiling (rank 1), verified with `load_ladder/check_text/tokenize` from `S:\Files\projects\mcq-system\reports\vocab_level_check.py`. Result: CLEAN. Curriculum-exempt words retained per VOCABULARY_LEVEL.md exemption 1, each defined at first use where student-facing: *attribute(s)*, *object(s)*, *compare*, *mass*, *capacity*, *duration*, *heft/hefting/hefted*, *balance scales*, *container(s)*, *piece*, *longer*, *heaviest*, *decide/decided* (all verbatim in the VC2M1M01 content description or its elaborations), plus the heading word *example(s)*, fixed by the house scaffold and the curriculum word *example* (VC2M1M01 .E05). Flagged general words were fixed by at-level swaps with meaning and mathematical content unchanged: *lighter* → *the lightest*, *yard* → *ground*, the name *Lily* → *Mia* (the ladder places *lily* at Yr7), the label *Question* → *Find out*, and *depend* removed from the Answers. Pandoc div directives (`::: {custom-style=...}`) are typesetting markup, not student-facing text, and are excluded from the checked text. The front matter and this Teacher note are teacher-facing metadata and are not vocabulary-gated (WORD_LEVEL_POLICY Rule 3). Cross-check with the whole-file build gate (`_pool/vocab_check.py`, ceiling Yr1, `--cds maths_1.json`) confirms: its only flags inside the student-facing region are *examples* and *heft/hefted*, inflections of the curriculum words *example* (VC2M1M01 .E05) and *hefting* (VC2M1M01 .E02) missed by the gate’s literal-form exemption; all other build-gate flags in this file sit in the teacher-facing front matter and Teacher note.

Measuring length with uniform informal units, used end to end

Mathematics 1 · Level 1 · Chapter 4 — Measurement · Subtopic 4B. Teaching order: 10th of 15, after 4A.

Owens: VC2M1M02 — “measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end”. Quoted verbatim. Source: Victorian Curriculum F–10 Version 2.0, Mathematics (VCAA), Level 1, Measurement, VC2M1M02, via maths_1.json (VCAA export retrieved 2026-07-29).

Achievement standard (extract): “They measure the length of shapes and objects using uniform informal units.” Quoted verbatim from the same source.

Elaborations drawn on: VC2M1M02.E01, .E02, .E03, .E04 — all four.

Linked bank: 192 MCQs keyed to VC2M1M02 — digital asset only, not printed (TOC D12).

All task wording is read aloud by the teacher; responses are a numeral, a drawing or a short sentence (TOC D17). Student-facing text runs from “What we are learning” to “Answers”; the front matter above and the Teacher note at the end are for the teacher.

What we are learning

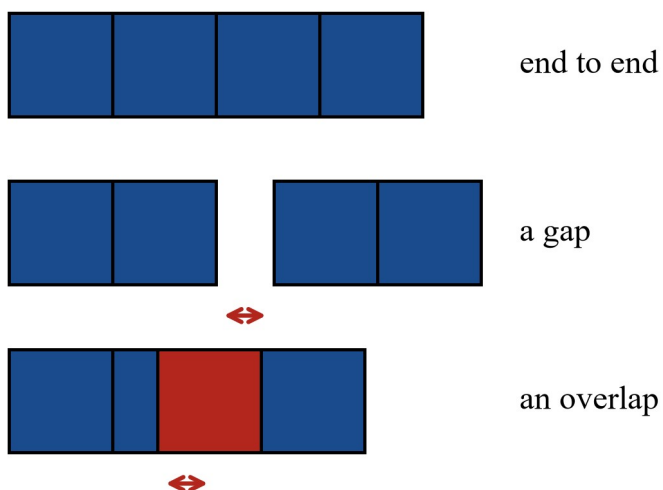
We are learning to measure. To **measure** (say: mez-er) is to find out how long something is.

The length of a thing is how long it is. We find the length of desks, books, mats and rooms.

We measure with units. A **unit** is one thing we use to measure with. One block is a unit. One pencil is a unit. To find a length, we use many of the same unit.

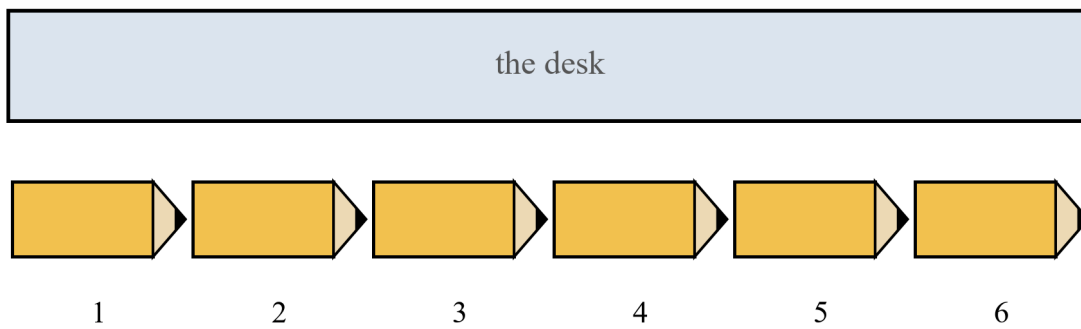
The units must be uniform. **Uniform** means all the same. All the blocks are the same size. All the pencils are the same size. If the units are not the same, the count will not work.

Put the units end to end. Start at one end. Put each unit next to the last one. The units touch. No **gaps** and no **overlaps**. A **gap** is an empty space between two units. An **overlap** is when one unit goes on top of the next unit. Gaps and overlaps change the count.



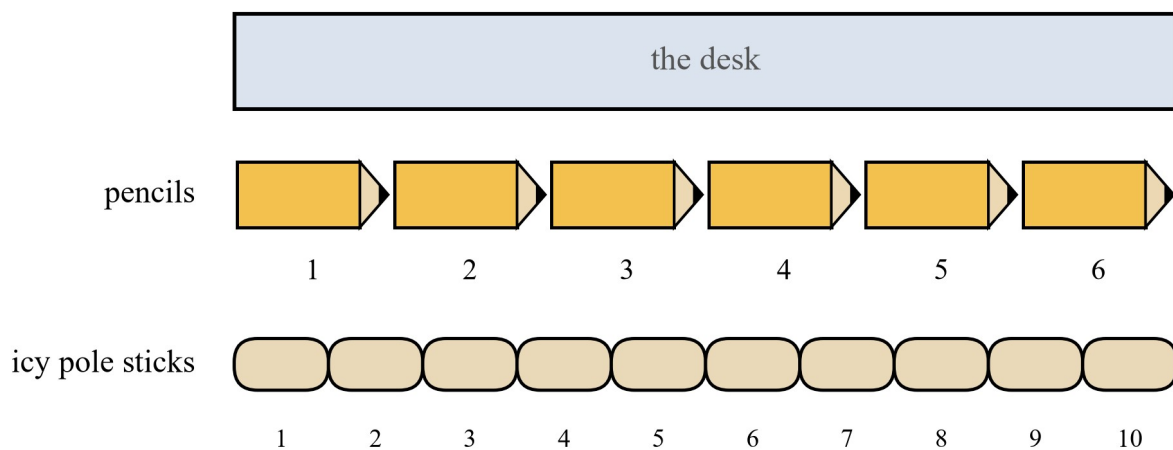
Three rows of blocks. The first row is end to end. The next row has a gap. The last row has an overlap.

Count the units. The count is the length. This desk is 6 pencils long. 6 is the length of the desk.



A desk, with 6 pencils in a line under it. The desk is 6 pencils long.

A different unit gives a different count. The same desk is 6 pencils long. It is 10 icy pole sticks long. An icy pole stick is shorter than a pencil, so we need more of them. Both counts are right! A short unit gives a big count. A long unit gives a small count.



The same desk, two ways. It is 6 pencils long and 10 icy pole sticks long.

New words:

- **measure** — to find out how long something is
- **length** — how long something is
- **unit** — one thing we use to measure with
- **uniform** — all the same
- **end to end** — each unit touches the last one
- **gap** — an empty space between two units
- **overlap** — when one unit goes on top of the next unit

Worked examples

Example 1 — measure a desk two ways

How long is Mia's desk?

You need: pencils and icy pole sticks.

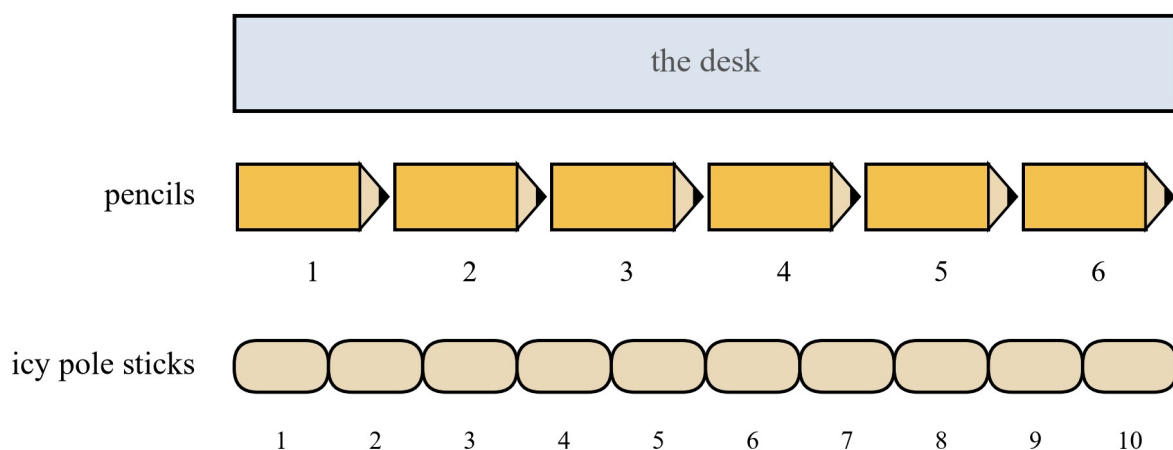
What we do

Why

1. Start at one end of the desk. Put down one pencil.

We always start at one end.

What we do	Why
2. Put each pencil end to end. The pencils touch. No gaps. No overlaps.	All the pencils are the same unit. End to end keeps the count right.
3. Go on to the other end. Count the pencils: 1, 2, 3, 4, 5, 6. The desk is 6 pencils long.	The count is the length.
4. Now measure the same desk with icy pole sticks. End to end. No gaps. No overlaps. Count them: 10 . The desk is 10 icy pole sticks long.	Same desk. New unit.
5. Why is the count 10 now and not 6? An icy pole stick is shorter than a pencil. Short units give a big count.	A different unit gives a different count. Both counts are right.



The same desk, two ways. It is 6 pencils long and 10 icy pole sticks long.

Measuring Mia's desk two ways

pencils |—|—|—|—|—|—| 1 2 3 4 5 6

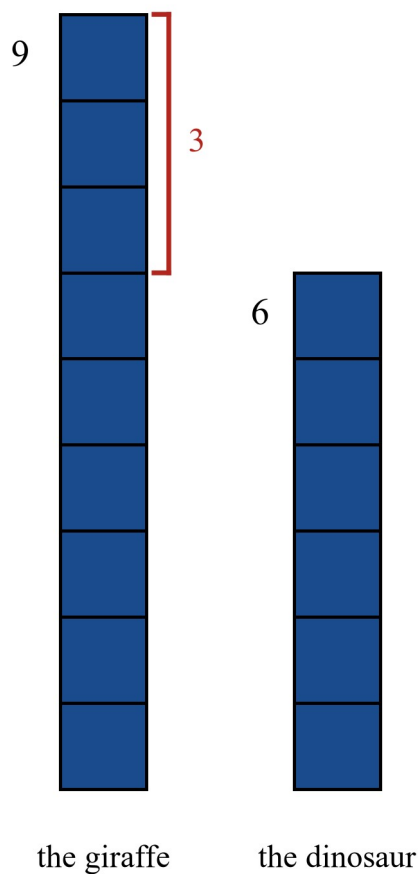
icy pole sticks |—|—|—|—|—|—|—|—|—|—|—|—| 1 2 3 4 5 6 7 8 9 10

Example 2 — which toy is taller? Stack blocks

Which toy is taller, the giraffe or the dinosaur?

You need: blocks, a toy giraffe and a toy dinosaur.

What we do	Why
1. Stand the giraffe by the wall. Stack blocks next to it. Use the same blocks. Put each block on top of the last one.	Uniform units, end to end.
2. Stop when the stack is as tall as the giraffe. Count the blocks: 9. The giraffe is 9 blocks tall.	The count tells us how tall it is.
3. Do the same thing for the dinosaur. Count the blocks: 6. The dinosaur is 6 blocks tall.	Same unit. Same way.
4. Which is taller? 9 is more than 6. The giraffe is taller.	We look at the two counts.
5. How much taller? $9 - 6 = 3$. The giraffe is 3 blocks taller than the dinosaur.	We can say how much more.



$$9 - 6 = 3$$

The giraffe is 9 blocks tall. The dinosaur is 6 blocks tall. $9 - 6 = 3$.

the giraffe ■■■■■■■■ 9 blocks the dinosaur ■■■■■■ 6 blocks

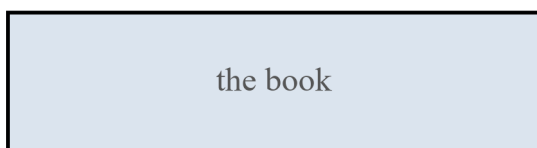
9 is more than 6. $9 - 6 = 3$

Now you try

With your teacher

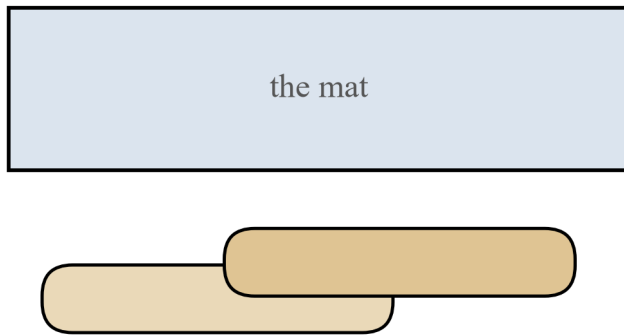
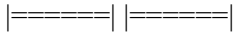
Q1. Look at this row of blocks. It finds the length of a book. What is wrong? Fix it.

■■■■■



5 blocks in a row under a book. There is a gap between two blocks.

Q2. Sam made this row of icy pole sticks to measure the mat. What is wrong? Fix it.



2 icy pole sticks on the mat. They overlap.

Q3. Measure the book with glue sticks. Put them end to end. No gaps. No overlaps.

You need: a book and glue sticks.

(a) Count. The book is glue sticks long.

(b) Draw the row of glue sticks.

Q4. Measure the mat two ways: with shoes and with pencils.

You need: a mat, shoes and pencils.

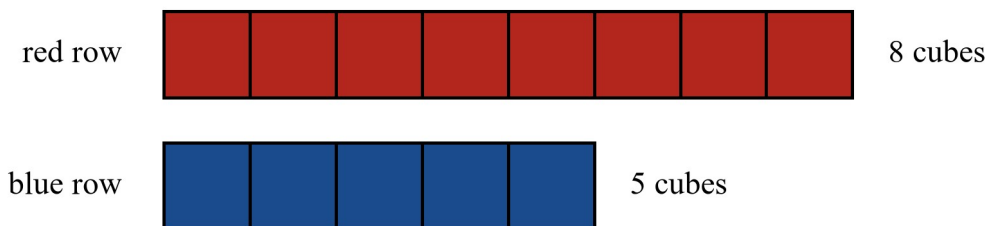
(a) Shoes:

(b) Pencils:

(c) Which count is more? Why? Talk about it.

Q5. Look at the two rows of cubes.

red row ■ ■ ■ ■ ■ ■ ■ ■ 8 cubes blue row ■ ■ ■ ■ ■ 5 cubes



A red row of 8 cubes and a blue row of 5 cubes.

(a) Which row is longer?

(b) How many more cubes? $8 - 5 = \square$

Q6. Footsteps! Measure from the door to the window with your footsteps.

You need: you and a friend.

(a) Count your footsteps:

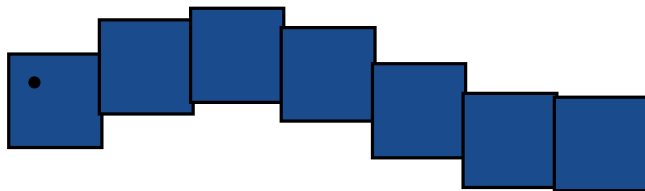
(b) Your friend counts too:

(c) Are the counts the same? Why or why not? Talk about it.

On your own

Q7. The snake is made of cubes. How many cubes long is the snake?

■ ■ ■ ■ ■ ■ ■ ■

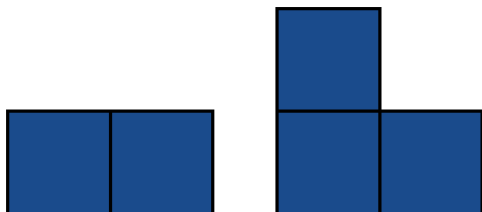
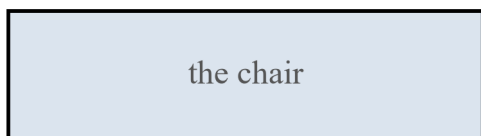


A snake made of 7 cubes.

The snake is cubes long.

Q8. Ava wants to find how long the chair is with blocks. Look at her picture. What are the two things that are wrong?

■ ■ ■ ■ ■ ■



Blocks under a chair. There is a gap, and one block is on top of another block.

Q9. The crayon is 5 cubes long. The glue stick is 8 cubes long.

- (a) Which is longer?
- (b) How much longer? $\square - \square = \square$

Q10. Mia's bag is 4 straws long. It is 9 cubes long.

- (a) Why are the two counts different?
- (b) Which unit is longer, a straw or a cube?

Q11. How tall are you? Stack cubes up to the top of your head.

You need: lots of cubes and a wall.

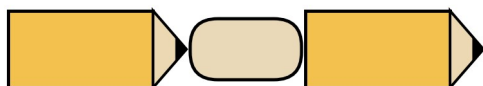
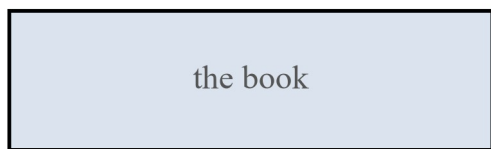
- (a) I am cubes tall.
- (b) Draw your cube tower.
- (c) A friend does the same. Who is taller?

Q12. You and a friend measure from the door to the mat with footsteps. Your count: □. Your friend's count: □.

Both counts are good. Why are they not the same?

Q13. Ben finds the length of his book with pencils and icy pole sticks. Look at his row. Is Ben right? Say why. Fix the row.

[=====][==][=====]



A row with a pencil, then an icy pole stick, then a pencil.

Ben used a pencil, then an icy pole stick, then a pencil.

Q14. Choose a unit. Choose a thing in the room. Measure it.

You need: your unit and your thing.

(a) Tell the class: "The ____ is ____ s long."

(b) Now choose a longer unit. Measure the same thing again. Will the count go up or down? Why?

Answers

Q1. There is a gap between two blocks. Fix it: move the blocks so they touch.

Q2. The sticks overlap: one stick goes on top of the next stick. Fix it: put the sticks end to end.

Q3. Answers will not all be the same. Check: glue sticks end to end, no gaps, no overlaps; the count matches the row.

Q4. Answers will not all be the same. (c) The count with pencils is more. A pencil is shorter than a shoe, so we need more pencils.

Q5. (a) The red row. (b) $8 - 5 = 3$.

Q6. Answers will not all be the same. (c) Not the same. Your footsteps and your friend's footsteps are not the same length. Steps that are not the same are like different units.

Q7. 7 cubes.

Q8. Two things: there is a gap between two blocks, and one block sits on top of another block (an overlap).

Q9. (a) The glue stick. (b) $8 - 5 = 3$.

Q10. (a) A straw and a cube are not the same length. A different unit gives a different count. (b) The straw.

Q11. Answers will not all be the same. Check: cubes stacked one on top of the next; the count matches the stack. (c) Answers will not all be the same.

Q12. Your footsteps are not the same length as your friend's footsteps. That is like using different units.

Q13. No. The units are not uniform: Ben used pencils and an icy pole stick in one row. Fix it: use all pencils, or all icy pole sticks.

Q14. Answers will not all be the same. (b) The count will go down. A long unit gives a small count.

Teacher note

Curriculum map. This subtopic owns VC2M1M02 in full (TOC §3, §4). The content description is delivered through hands-on measuring of classroom objects and a shape, not through the elaborations one by one (D11). The CD's own requirement — uniform units used end-to-end, with the recognition that this is needed — is taught outright in “What we are learning” and rehearsed in Example 1, Q1–Q3, Q8, Q13; E01 (two different units on one object, and why the counts differ) → Example 1, Q4, Q10, Q14; E02 (lay copies of one unit, count, say which is longer and how much longer; why no gaps or overlaps) → Example 2, Q1, Q2, Q5, Q8, Q9; E03 (a distance in footsteps, different counts, why) → Q6, Q12; E04 (blocks stacked to compare the height of two objects) → Example 2, Q11. The CD's “shapes and objects” is met by the objects throughout and by the cube-snake shape in Q7. Every “why”, “say why” and “talk about it” prompt is part of the item, not an add-on: the reasoning that units must be uniform and end-to-end, and that a different unit gives a different count, is scored (TOC §7: items score the strategy and the explanation, and a rubric that scores only the answer fails this CD).

Teaching sequence. One short sequence built on materials, across about two lessons: (1) direct comparison (rehearsing 4A) — which pencil is long, which is short; (2) the need for a unit — “how long is the desk? let's find out with pencils”; (3) the rules modelled — same unit, end to end, no gaps, no overlaps (Example 1); (4) two units on the same object — why the counts differ (Example 1, Q4, Q10); (5) measuring and comparing with blocks, including height (Example 2, Q11); (6) footsteps — same distance, different counts, why (Q6, Q12); (7) error analysis — find the gap, the overlap, the mixed units (Q1, Q2, Q8, Q13).

The big idea carried beyond this book. TOC §3 and §5 name 4B as the subtopic that carries the most weight outside this book: a measurement is a count of uniform units iterated without gaps or overlaps, and changing the unit changes the count (VC2M1M02 . E01, . E03). That idea survives the move to metric units at Level 3 (D7) and runs all the way to VCE (TOC §5). Do not collapse 4B into “count the blocks” with one unit and one right answer: the two-unit tasks (Example 1, Q4, Q10, Q14) and the footsteps tasks (Q6, Q12) are where the concept is delivered. Q6 and Q12 are also

the first honest meeting with measurement variability — the same distance, two good counts, and a reason for the difference (TOC §5, implicit prerequisite 2).

Cross-subject link. VC2 Science F–2 VC2S2I03 requires informal measurement in the same years and never teaches it; 4B is where it is done (TOC §5, implicit prerequisite 1).

Materials. Icy pole sticks; pencils; straws; glue sticks; books; shoes; blocks; connecting cubes (unifix/centi-cubes); a toy giraffe and a toy dinosaur or any two toys of different heights; a mat; wall space for the Q11 stack. Every task names its materials (“You need”) per TOC §6.

Assumed Foundation skill, rehearsed only: attributes and direct comparison (VC2MFM01) — long/short comparing, rehearsed in step (1) of the teaching sequence and in Q5, not taught as new and not assessed as a Level 1 outcome (D3).

Also drawn on (already taught, in the recommended sequence): counting to 120 — 1A (VC2M1N01), used to count units; addition and subtraction within 20 and the +, −, = symbols — 2A (VC2M1N04), used in the “how many more” steps (Example 2, Q5, Q9); comparing and ordering length — 4A (VC2M1M01), taught immediately before 4B (D5), which gives students long/short language before they attach counts to it. No new calculation is taught here.

Level 2 destination (named only, not taught — D3): VC2M2M01 — measuring and comparing objects by length, capacity and mass with uniform informal units, and smaller units for accuracy (taught in `_build2`). The uniform-unit idea secured here is what formal metric units at Level 3 then stand on (D7, TOC §5).

Assessment. Chapter checkpoint T4 (18 marks across VC2M1M01, VC2M1M02, VC2M1M03): part practical and teacher-observed (comparison and measuring), part teacher-read (calendar and duration) (TOC §7). The 4B item in T4 should score the method (uniform units, end to end, no gaps, no overlaps) and the explanation (why the counts differ), not the count alone (TOC §3 Chapter 4 note).

Data note. Every referent in this section is a real everyday object — desks, pencils, icy pole sticks, books, shoes, blocks, cubes, straws, glue sticks, a crayon, a bag, a chair, a mat, toys, footsteps; the children’s names (Mia, Sam, Ava, Ben) are invented, which is fine (TOC §6). All counts are scenario values constructed for the example or task; no external datum is asserted, so no source line is required beyond the curriculum quotation in the front matter (TOC §6). All counts stay within the Level 1 ranges: numbers within 20 for every calculation (D8), operation symbols limited to +, −, = (D9), no metric units anywhere (D7), no chance language (D6).

First Nations note. None of the elaborations of VC2M1M02 carries Aboriginal and Torres Strait Islander content (TOC D16 names only VC2M1M01.E05 and VC2M1M03.E05 for this chapter), so no §2A exclusion note is needed in this subtopic.

Vocabulary gate record (DJB 2026-08-18). Student-facing text — everything from “What we are learning” to “Answers” — is at or below the Yr1 ladder ceiling (rank 1), verified with `load_ladder/check_text/tokenize` from `S:\Files\projects\mcq-system\reports\vocab_level_check.py`. Result: CLEAN. Every ladder flag in the student-facing region resolves to the curriculum’s own words, retained per VOCABULARY_LEVEL.md exemption 1 and each defined at first use in student-facing text: *measure*, *measuring*, *unit(s)*, *uniform*, *different*, *longer*, *gaps* and *overlaps* (all verbatim in the VC2M1M02 content description or its elaborations), with *length* and *end to end* at or under the ceiling in their own right, and three inflections of those curriculum words — the heading’s *examples* (from elaboration *example*), and singular *gap* and *overlap* beside E02’s plurals. The `::: {custom-style="Source Code"}` lines are pandoc rendering directives, not prose, and are excluded from the checked text. Unplaced tokens (the invented names *Sam* and *Ava*, the pronunciation aside *mez-er*, *why*) are not violations. No general word above Yr1 remains. The front matter and this Teacher note are teacher-facing metadata and are not vocabulary-gated (WORD_LEVEL_POLICY Rule 3).

Duration and sequence of events: years, months, weeks, days and hours

Teacher reference (not read by students). Level 1 · Measurement · Chapter 4 · 4C. Owns VC2M1M03.

Content description (verbatim): *describe the duration and sequence of events using years, months, weeks, days and hours.* **Achievement standard (extract, verbatim):** *Students compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating their reasoning.*

Elaborations drawn on: VC2M1M03.E01, .E02, .E03, .E04. (VC2M1M03.E05 is an excluded dot point — see the Teacher note at the end of this subtopic and the front-of-book note.) **Linked digital asset:** 288 MCQs keyed to VC2M1M03 in the question bank (a linked digital asset, not reprinted in this book).

Source: Victorian Curriculum F–10 Version 2.0, Mathematics, Level 1 — VC2M1M03, its elaborations and its achievement-standard extract, quoted verbatim from the VCAA export carried in maths_1.json (VCAA export retrieved 2026-07-29).

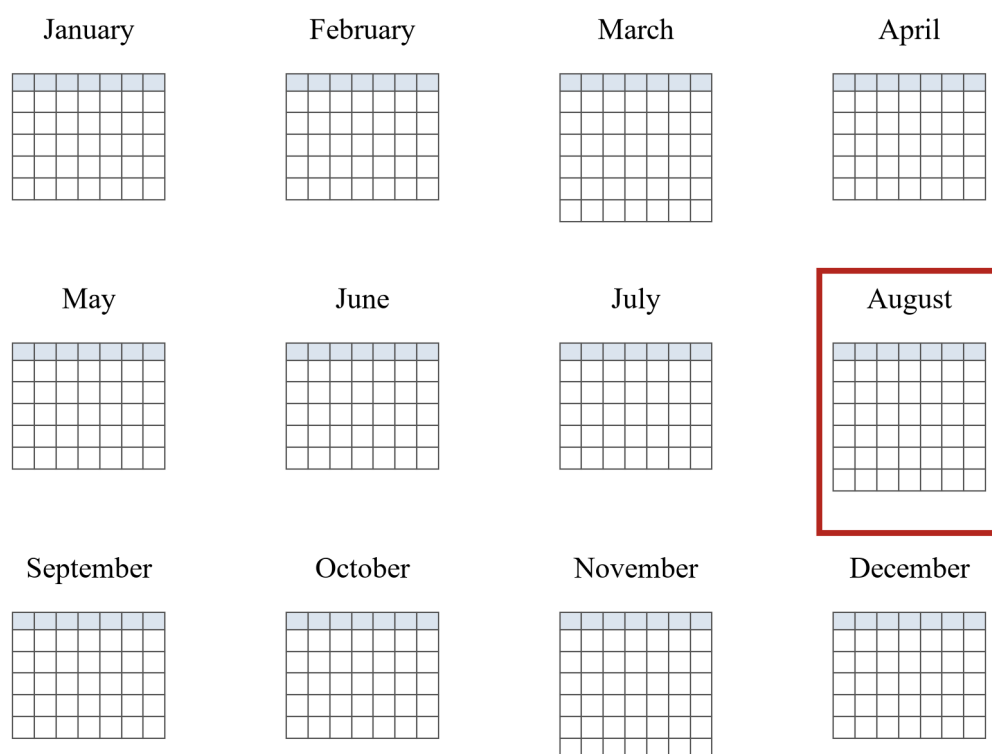
Words we use

duration — how long something takes. A clap takes a short time. A tree takes a long time to grow.

sequence — the order that things happen in. First this. Then that.

calendar — something that shows all the days of the year, in months and weeks.

The 12 months are the names of the parts of a year. In order, they are January, February, March, April, May, June, July, August, September, October, November and December.



A calendar for the year. The 12 months are in order. August has a red ring.

In this book, the week starts on Monday. This is how calendars in Australia show the week.



The 7 day cards in order, Monday to Sunday.

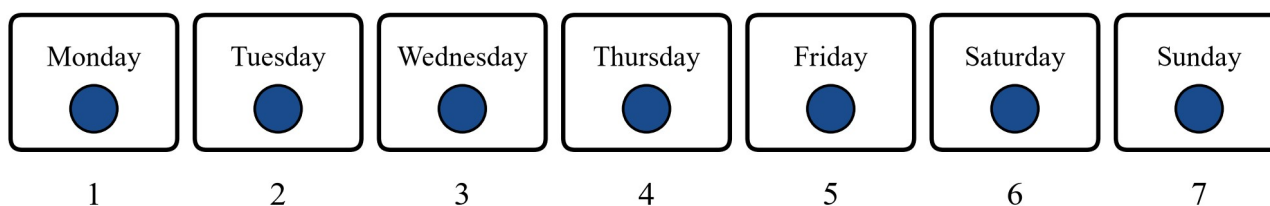
Teaching sequence (for the teacher)

Each task in this subtopic is read aloud by the teacher. The students listen, look, say, do and draw.

Materials: one wall calendar for the year 2026; 7 day-of-the-week cards (Monday to Sunday); 12 month cards (January to December); 5 unit cards (*hour, day, week, month, year*); string and pegs; sticky tape; 4 picture cards of one day (get up, walk to school, lunchtime, bed); counters.

Step 1 — Say the days (rehearse, do not re-teach). The days of the week and the times of the day were taught at Foundation (VC2MFM02). Lay the 7 day cards out, Monday to Sunday. Say the days together. Ask: What day is today? What day was yesterday? What day will it be tomorrow?

Step 2 — Make a week. 7 days make 1 week. Put a counter on each day card as you count them: 1, 2, 3, 4, 5, 6, 7. Hold up 7 fingers. A week is longer than a day.



7 days make 1 week

Seven day cards, Monday to Sunday, each with a blue dot. The numbers 1 to 7 count the days. 7 days make 1 week.

Step 3 — Make a month. Open the calendar at August 2026. Point and count the days together: August has 31 days. A month is longer than a week. Find the weeks that run across the page.

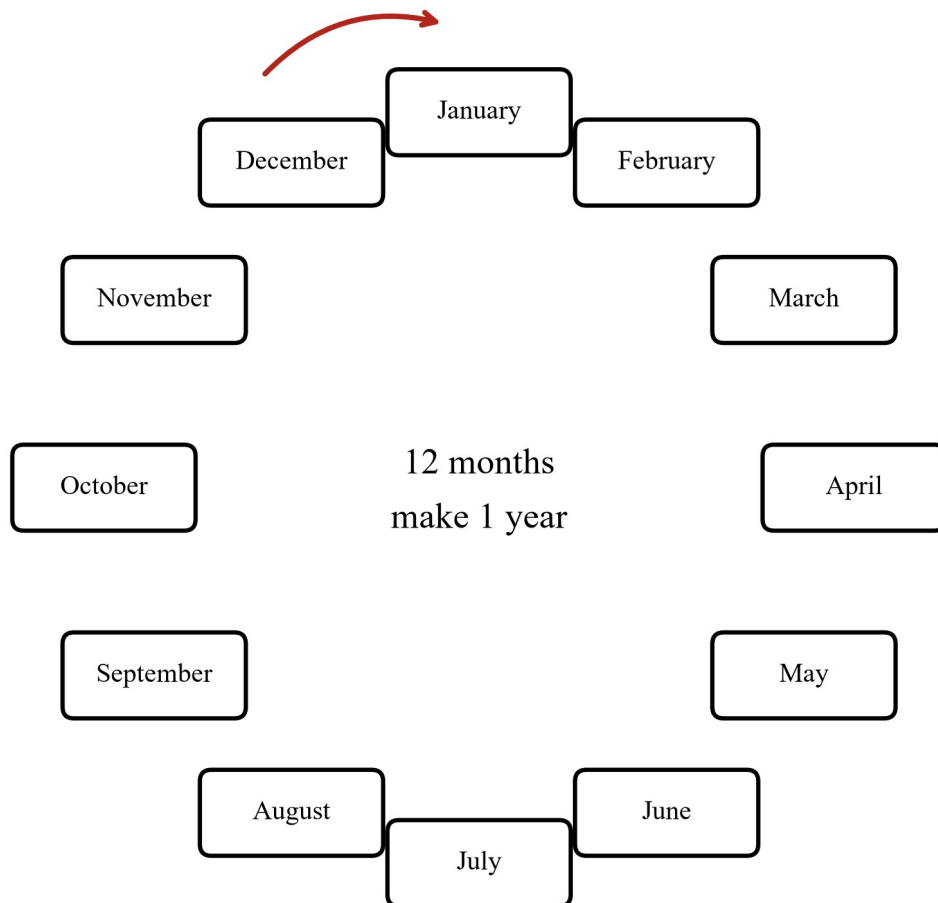
August 2026

	M	T	W	T	F	S	S
						1	2
1 week	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						

August has 31 days

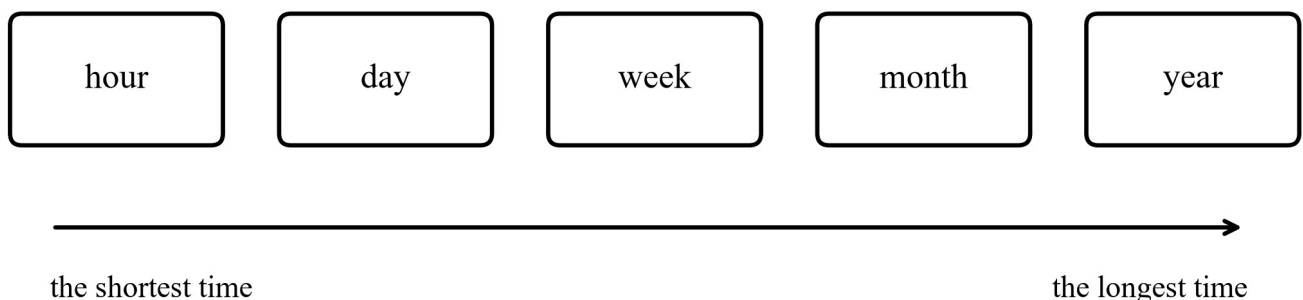
August 2026 on a calendar, Monday first. The weeks run across the page. One row is 1 week. The 31 has a red ring. August has 31 days.

Step 4 — Make a year. Put the 12 month cards in a ring, January to December, and stick the ends together with the sticky tape. Count them: 12 months make 1 year. A year has 365 days. There are 24 hours in 1 day. After December comes January again, and a new year starts. The months go round and round.



The 12 month cards in a ring, January to December. A red arrow goes from December back to January. 12 months make 1 year.

Step 5 — Order the units. Lay out the 5 unit cards. Which takes the shortest time? (*hour.*) Which takes the longest time? (*year.*) Order the cards: hour, day, week, month, year. Match each card to a real thing: a walk to school takes less than an hour; it takes a day for the sun to rise and fall and rise again (as in VC2M1M03 . E04).



The 5 unit cards in order: hour, day, week, month, year. The arrow goes from the shortest time to the longest time.

Source: calendar facts — Gregorian calendar; day counts and weekday alignment for 2026 verified against a real calendar 2026-08-19 (2026 is not a leap year; 2028 is). The walk-to-school and sun-rise examples are VCAA's own, from elaboration VC2M1M03 . E04 (VCAA export retrieved 2026-07-29).

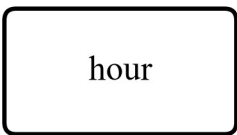
Worked examples

Example 1 — with help

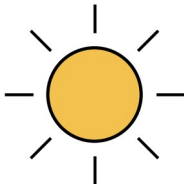
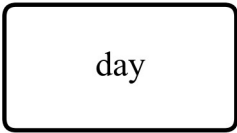
Put the 5 time units in order, from the shortest time to the longest time. Match each one to a real thing.

Things you need: the 5 unit cards; the day cards; the 2026 wall calendar.

Working	Why
Lay out the unit cards: <i>hour, day, week, month, year</i> .	Say each one.
<i>hour</i> — the shortest time.	A walk to school takes less than an hour.
<i>day</i> — it takes more time than an hour.	It takes a day for the sun to rise and fall and rise again.
<i>week</i> — it takes more time than a day. 1 week = 7 days.	Count out 7 day cards to check.
<i>month</i> — it takes more time than a week.	August 2026 has 31 days.
<i>year</i> — the longest time. 1 year = 12 months.	From your last birthday to your next birthday is about 1 year.
Order: hour, day, week, month, year.	Say the order together.



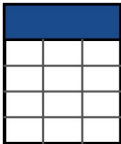
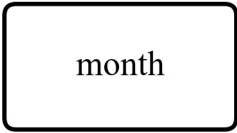
a walk to school



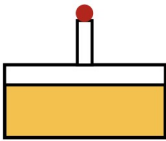
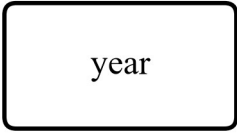
the sun rises and falls



7 days



August has 31 days



from one birthday to the next

Hour, day, week, month and year in order, each matched to a real thing: a walk to school, the sun, 7 days, a calendar page and a birthday cake.

Example 2 — with help

Part A. Put the pictures of Mia’s day in order on a timeline. Part B. What comes after December?

Things you need: the string; 4 picture cards (get up, walk to school, lunchtime, bed); the 2026 wall calendar.

Working	Why
Look at the 4 picture cards. What does Mia do first?	She gets up.

Working

Put the cards on the string, from left to right: get up, walk to school, lunchtime, bed.

Say: Mia gets up **first**. **Next** she walks to school. **Next** she has lunch. She goes to bed **last**.

Find December on the calendar.

What month comes next? January.

The months go round and round, every year.

Why

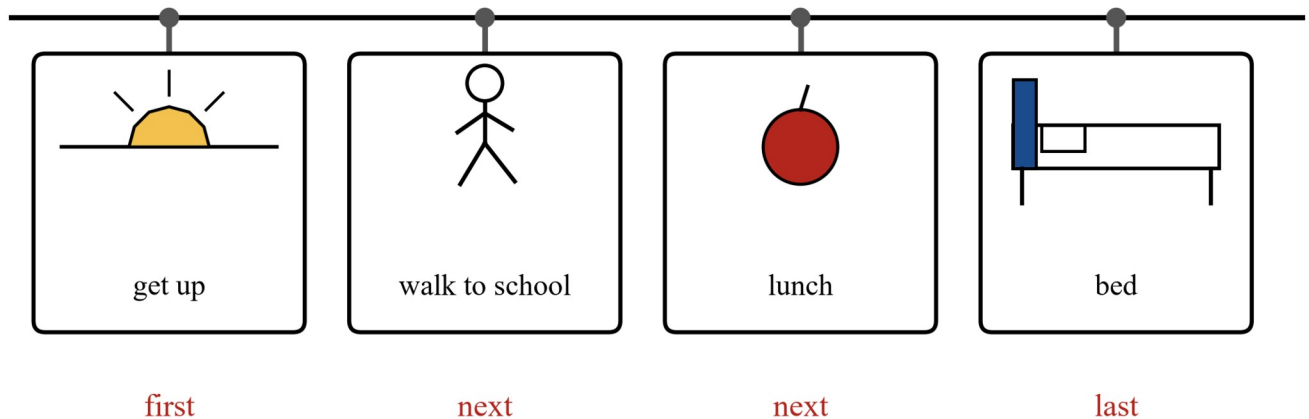
The string is a timeline. It shows the order of the day.

Use the words *first*, *next* and *last*.

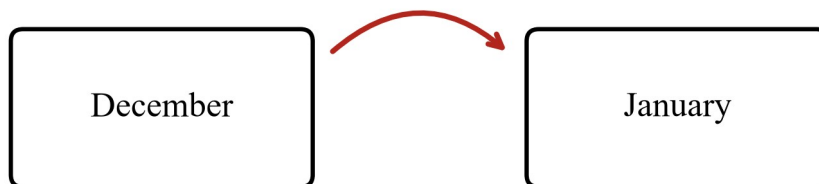
December is the last month of the year.

After December, a new year starts: 2027.

After December it is always January.



Mia's day on the string. Four cards in order: get up is first, walk to school is next, lunch is next, bed is last.



After December, a new year starts: 2027

A December card and a January card. A red arrow goes from December to January. After December, a new year starts: 2027.

Your turn

The teacher reads each one to you. The things you need are on your desk. Your answer is a word, a number, a drawing or a short sentence.

With help

Q1. (E01 — matching) Things you need: the 5 unit cards; the picture cards. Draw a line from each unit to its picture.

- *hour* — a child walking to school
- *day* — the sun up in the sky
- *week* — a line of 7 days

- *month* — one page of the calendar
- *year* — a birthday cake

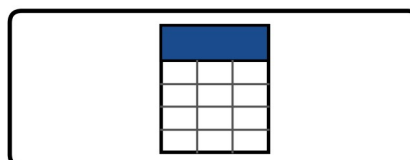
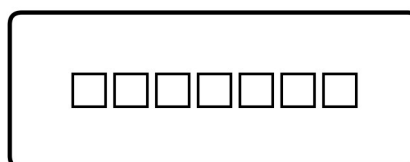
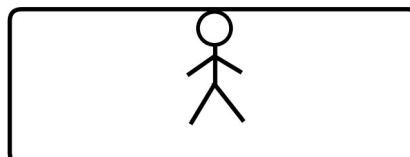
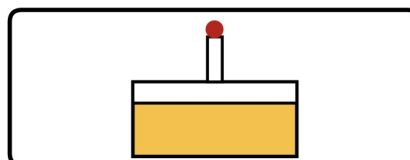
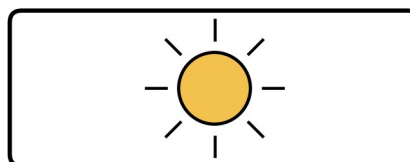
hour

day

week

month

year



The 5 unit cards on the left and 5 picture cards on the right, to match with lines.

Q2. (E01 — *days of the week*) **Things you need:** the 7 day cards. Put the cards in order, starting with Monday. Circle today. How many days are in 1 week? Write the number.

Q3. (E02 — *months of the year*) Write the months that are missing. How many months are in 1 year? Write the number.

January, _____, March, _____, May, June, _____, August, September, _____, November, _____.

January	_____	March	_____	May	June
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_____	August	September	_____	November	_____
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The 12 months on cards, in order. Some cards are blank, with a red line for the missing month.

Q4. (E02 — *days in a month*) **Things you need:** the 2026 calendar. Look at February 2026. Point and count the days. February 2026 has _____ days. Now find the month that comes after August. It is _____.

February 2026

M T W T F S S

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

February 2026 on a calendar. The week starts on Monday.

Q5. (E03 — *a timeline*) **Things you need:** 3 picture cards; paper; glue. The pictures show Tom's morning: eat breakfast, put on shoes, walk to school. Glue the pictures on the paper in order. Write *first*, *next* and *last* under them.

Q6. (E04 — *how long does it take?*) **Things you need:** 4 activity cards; 2 boxes. One box says *about 1 hour*. One box says *about 1 day*. Put each card in a box.

- eat lunch
- the sun rises and falls and rises again
- sleep all night
- walk to school

eat lunch	the sun rises and falls and rises again	sleep all night	walk to school
-----------	--	-----------------	----------------

about 1 hour	about 1 day
--------------	-------------

Two boxes, one for about 1 hour and one for about 1 day. Four cards wait to go in a box.

On your own

Q7. (E01) Write the missing word.

- (a) There are 7 days in 1 _____.
- (b) There are 12 months in 1 _____.

Q8. (E02) How many days are in each month? Write the number.

January _____ · April _____ · August _____

Q9. (E02) Circle all the months that have 31 days.

January · February · March · April · May · June · July · August · September · October · November · December

Q10. (E02) Answer each part.

- (a) Which month comes before June?
- (b) Which month comes after November?
- (c) Which month is first in the year?
- (d) Which month is last in the year?

Q11. (E02 — the months cycle) The year 2026 ends on Thursday 31 December.

- (a) Which month comes after December?
- (b) Which year comes next? Write the number: _____.

Q12. (E03) Draw a picture timeline of your day. Draw 3 pictures. Write *first*, *next* and *last* under them.

Q13. (E04 — how long does it take?) Circle one for each.

- (a) brush your teeth — 1 hour / 1 day / 1 week
- (b) sleep all night — 1 hour / 1 day / 1 week
- (c) from one birthday to the next — 1 week / 1 month / 1 year

Q14. (*E04 — say why*) Sam says, “It takes a week for the sun to rise and fall and rise again.” Is Sam right? How do you know? Draw or write your answer.

Answers (for the teacher)

Q1. hour → the child walking; day → the sun; week → the line of 7 days; month → the calendar page; year → the birthday cake. **Q2.** Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday; today is circled as the day it is taught; 7. **Q3.** February, April, July, October, December; 12. **Q4.** 28; September. **Q5.** first → eat breakfast; next → put on shoes; last → walk to school. **Q6.** about 1 hour: eat lunch, walk to school; about 1 day: the sun rises and falls and rises again, sleep all night. **Q7.** (a) week; (b) year. **Q8.** 31, 30, 31. **Q9.** January, March, May, July, August, October, December. **Q10.** (a) May; (b) December; (c) January; (d) December. **Q11.** (a) January; (b) 2027. **Q12.** 3 pictures in an order that makes sense, with *first*, *next* and *last*. **Q13.** (a) 1 hour; (b) 1 day; (c) 1 year. **Q14.** No. It takes a day, not a week, for the sun to rise and fall and rise again. Award the mark for the reason, not only for “no” (the achievement standard asks students to communicate their reasoning).

Teacher note

Materials list (full). Wall calendar for 2026; 7 day-of-the-week cards; 12 month cards; 5 unit cards (*hour, day, week, month, year*); string, pegs and sticky tape; picture cards (the day sequence in Example 2; Tom’s morning in Q5; the activity cards in Q6); counters; glue; paper.

Assumed Foundation skill rehearsed (not re-taught). Days of the week and times of the day — VC2MFM02 (*sequence days of the week and times of the day, including morning, lunchtime, afternoon and night-time, and connect them to familiar events and actions*, in `maths_F.json`, VCAA export retrieved 2026-07-29). Step 1 rehearses it in the first minutes of the sequence, per D3.

Level 2 destinations this subtopic sets up (named, not taught). VC2M2M03 — identify the date and determine the number of days between events using calendars; VC2M2M04 — recognise and read the time on an analog clock to the hour, half-hour and quarter hour (both in `maths_2.json`, VCAA export retrieved 2026-07-29). Accordingly this subtopic contains no date-finding on calendars, no counting of days between events, and no clock faces at all; it works in durations and sequences only (D3). Where a time label appears it uses the 12-hour clock with am/pm (§6).

Calendar facts used, verified. 2026 is not a leap year; February 2026 has 28 days; 2026 has 365 days (= 52 weeks and 1 day); 1 January 2026 is a Thursday; 31 December 2026 is a Thursday; 1 January 2027 is a Friday; August 2026 has 31 days; month day counts as printed (31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31). Verified against the Gregorian calendar 2026-08-19. 2028 is a leap year (February 2028 will have 29 days) — noted here for teacher accuracy, not taught.

Seasons as used. Any seasonal reference uses the southern-hemisphere seasons: summer spans December–February, autumn March–May, winter June–August, spring September–November (Source: Bureau of Meteorology, `bom.gov.au`, Australian seasons, retrieved 2026-08-19).

Exclusion — VC2M1M03 . E05. Elaboration E05 (*investigating durations of time represented in Aboriginal and/or Torres Strait Islander seasonal calendars*, verbatim from the authority file) is Aboriginal and Torres Strait Islander content, which is excluded from ClassBasics books: accuracy cannot be guaranteed, and it is better to be respectful than cover the entire curriculum inaccurately (CONTENT_POLICY Rule 1; see the front-of-book note). The content description itself is still delivered in full through E01–E04: elaborations are illustrations, not requirements (D11). This exclusion is recorded here so the coverage audit reports it as ACCEPTED, never silently dropped.

Scope guardrails honoured. No metric units (D7); no chance or probability language (D6); no student-produced count beyond the CD’s own scope (D8) — students count to at most 31 here, while 365, 52, 24 and 12 are stated unit facts, not counting tasks; no $\times$ or $\div$ as operators and no written algorithms (D9); no fractions; no clock-face reading (Level 2 VC2M2M04).

Forward map (for context only, from TOC §5). 4C is the first rung of the tightest Level-1-to-VCE line in the book: the cyclic structure of the calendar (VC2M1M03 . E02) leads, ten years later, to the time-and-date content of FM Units 1 & 2 AoS4 (conventions, schedules and timetables). Day, week and month vocabulary also serves VC2 Science F–2 daily and seasonal weather work (VC2S2U07). None of that is taught or assessed here.

Checkpoint CP4

Mathematics 1 · Level 1 · Chapter 4 — Measurement · Checkpoint CP4. This is the topic checkpoint for Chapter 4 — checkpoint **T4** in TOC §7. It is a classroom instrument, **not an exam** (TOC §7, D17).

Content descriptions scored — 3 CDs, 6 marks each, 18 marks (TOC §7):

- VC2M1M01 — “compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning”
- VC2M1M02 — “measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end”
- VC2M1M03 — “describe the duration and sequence of events using years, months, weeks, days and hours”

Quoted verbatim. Source: Victorian Curriculum F–10 Version 2.0, Mathematics (VCAA), Level 1, Measurement, VC2M1M01, VC2M1M02 and VC2M1M03, via `maths_1.json` (VCAA export retrieved 2026-07-29).

Achievement-standard extracts (verbatim, same source): VC2M1M01 and VC2M1M03 share one extract — “Students compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating their reasoning.” VC2M1M02 carries its own — “They measure the length of shapes and objects using uniform informal units.” The Marking guide quotes each extract beside the items it scores (TOC §7).

Format (TOC §7, row T4): part practical and teacher-observed (comparing and measuring — Parts A and B), part teacher-read (calendar and duration — Part C).

Administration rules, stated here as §7 specifies: every task is read aloud by the teacher; materials are on the desk; recording is an order made with real objects, a numeral, a drawing or a spoken reason; **there is no time limit — no timed paper anywhere in this book; there is no calculator;** this checkpoint is **not an exam**.

No multiple-choice section — TOC D12 and §7: six-year-olds are not assessed by multiple choice on paper. The linked bank (240 + 192 + 288 MCQs keyed to the three CDs) is a digital asset only, not printed (TOC D12).

Student-facing text runs from “What you will do” to the total line at the end of Part C; everything else in this file is teacher-facing.

What you will do

Your teacher reads each task to you.

The things you need are on your desk.

Your answer can be an order made with real things, a number, a drawing, or a short reason said out loud.

We do not race. Take the time you need.

Words you will use:

- **length** — how long something is
- **mass** — how heavy something is
- **capacity** (say: kuh-PAS-i-tee) — how much a container can hold
- **duration** (say: dyoo-RAY-shun) — how much time something takes
- **unit** — one thing we use to measure with
- **uniform** — all the same
- **end to end** — each unit touches the last one
- **gap** — an empty space between two units
- **overlap** — when one unit goes on top of the next unit
- **calendar** — something that shows all the days of the year, in months and weeks

- **heft** — hold one thing in each hand. Feel which one is heavier.
- **balance scales** — a thing with two sides. Put one object on each side. The heavy side goes down.

Part A — Compare and order · VC2M1M01 · 6 marks

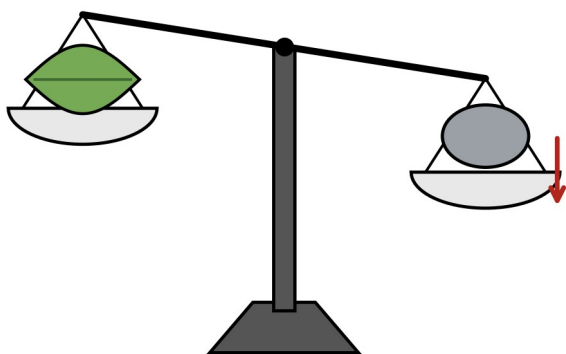
Things you need: 3 ribbons of different lengths, a piece of string, 3 objects named A, B and C, balance scales, a cup, a bowl, a jug, water and a tray.

Your teacher watches how you do it. Say your reason out loud.

Q1. (2 marks) Your teacher puts the 3 ribbons on different tables. Do not move them. Use the piece of string.

- Find the order: shortest to longest. Say the order to your teacher.
- Tell your teacher how you know.

Q2. (2 marks) The 3 objects are A, B and C. You can heft them. You can use the balance scales.



the heavy side goes down

Balance scales with one thing on each side. The heavier side goes down.

- Put the objects in order from lightest to heaviest.
- Tell your teacher how you know.

Q3. (2 marks) You have a cup, a bowl and a jug. You have water and a tray.

- Pour water to find out. Put the containers in order: holds the least to holds the most.
- Tell your teacher how you decided.

Part B — Measure length · VC2M1M02 · 6 marks

Things you need: a book, a mat, icy pole sticks (all the same size), pencils (all the same size) and blocks.

Your teacher watches how you measure.

Q4. (2 marks) Measure the book with icy pole sticks. Put them end to end. No gaps. No overlaps.

The book is icy pole sticks long.

Q5. (2 marks) Measure the mat two ways: with pencils and with icy pole sticks.

- Pencils:
- Icy pole sticks:
- Why are the two counts different? Tell your teacher.

Q6. (2 marks) Your teacher makes a row of blocks to measure a pencil. Look at the row.

- (a) What is wrong with the row?
- (b) Fix it, or say why it changes the count.

Part C — Calendar and duration · VC2M1M03 · 6 marks

Things you need: a calendar for 2026 and 3 picture cards (get up, walk to school, go to bed).

Your teacher reads each one to you.

Q7. (2 marks) Look at the 3 picture cards.

- (a) Put the cards in order. Say: *first*, *next* and *last*.
- (b) How many days are in 1 week? ☐

Q8. (2 marks) Look at the calendar.

- (a) Find February 2026. How many days does it have? ☐
- (b) Which month comes after August? ☐

February 2026

M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

February 2026 on a calendar. The week starts on Monday.

Q9. (2 marks) Mia walks to school. The sun rises and falls and rises again.

- (a) Which one takes about 1 hour? Which one takes about 1 day?
- (b) Tell your teacher how you know.

Total: 18 marks — 6 marks for VC2M1M01 (Part A), 6 marks for VC2M1M02 (Part B) and 6 marks for VC2M1M03 (Part C).

Solutions

Teacher-facing. Where an answer depends on the materials supplied, the check is given instead of one fixed answer. Spoken reasons may be short and informal; award them for the idea, not the wording.

Q1. (a) The order depends on the 3 ribbons supplied. Check: each ribbon was compared by holding the string against it, and the order matches those string comparisons. (b) One answer: “I held the string on each ribbon. The string was longer than the blue one, so the blue one is the shortest.”

Q2. (a) The order depends on the objects supplied. Suggested set: an eraser, a wooden block and a rock — eraser, then block, then rock (verify on the day with the scales). (b) One answer: “We put A and B on the scales. The B side went down, so B is heavier than A.”

Q3. (a) The order depends on the containers supplied. Suggested set: cup, bowl, jug — cup, then bowl, then jug (verify on the day by pouring). (b) One answer: “I filled the cup and poured the water into the bowl. The bowl held it all, so the bowl holds more than the cup.”

Q4. The count depends on the book and the icy pole sticks supplied. Check: the row is one uniform unit, end to end, from one end of the book to the other, with no gaps and no overlaps, and the count matches the row.

Q5. (a), (b) The counts depend on the mat and the units supplied; the icy pole stick count is the bigger count when an icy pole stick is shorter than a pencil. Check both rows were laid end to end. (c) The icy pole stick is shorter than the pencil, so more icy pole sticks are needed. A short unit gives a big count.

Q6. The teacher plants one mistake: a **gap** between two blocks, an **overlap** (one block on top of the next), or **mixed units** (blocks and another unit in the one row). (a) The student names the planted mistake. (b) Fix: move the blocks so they touch, end to end; or take out the other unit and use all blocks. Or say why: gaps, overlaps and different units change the count.

Q7. (a) *first* — get up; *next* — walk to school; *last* — go to bed. (b) 7.

Q8. (a) 28. (b) September.

Source: calendar facts — Gregorian calendar; day counts and weekday alignment for 2026 verified against a real calendar 2026-08-23 (2026 is not a leap year; 2028 is). The order of the months is the Gregorian calendar’s own.

Q9. (a) Mia’s walk to school takes about 1 hour. The sun rising and falling and rising again takes about 1 day. (b) One answer: “Walking to school is a short time. The sun takes a whole day and night to rise again.”

Source: the walk-to-school and sun examples are VCAA’s own, from elaboration VC2M1M03.E04 (VCAA export retrieved 2026-07-29).

Marking guide

This is a classroom instrument, not an exam (TOC §7, D17). Award whole marks only. Two rules govern every reasoning mark below:

1. **The reasoning mark is for the reason.** Award it for the idea, not the wording. A correct answer with no reason scores only the answer mark — the CDs scored here require reasoning, and a rubric that scores only the answer fails the CD (TOC §7).
2. **The teacher must not supply the reason.** The CD words are *communicating reasoning* — the student does the communicating. Prompting is limited to “How do you know?” and “Say how you decided.”

Coverage and marks — one row per CD scored, for the coverage audit:

CD scored	Achievement-standard extract (quoted verbatim)	Items	Marks
VC2M1M01	“Students compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating their reasoning.”	Q1–Q3	6
VC2M1M02	“They measure the length of shapes and objects using uniform informal units.”	Q4–Q6	6
VC2M1M03	“Students compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating their reasoning.”	Q7–Q9	6
Total			18

Source: Victorian Curriculum F–10 Version 2.0, Mathematics (VCAA), Level 1, Measurement — the achievement-standard extracts carried in `maths_1.json` for VC2M1M01, VC2M1M02 and VC2M1M03 (VCAA export retrieved 2026-07-29), quoted verbatim. VC2M1M01 and VC2M1M03 share one extract in the authority file; both rows quote it.

Part A rubric — vc2m1m01 (6 marks)

Scored under the extract: “*Students compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating their reasoning.*” Part A is practical and teacher-observed. One order mark and one reasoning mark per item: the reasoning mark awards the extract’s words *communicating their reasoning*.

Item	Mark	Award
Q1(a)	1	Correct order of the 3 ribbons, shortest to longest, found by comparing each ribbon with the string (indirect comparison — observed, not guessed by eye across the tables).
Q1(b)	1	A reason that names the string as the helper, e.g. “The string was the same as the red ribbon, and the string is longer than the blue one.” Award for “communicating their reasoning”.
Q2(a)	1	Correct order of A, B and C, lightest

Item	Mark	Award
		to heaviest (hefting is accepted as the first move; the scales settle the order).
Q2(b)	1	A reason that uses the evidence of the heft or the scales, e.g. “The B side went down, so B is heavier than A.” Award for “communicating their reasoning”.
Q3(a)	1	Correct order of the containers, holds the least to holds the most, found by pouring.
Q3(b)	1	A reason that tells what the pouring showed, e.g. “The cup poured into the bowl and the bowl held it all.” Award for “communicating their reasoning”.

Duration, the fourth attribute in the extract, is scored in Part C (Q9) through events; the extract’s “objects **and events**” is covered across the two parts.

Part B rubric — VC2M1M02 (6 marks)

Scored under the extract: “*They measure the length of shapes and objects using uniform informal units.*” Part B is practical and teacher-observed. The CD’s own words — *recognising that units need to be uniform and used end-to-end* — are scored as method and explanation, not inferred from a count: a right count laid the wrong way scores no method mark, and a wrong count laid the right way scores the method mark (TOC §3, Chapter 4 note).

Item	Mark	Award
Q4 — method	1	Observed: one uniform unit, starting at one end, units end to end, no gaps, no overlaps.
Q4 — count	1	The numeral matches the row laid. Recount together if needed.
Q5 — counts	1	Two counts, one with each unit, each row laid end to end with no gaps and no overlaps.
Q5 — reason	1	“An icy pole stick is shorter than a pencil, so we need more of them.” Accept any wording that says a short unit gives a big count. Awards the recognition in “recognising that units need to be uniform and used end-to-end” and “using uniform informal units”.
Q6 — find	1	Names the planted mistake: a gap, an overlap, or mixed units.
Q6 — fix or say why	1	Fixes the row (blocks touching, end to end, all the same unit) or says why the mistake changes the count.

Part C rubric — VC2M1M03 (6 marks)

Scored under the extract: “*Students compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating their reasoning.*” Part C is teacher-read; duration and the sequence of events are scored, with one reasoning mark for the extract’s words *communicating their reasoning*.

Item	Mark	Award
Q7(a)	1	The cards in order with the words <i>first, next</i> and <i>last</i> : get up, walk to school, go to bed.
Q7(b)	1	7.
Q8(a)	1	28 (February 2026, counted on the calendar page supplied).
Q8(b)	1	September.
Q9(a)	1	Walk to school — about 1 hour; the sun rising and falling and rising again — about 1 day. Award when both are matched.
Q9(b)	1	A reason that compares how long the two events take, e.g. “Walking to school is a short time; the sun takes all day.” Award for “communicating their reasoning”.

Teacher note

Running the checkpoint. One normal lesson, or split across two short sittings (practical Parts A and B first, Part C after). It is untimed: there is no time limit on any part (TOC §7, D17). Keep a tick sheet per student for the observed marks (Q1–Q6 method and reasoning); the spoken reasons may be recorded as short notes on the tick sheet. Materials stay on the desk throughout. A student may point, act and say rather than write; every reasoning mark still requires the student to communicate the reason — rephrasing a reason back to a student and accepting it is not evidence for VC2M1M01’s or VC2M1M03’s *communicating reasoning*.

Materials to prepare. Part A: 3 ribbons of different lengths; a piece of string; 3 objects named A, B and C with clearly different masses (for example an eraser, a wooden block and a rock); balance scales; a cup, a bowl and a jug; water; a tray. Part B: a book; a mat; icy pole sticks, all the same size; pencils, all the same size; blocks. Part C: a calendar for 2026 open at February and August; 3 picture cards — get up, walk to school, go to bed. For Q6, plant exactly one mistake in the row of blocks: a gap, an overlap, or a mixed unit.

Scope guardrails honoured. No metric units anywhere (D7) — every measurement here is a count of an informal unit; no chance or probability language (D6); no clock faces and no fractions (Level 2 content, D3); no vertical algorithms and no operation symbols needed or used (D9); every count sits well inside the Level 1 ranges (D8). The assumed Foundation skills rehearsed in Chapter 4 (attributes and direct comparison, VC2MFM01; days of the week, VC2MFM02) are not scored here as Level 1 outcomes (D3).

What is not assessed. No Foundation outcome, no Level 2 outcome, no probability, no metric measurement, no clock-face reading, no fractions (TOC §7). No multiple-choice item (D12).

Data note. Every referent is a real everyday object or a routine event of a child’s day (ribbons, string, balance scales, containers and water, icy pole sticks, pencils, blocks, a book, a mat, a 2026 calendar, picture cards of a school day); the child’s name (Mia) is invented, which is fine (TOC §6). Calendar facts carry their source line in the Solutions (Gregorian calendar, verified 2026-08-23); the walk-to-school and sun examples are VCAA’s own (VC2M1M03.E04, VCAA export retrieved 2026-07-29); curriculum text is quoted verbatim from `maths_1.json` (VCAA export retrieved 2026-07-29). Aboriginal and Torres Strait Islander elaborations VC2M1M01.E05 and VC2M1M03.E05 are not drawn on, per the ACCEPTED exclusion recorded in the 4A and 4C Teacher notes (CONTENT_POLICY Rule 1).

Vocabulary gate record (2026-08-23). Student-facing text — everything from “What you will do” to the total line at the end of Part C, plus the alt text of both figures — is at or below the Yr1 ladder ceiling (rank 1), verified with `load_ladder/check_text/tokenize` from `S:\Files\projects\mcq-system\reports\vocab_level_check.py` on the same basis as the section gates. Result: CLEAN. Every ladder flag in the student-facing region resolves to the curriculum’s own words, retained per VOCABULARY_LEVEL.md exemption 1 and each defined at first use in the “Words you will use” list (or already defined in Chapter 4): *capacity*, *overlap(s)*, *mass*, *unit(s)*, *uniform*, *balance scales*, *container(s)*, *measure*, *gap*, *compare*, *heaviest*, *decided* and *heft* — all verbatim in the content descriptions or elaborations of VC2M1M01, VC2M1M02 and VC2M1M03, *heft* as an inflection of the elaboration word *hefting* (VC2M1M01.E02), the same literal-form miss of the gate that the 4A record documents. Two general words the ladder places above the ceiling — *checkpoint* (Yr3) and *calculator* (Yr3) — were fixed by rewriting the student-facing region to remove them; the §7 administration rules they belong to (teacher-read, materials on desk, no calculator, no time limit, not an exam) stand stated exactly as §7 specifies in the teacher-facing front matter above, which is not vocabulary-gated. The month names *February* and *August* are retained as subject terminology this checkpoint teaches (VC2M1M03.E02) and proper nouns (exemptions 2 and 3), on the same basis as the 4C record. Unplaced tokens (*kuh-pas-i-tee*, *dyoo-ray-shun* pronunciation asides and the invented name *Mia*) are not violations. The opening blockquote, the Solutions, this Marking guide and this Teacher note are teacher-facing metadata and are not vocabulary-gated (WORD_LEVEL_POLICY Rule 3).