

Mathematics Towards Foundation D

Chapter 4 — Measurement: comparing things, and the shape of the day

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Contents

Section	Page
Length, capacity, mass and duration: naming the attribute and comparing directly	2
Checkpoint 4 — the VC2MFDM01 component: observed tasks and rubric (adult-facing)	12
Sequencing routines and events; connecting events to times of the day	14
Observation checkpoint — the VC2MFDM02 part of Checkpoint 4 (4 marks)	21
Checkpoint 4 (CP4) — Chapter 4: Measurement — comparing things and the shape of the day	26
Checkpoint 4 (CP4) — Rubric and recording sheet	33
Checkpoint 4 summary	37

Length, capacity, mass and duration: naming the attribute and comparing directly

This is read with the student. The teacher says all the words. The student looks, touches and shows what they know. The student can speak, sign, point, look, or use their talk device. The student does not need to read.

identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparison — VC2MFDM01 (Victorian Curriculum F–10 Version 2.0, Mathematics, Foundation Level D; authority file maths_AD.json)

Achievement standard (Foundation Level D), quoted verbatim from maths_AD.json: “Students identify the attributes of mass, capacity, length and duration using direct comparison in practical situations.”

Elaboration ids carried for MCQ and coverage linkage: VC2MFDM01.E01, VC2MFDM01.E02, VC2MFDM01.E03.

Theory

Comparing two things

We look at two things. We ask: how are they different?

We compare the two things. We do not need numbers. We put the things side by side. We look. We pour. We lift. We watch.

Then we say how they are different.

Four words: length, capacity, mass and duration

When we compare, we say *what* we are looking at. Four words tell us:

- **length** — how long something is
- **capacity** — how much a container can hold
- **mass** — how heavy something is
- **duration** — how long something takes

Length, capacity, mass and duration are **attribute** words. The attribute word tells us what we are comparing.

Length — how long is it?

Length is how long something is.

Put the two things side by side. Line up one end. Look at the other end.

Two straws side by side with one end lined up. The blue straw goes past the red straw.

Two straws side by side with one end lined up. The blue straw goes past the red straw.

Two straws sit side by side. The ends line up. The blue straw goes past the red straw.

The blue straw is **longer**. The red straw is **shorter**.

If the two things stop at the same place, they are **the same** length.

Words for length: **longer, shorter, the same**.

Capacity — how much does it hold?

Capacity is how much a container can hold.

Pour water from one container into the other. Watch the water.

Water pouring from a cup into a jug. The jug is not full.

Water pouring from a cup into a jug. The jug is not full.

The cup is full of water. Pour the water from the cup into the jug. The jug is not full. The jug can hold more water.

The jug **holds more**. The cup **holds less**. The jug is **bigger**. The cup is **smaller**.

Words for capacity: **holds more, holds less, bigger, smaller, the same**.

Mass — how heavy is it?

Mass is how heavy something is.

Hold one thing in each hand. Lift. Feel which one pulls down more.

Two hands lifting. One hand holds a tin of spaghetti, one hand holds a bag of marshmallows. The hand with the tin sits lower.

Two hands lifting. One hand holds a tin of spaghetti, one hand holds a bag of marshmallows. The hand with the tin sits lower.

A tin of spaghetti sits in one hand. A bag of marshmallows sits in the other hand. Lift. The tin pulls down more.

The tin of spaghetti is **heavier**. The bag of marshmallows is **lighter**.

Words for mass: **heavier, lighter, the same**.

Duration — how long does it take?

Duration is how long something takes.

Start two things at the same time. Watch. Which one is done first? Which one is still going?

Two pairs of shoes. One person has shoes with Velcro and is done. One person has shoes with buckles and is still going.

Two pairs of shoes. One person has shoes with Velcro and is done. One person has shoes with buckles and is still going.

Two people put on shoes. They start at the same time. One pair of shoes has Velcro. One pair of shoes has buckles.

The shoes with Velcro are done first. The shoes with buckles are still going.

Putting on the shoes with buckles **takes longer**. Putting on the shoes with Velcro is **quick**.

Words for duration: **takes longer, quick, done first, still going, a long time, a short time**.

Naming the attribute

What are we comparing? Say the attribute word.

- Two pencils, side by side. Which is longer? We are comparing **length**.
- A jug and a cup. Which holds more? We are comparing **capacity**.
- A tin of spaghetti and a bag of marshmallows. Which is heavier? We are comparing **mass**.
- Two people put on shoes. Which takes longer? We are comparing **duration**.

Worked examples

Do these with the teacher. Use things to touch, or use what you can see here.

Worked example 1 — which straw is longer?

Two straws: one red, one blue.

Working

Comment

Put the straws side by side.

Line up one end.

Look at the other end.

The blue straw goes past the red straw.

Working	Comment
Say the compare word.	The blue straw is longer. The red straw is shorter.

∴ The blue straw is **longer**. The red straw is **shorter**. We compare **length**.

Worked example 2 — which holds more?

A cup full of water, and a jug.

Working	Comment
Pour the water from the cup into the jug.	Watch the water.
Look at the jug.	The jug is not full.
Say the compare word.	The jug holds more. The cup holds less.

∴ The jug **holds more**. The cup **holds less**. We compare **capacity**.

Worked example 3 — which is heavier?

A tin of spaghetti and a bag of marshmallows.

Working	Comment
Hold the tin in one hand. Hold the bag in the other hand.	One thing in each hand.
Lift. Feel which one pulls down more.	The tin pulls down more.
Say the compare word.	The tin is heavier. The bag is lighter.

∴ The tin of spaghetti is **heavier**. The bag of marshmallows is **lighter**. We compare **mass**.

Worked example 4 — which takes longer?

Putting on shoes with buckles, and putting on shoes with Velcro.

Working	Comment
Start both at the same time.	One person does the buckles. One person does the Velcro.
Watch.	The shoes with Velcro are done first. The shoes with buckles are still going.
Say the compare word.	The buckles take longer. The Velcro is quick.

∴ Putting on the shoes with buckles **takes longer**. Putting on the shoes with Velcro is **quick**. We compare **duration**.

Worked example 5 — name the attribute

The teacher says: “The red bag and the blue bag. Which bag is heavier?”

What are we comparing?

Working	Comment
What word is in the question?	<i>Heavier</i> is a mass word.
What are we looking at?	How heavy the bags are.
Say the attribute word.	We are comparing mass.

∴ We are comparing **mass**.

Practice questions

The teacher says all the words. The student says, signs, points, looks, or uses their talk device. The teacher puts the answer down. Use real things where you can.

Q1. Two straws.

Two straws side by side with one end lined up. The green straw goes past the yellow straw.

Two straws side by side with one end lined up. The green straw goes past the yellow straw.

- a. Which straw is longer? ____
- b. Which straw is shorter? ____
- c. Show how you know.

Q2. Two pencils, side by side. The ends line up. The pencils stop at the same place.

- a. The pencils are the same length, or not the same? ____
- b. What are we comparing? (length, capacity, mass or duration) ____

Q3. A bottle of water and a cup. The teacher pours the water from the bottle into the cup. The cup is full and the bottle still has water in it.

- a. Which holds more, the bottle or the cup? ____
- b. Which holds less? ____

Q4. A jug and a cup. The cup is full of water. The teacher pours the water from the cup into the jug. The jug is not full.

- a. Which holds more? ____
- b. Show how you know.

Q5. A tin of spaghetti and a bag of marshmallows. Lift one in each hand.

Two hands lifting. One hand holds a tin of spaghetti, one hand holds a bag of marshmallows. The hand with the tin sits lower.

Two hands lifting. One hand holds a tin of spaghetti, one hand holds a bag of marshmallows. The hand with the tin sits lower.

- a. Which is heavier? ____
- b. Which is lighter? ____

Q6. Show how you know which is heavier.

- a. What do you do? ____
- b. What are we comparing? (length, capacity, mass or duration) ____

Q7. Two people put on shoes. They start at the same time. One pair of shoes has buckles. One pair of shoes has Velcro. The shoes with Velcro are done first.

Two pairs of shoes. One person has shoes with Velcro and is done. One person has shoes with buckles and is still going.

Two pairs of shoes. One person has shoes with Velcro and is done. One person has shoes with buckles and is still going.

- a. Which shoes are done first? ____
- b. Which takes longer? ____

Q8. Sam puts 3 (three) blocks in a box. Alex puts 10 (ten) blocks in a box. They start at the same time. Alex is still going. Sam is done.

- a. Who is done first? ____
- b. Who takes longer? ____
- c. What are we comparing? (length, capacity, mass or duration) ____

Q9. Name the attribute. The teacher says a question. The student says, signs or points to the attribute word: length, capacity, mass or duration.

- a. “Two pencils. Which is longer?” — _____
- b. “A jug and a cup. Which holds more?” — _____
- c. “Two bags. Which is heavier?” — _____
- d. “Two people walk to the door. Who gets there first?” — _____

Q10. Match the word to the picture. The teacher says an attribute word. The student points to, looks at, or places the matching picture card.

Four picture cards. Card 1: two pencils side by side. Card 2: water pouring from a cup into a jug. Card 3: two hands lifting a tin and a bag. Card 4: shoes with buckles and shoes with Velcro.

Four picture cards. Card 1: two pencils side by side. Card 2: water pouring from a cup into a jug. Card 3: two hands lifting a tin and a bag. Card 4: shoes with buckles and shoes with Velcro.

- a. *length* — card _____
- b. *capacity* — card _____
- c. *mass* — card _____
- d. *duration* — card _____

Answers

The student's answer can be spoken, signed, pointed, a gaze, a picture, or an action with the talk device. The teacher puts it down in words.

Q1. a. the green straw b. the yellow straw c. the student puts the straws side by side, lines up one end, and looks.

Q2. a. the same b. length.

Q3. a. the bottle b. the cup.

Q4. a. the jug b. the student points to the jug that is not full, or says *holds more*.

Q5. a. the tin of spaghetti b. the bag of marshmallows.

Q6. a. lift one in each hand b. mass.

Q7. a. the shoes with Velcro b. the shoes with buckles.

Q8. a. Sam b. Alex c. duration.

Q9. a. length b. capacity c. mass d. duration.

Q10. a. card 1 b. card 2 c. card 3 d. card 4.

Fully-worked solutions

Q1.

Two straws side by side with one end lined up. The green straw goes past the yellow straw.

Two straws side by side with one end lined up. The green straw goes past the yellow straw.

Put the straws side by side. Line up one end. The green straw goes past the yellow straw.

∴ The green straw is **longer**. The yellow straw is **shorter**. We compare **length**.

Q2.

The pencils sit side by side. The ends line up. They stop at the same place.

∴ The pencils are **the same** length. We compare **length**.

Q3.

The water from the bottle does not all fit in the cup. The cup is full and the bottle still has water.

∴ The bottle **holds more**. The cup **holds less**. We compare **capacity**.

Q4.

All the water from the cup goes into the jug. The jug is not full. The jug can hold more water.

∴ The jug **holds more**. The cup **holds less**. We compare **capacity**.

Q5.

Two hands lifting. One hand holds a tin of spaghetti, one hand holds a bag of marshmallows. The hand with the tin sits lower.

Two hands lifting. One hand holds a tin of spaghetti, one hand holds a bag of marshmallows. The hand with the tin sits lower.

Hold one thing in each hand. Lift. The tin pulls down more.

∴ The tin of spaghetti is **heavier**. The bag of marshmallows is **lighter**. We compare **mass**.

Q6.

To compare how heavy things are, lift one thing in each hand and feel which pulls down more. How heavy something is — that is mass.

∴ Lift one in each hand. We compare **mass**.

Q7.

Both start at the same time. The shoes with Velcro are done first. The shoes with buckles are still going.

∴ The shoes with Velcro are done first. Putting on the shoes with buckles **takes longer**. We compare **duration**.

Q8.

Sam and Alex start at the same time. Sam is done. Alex is still going.

∴ Sam is done first. Alex **takes longer**. We compare **duration**.

Q9.

- Longer* is a length word: we compare **length**.
- Holds more* is a capacity word: we compare **capacity**.
- Heavier* is a mass word: we compare **mass**.
- Gets there first* is a duration word: we compare **duration**.

∴ a. length b. capacity c. mass d. duration.

Q10.

Card 1 is two pencils side by side: that is **length**. Card 2 is water pouring from a cup into a jug: that is **capacity**. Card 3 is two hands lifting a tin and a bag: that is **mass**. Card 4 is shoes with buckles and shoes with Velcro: that is **duration**.

∴ a. card 1 b. card 2 c. card 3 d. card 4.

Teacher note — scope, framework sources and design (adult-facing)

What this subtopic owns. 4A owns exactly one content description, VC2MFDM01 (Chapter 4 — Measurement: comparing things, and the shape of the day; subtopic 1 of 2). All four attributes named in the CD — length, capacity, mass and duration — appear in the Theory, the Worked examples, the Practice questions and the Checkpoint 4 component below. The subtopic title says *naming the attribute*: students must not only compare but say, sign or select *which attribute* is being compared. That discrimination — which attribute is in play — is the seed of all later measurement work.

Framework sources, quoted verbatim from the authority file (S:\Files\projects\mcq-system\data\vc2_books\maths_AD.json).

Content description VC2MFDM01:

identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparison

Achievement standard extract:

Students identify the attributes of mass, capacity, length and duration using direct comparison in practical situations.

Elaborations (illustrations of the CD, not a syllabus; carried for MCQ and coverage linkage per TOC §3 and D9 — coverage of this subtopic is judged against the CD text and the achievement standard extract above, never against a tally of elaborations):

- VC2MFDM01.E01: “using language to compare attributes of length, mass and capacity and to communicate differences between objects, such as ‘longer’ or ‘shorter’, ‘smaller’ or ‘bigger’, or ‘heavier’ or ‘lighter’”
- VC2MFDM01.E02: “using direct comparison to compare objects based on their length, mass or capacity; for example, pouring water from one container into another to identify which holds more and which holds less, or hefting objects such as a tin of spaghetti and a bag of marshmallows to determine ‘heavier’ and ‘lighter’”
- VC2MFDM01.E03: “identifying and comparing regular events that occur during the school day and commenting on their duration (‘short’, ‘long’, ‘quick’); for example, starting 2 events at the same time to determine which takes longer, such as putting on a pair of shoes with buckles and putting on a pair of shoes with Velcro, and describing the duration using familiar terms, such as ‘I took longer to do up my buckles’”

The elaborations set the mechanism of this subtopic: comparative language that the **student** uses (E01 — this is the step beyond Level C’s *identify*, per D1), pouring and hefting as the comparison mechanisms (E02), and duration compared **only** by starting two events at the same time and seeing which is done first (E03 — the only way duration is compared at Level D, given its own task in Worked example 4, Practice Q7–Q8 and Checkpoint item D below).

Scope boundaries (TOC §2 and §6 — do not cross).

- **Direct comparison only. No units — formal or informal — and no estimation (D12).** No “how many blocks long is it?”, no “estimate how long this takes”, no rulers, balances, scales or measuring cups. Uniform informal units are Level 1 (VC2M1M02); metric units are Level 3 (VC2M3M01, VC2M3M02). Naming a real object that happens to carry a printed unit is permitted by D12 but is not done in this subtopic.
- **No clocks and no timed measurement.** No clock face is read anywhere in this book; reading clocks is Level 2 (VC2M2M04). Duration here is event-against-event, never student-against-clock. Nothing in this subtopic is timed.
- **Sequencing and times of the day belong to 4B (VC2MFDM02):** first / next / last, visual schedules, categorising by time of day, days of the week. None of it is taught here. The two events in the duration tasks happen at the same time, so no sequencing is involved.
- **Nothing from Foundation is taught here.** Foundation’s VC2MFM01 is the destination (see Handoff below), not a source of content. Levels A, B and C are sibling books; nothing from them appears here.

Communication-supported design (D15, binding).

- No task depends on the student reading anything. Every instruction is delivered in the student’s own communication modality: spoken language, sign, AAC device (talk device), picture exchange, eye-gaze, or a combination. The mathematics is carried in the materials, the pictures, the teacher’s script and the student’s communication system.
- The four attribute words and the comparative words are given symbol support: picture cards for length, capacity, mass and duration (diagram 4a_attribute_cards.png), and word–symbol cards for longer / shorter, holds more / holds less, heavier / lighter, takes longer / done first / still going. The teacher presents the cards and the student selects by point, gaze, placement, sign or speech.
- Sensory and motor considerations are designed in: materials come in several sizes and textures (large straws, ribbed containers, easy-grip tins); pouring is offered hand-over-hand or co-actively, with a tray and a sleeve for students who avoid wet input; hefting uses objects with grips the student can hold, and where holding is not possible the teacher hefts with the student’s hands co-actively, or presents the two objects on the student’s open palms; every pointing response has an eye-gaze alternative; no task requires fine motor precision.
- Assisted and partial responses are legitimate responses everywhere in this subtopic (D10) — hand-over-hand, partial physical prompt, co-active movement, eye-gaze and aided communication are all scored, never zeroed.

Age-respectful referents (D1, D15). The referents here — food, shoes, bags, water, walking, clapping — are everyday and age-neutral. A student at Level D may be any age: the materials and the mathematics are the same for all of them; only the framing talk changes. No nursery rhymes, no picture-book characters, no early-childhood settings, and nothing that states or implies an age or a year level.

Handoff (D2). This subtopic delivers *direct comparison of length, capacity, mass and duration*; Foundation’s VC2MFM01 immediately builds it into *direct comparison with reasoning communicated*, at Foundation’s wider

expectations. Set up, don't duplicate: students leave 4A comparing two objects against each other with the attribute named and the comparative language in place.

Teacher script — teaching sequence (adult-facing)

The script is the deliverable (TOC §6). Words in quotation marks are said to the student and sit at or below the Foundation vocabulary ceiling. Adult guidance text is for the teacher. Run the sessions in order; repeat each session across occasions as the student needs. Offer every response in the student's modality, and wait — give processing time before modelling again.

Session 1 — length: longer and shorter

Materials: two pencils of different lengths; two pairs of straws (one pair different, one pair the same); the length picture card.

1. Hold up the two pencils. Say: "Look. Two pencils. This pencil goes a long way. This pencil does not."
2. Put the pencils side by side on the desk, ends lined up. Say: "Side by side. The ends line up. Look here." Point to the far ends. "The green pencil goes past. The green pencil is **longer**. The yellow pencil is **shorter**."
3. Present the two straws. Say: "Which one is longer?" Wait for the response (speech, sign, point, gaze, card). If there is no response, line the straws up and say the words again; record a partial or assisted response.
4. Present the equal pair. Say: "Look. They stop at the same place. **The same**." Offer the word *the same* and record the response.
5. Say: "How long something is — that is **length**." Present the length picture card.

Session 2 — capacity: holds more, holds less

Materials: a cup, a jug, a water bottle; water; a tray; sleeves or towels; the capacity picture card.

1. Show the full cup and the jug. Say: "Water. We pour."
2. Pour the water from the cup into the jug (hand-over-hand or co-active where the student wants to pour). Say: "Pour. Watch the water."
3. Look at the jug together. Say: "The jug is not full. The jug **holds more**. The cup **holds less**."
4. Repeat with the bottle and the cup, pouring the other way, so the student sees water that does not fit. Say: "The cup is full. The bottle still has water. The bottle **holds more**."
5. Offer the choice: "Which holds more?" Record the response in the student's modality.
6. Say: "How much a container can hold — that is **capacity**." Present the capacity picture card.

Sensory note: for students who avoid wet input, the student directs the pour by point or gaze and the teacher or an aide pours; the comparison is watched, not touched.

Session 3 — mass: heavier and lighter

Materials: a tin of spaghetti; a bag of marshmallows; two objects of clearly different mass with grips the student can hold; the mass picture card.

1. Put the tin in one of the student's hands and the bag in the other (hand-over-hand or co-active where needed). Say: "One in each hand."
2. Say: "Lift." Lift together. Say: "Feel. The tin pulls down more. The tin is **heavier**. The bag is **lighter**."
3. Offer the choice: "Which is heavier?" Record the response.
4. Offer: "Which is lighter?" Record the response.
5. Say: "How heavy something is — that is **mass**." Present the mass picture card.

Session 4 — duration: takes longer

Materials: a pair of shoes with buckles and a pair of shoes with Velcro; blocks and a box for the second event pair.

1. Two people (teacher and aide, or two students) each take a pair of shoes. Say: "We put on shoes. We start at the same time. Ready. Go."

- Both start together. Narrate while watching: “Still going. Still going. The Velcro is done. **Done first.** The buckles are still going.”
- Say: “The buckles **take longer.** The Velcro is **quick.**” Model the student-facing sentence from the elaboration where the student can take it: “I took longer to do up my buckles.”
- Run the second pair: Sam puts 3 blocks in the box and Alex puts 10 blocks in the box, started together. Say: “Who is done first? Who takes longer?” Record the response.
- Say: “How long something takes — that is **duration.**” Present the duration picture card.

Do not time anything, and do not count seconds. The comparison is event-against-event only.

Session 5 — naming the attribute

Materials: the four picture cards (length, capacity, mass, duration).

- Lay out the four cards. Say each word once, touching its card: “Length. Capacity. Mass. Duration.”
- Say a comparison question and ask for the attribute: “Two pencils. Which is longer? What are we comparing?” Wait. If needed, model: “Longer — that is length.” Record the response (point, gaze, card placement, sign or speech).
- Work through one question for each attribute (use Practice Q9). Then reverse the direction: say the attribute word and ask the student to select the matching card (Practice Q10).

Checkpoint 4 — the VC2MFDM01 component: observed tasks and rubric (adult-facing)

Checkpoint 4 assesses Chapter 4 and is worth 8 marks across VC2MFDM01 (4A) and VC2MFDM02 (4B) — 4 marks per owned CD. The four items below are the VC2MFDM01 component, one separately scored observation per attribute, with **duration scored on its own** because it is the one students most often lose (TOC §7). The VC2MFDM02 component sits in 4B.

Administration (binding — D10 and TOC §7).

- One-to-one or small group, with real objects and real events, in the student's own communication modality. Nothing is timed; nothing requires reading or writing.
- Every item is observed on **at least three separate occasions**. A single observation is not evidence at Level D: response varies with fatigue, seizure activity, medication, sensory load, pain, and whether the student's communication system is to hand. The recorded judgement is the student's **best sustained** response — not an average and not the most recent.
- **Assisted and partial responses are scored, not zeroed.** Hand-over-hand, partial physical prompt, co-active movement, eye-gaze and aided communication (AAC device, picture exchange, sign) are legitimate observed responses. A rubric that scores only independent performance fails the achievement standard.

Item L — length (1 mark).

Materials: two pencils of different lengths. Script: put the pencils in front of the student and say, "Which pencil is longer? Show me. Tell me." Observe the comparison method (side by side, ends lined up) and the communicated difference. Prompt where needed: line the pencils up and model "longer / shorter".

Item C — capacity (1 mark).

Materials: a cup full of water, a jug, a tray. Script: say, "Pour the water into the jug. Watch." Then, "Which holds more? Show me. Tell me." Observe the pour (independent, hand-over-hand or co-active all count) and the communicated difference. Prompt where needed: point to the jug that is not full and model "holds more / holds less".

Item M — mass (1 mark).

Materials: a tin of spaghetti and a bag of marshmallows. Script: place one in each of the student's hands (co-actively where needed) and say, "Lift. Which is heavier? Show me. Tell me." Observe the heft and the communicated difference. Prompt where needed: model "heavier / lighter".

Item D — duration (1 mark, scored on its own).

Materials: a pair of shoes with buckles and a pair of shoes with Velcro, worn by two people. Script: say, "We put on our shoes. We start at the same time. Ready. Go." Start both events together, then ask, "Which is done first? Which takes longer? Show me. Tell me." Observe the watch-and-compare and the communicated difference. Prompt where needed: narrate "still going / done first" and model "takes longer". Do not time the events and do not count seconds.

Rubric — in the language of the achievement standard.

Award **1 mark** per item where, on the student's best sustained response across at least three occasions, the student **identifies the attribute of length / capacity / mass / duration using direct comparison in a practical situation**: the student engages with the direct comparison (objects side by side; the pour; the heft; the two events started together) **and** communicates the difference using the comparative language of that attribute — longer / shorter; holds more / holds less / bigger / smaller; heavier / lighter; takes longer / quick / done first — in any modality (speech, sign, point, gaze, card selection, AAC), whether independent, partial or assisted. The comparison method and the comparative language are the reasoning at this level and are recorded as part of the observation, not as an extra demand (TOC §7: reasoning is scored, not just the answer).

Award **0 marks** where, across the occasions, the student does not yet engage with the comparison even with full assistance. Record what was offered and what was observed; the next teaching step follows from the record.

Item	Attribute	Occasion 1	Occasion 2	Occasion 3	Best sustained (0 or 1)
L	length				
C	capacity				
M	mass				
D	duration (scored on its own)				

VC2MFDM01 / 4
component total

Do not score, here or anywhere in 4A: counting out units, estimating, naming or reading clock time, written responses, or any performance the student was not given a communication-supported way to show.

Sequencing routines and events; connecting events to times of the day

This page is used with the teacher. The teacher gives all the words in the student's own way — spoken, signed, on a communication device, or with pictures. The student looks, listens, says, signs, points, gazes, touches, places or moves things. The student does not need to read. No task needs speech. No task needs writing.

sequence familiar routines and events using simple ordinal language and connect familiar events to times of the day, including morning, afternoon and night-time — VC2MFDM02, content description, quoted verbatim from maths_AD.json

They order and connect familiar events to times of the day. — VC2MFDM02, achievement standard extract, quoted verbatim from maths_AD.json

Theory

Things happen in order

An **event** is a thing that happens. You eat breakfast. That is an event. You go to school. That is an event.

A **routine** is events that happen in the same way, again and again. Wake up. Eat. Go to school. Come home. Sleep. The same things, every day. That is a routine.

The events in a routine happen in an order. One thing comes first. Another thing comes after.

Teacher note: 'event' and 'routine' are the curriculum's own words (VC2MFDM02). They are defined here at first use, as required.

First, next, last

Order words say when an event happens:

- **first** — at the start
- **next** — after that
- **last** — at the end

3 picture cards show part of a day:

Three picture cards in a row: a person waking up, a person eating breakfast, a person walking to school with a bag.

Three picture cards in a row: a person waking up, a person eating breakfast, a person walking to school with a bag.

Wake up is **first**. Eat breakfast is **next**. Go to school is **last**.

We put the cards in order. We say the order words: *first, next, last*.

The same words work for any routine. Socks first. Shoes next. Out the door last.

Morning, afternoon, night-time

The day has 3 parts: **morning**, **afternoon** and **night-time**.

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

- **Morning** — the light comes. You wake up. You eat breakfast. You go to school.
- **Afternoon** — lunch is done. You go home from school. You play. You do sport.
- **Night-time** — it is dark. You eat dinner. You brush your teeth. You go to bed.

We do not need a clock to know the time of the day. We look at the light. We look at what happens.

Teacher note: no clock face is read in this subtopic or anywhere in this book. Reading an analog or digital clock is Level 2 (VC2M2M04). Here, times of the day are known by the light and by the events of the student's own day.

Teacher note: how long an event takes — duration — is 4A's content (VC2MFDM01). 4B asks what comes first, next and last. It does not ask what takes longer.

The visual schedule

A **visual schedule** is a row of pictures that shows what happens, in order.

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

Look at the schedule. You can see what comes first. You can see what comes next.

You can follow the schedule: do the thing, then move the marker. Now you can see what comes next.

Teacher note: 'visual schedule' is the curriculum's own term (VC2MFDM02.E02). It is defined here at first use. Build the schedule from the student's own day, with real objects, photos or symbols, on a strip, a board or a screen.

The days of the week

A week has 7 days: seven days. Each day has a name. The names come in the same order all the time: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday.

Source: Encyclopaedia Britannica, *Week*, retrieved 2026-08-17.

A days-of-the-week chart: 7 cards in a row, Monday to Sunday, each with a symbol and the day name. A marker sits on one card.

A days-of-the-week chart: 7 cards in a row, Monday to Sunday, each with a symbol and the day name. A marker sits on one card.

Monday, Tuesday, Wednesday, Thursday and Friday are school days. Saturday and Sunday are the weekend.

We hear the day names in shared songs and stories. We say them, sign them and sing them. We can know the names without reading them.

Teacher note: recognition of the day names is built through shared songs and stories (VC2MFDM02.E05), in the student's own modality — song, chant, sign, story, or a device that says the names. Choose songs and stories that respect the student's age; the days can also be named in a spoken or signed chant with no song at all. The written names sit on the chart with the symbols, but no student needs to read them.

What this can look like

The content description is the expectation. The elaborations below are VCAA's examples of ways the content might look. They are carried for MCQ and coverage linkage — VC2MFDM02.E01–VC2MFDM02.E05 — and they are not a teaching order (TOC D9).

re-counting and sequencing 2 or more events from a shared story in the order in which they occurred, using language like 'this happened first', 'this happened next' and 'this happened last' —
VC2MFDM02.E01

following a visual schedule based on the school day's events — VC2MFDM02.E02

sequencing images of daily events; for example, placing images on a string line across the classroom and justifying their placement by referring to morning, afternoon and night-time — VC2MFDM02.E03

categorising familiar activities according to when they occur (in the morning, afternoon or night-time); for example, sorting pictographs of common activities such as eating breakfast, brushing teeth, going to school, going home from school and going to bed — VC2MFDM02.E04

Source: VCAA, Victorian Curriculum F–10 Mathematics Version 2.0, Foundation Level D, via maths_AD.json, retrieved 2026-08-16.

Materials

- **Picture cards (pictographs) of familiar daily events** — a pictograph is a picture that stands for a thing. Big cards, thick edges, easy to hold. Cards for: wake up, eat breakfast, go to school, eat lunch, go home from school, play, do sport, cook, eat dinner, brush teeth, go to bed. Two sizes — a big set for the floor or the wall and a small set for the table. Cards with different textures for a student who uses touch.
- **3 time symbols** — one for each part of the day: sun low in the sky (morning), sun high in the sky (afternoon), moon and stars (night-time). Big cards that can sit on the table, the floor or the wall.
- **3 containers, hoops or mats for sorting** — one under each time symbol.
- **A string line** — string across the room or along the table, with pegs. A student who does not peg can place cards in a row on the table, push a card to its place, or look at the place on the line.
- **A visual schedule strip for the student's own day** — real objects, photos or symbols on a strip, a board or a screen, and a marker to move as each event is done.
- **A days-of-the-week chart** — 7 cards in order, Monday to Sunday, each with the day name and a symbol the student knows, and a marker for today.
- **A shared song, chant or story that names the days of the week**, in the student's own modality, chosen to respect the student's age.
- **The student's communication system to hand** — device, picture cards, or the signs the student uses, with these words ready: *first, next, then, last, morning, afternoon, night-time, today*, the 7 day names, *yes* and *no*.

Every task that asks for a point also works with an eye gaze. Every task that asks for pegging or placing also works with a push, a hand-over-hand movement, or a look at the place. Offer both without being asked.

Teacher script — teaching sequence

The words in SAY lines are short on purpose. Say, sign or present them in the student's own communication way. Model the words on the student's system before you ask. After every ask, WAIT — give the student time. Accept every way of answering: speech, sign, pointing, eye-gaze, placing, or a symbol on the communication system.

Step 1 — order words with real things

DO: Build a tower of 3 blocks with the student, one block at a time. Touch each block as you say its word.

SAY: *Block first. Block next. Block last.*

DO: Build it again together. Hand-over-hand or co-active movement is fine.

SAY: *First. Next. Last.*

Step 2 — first, next, last with pictures

DO: Show 3 picture cards from a routine the student knows: wake up, eat breakfast, go to school. Mix them up on the table.

SAY: *Put the pictures in order.*

WAIT. The student places the cards, points to the order, gazes at the order, or orders them with help.

SAY: *Wake up is first. Eat breakfast is next. Go to school is last.*

Step 3 — morning, afternoon, night-time

DO: Show the 3 time symbols, one at a time.

SAY: *Morning. Afternoon. Night-time.*

DO: Hold up the card *eat breakfast*. Put it under the morning symbol.

SAY: *Breakfast. Morning. We eat breakfast in the morning.*

DO: Sort 3 cards together: eat breakfast, go home from school, go to bed.

SAY: *Breakfast — morning. Home — afternoon. Bed — night-time.*

Step 4 — follow the visual schedule

DO: Use the student's own schedule strip.

SAY: *Look. What do we do first?* [Point to the first picture.]

WAIT. Do the event together. Come back to the strip. Move the marker.

SAY: *Done. What comes next?*

Repeat for each event on the strip.

Step 5 — the string line

DO: Put the 3 time symbols along the string line: morning on one end, afternoon in the middle, night-time on the other end.

SAY: *Morning goes here. Afternoon goes here. Night-time goes here.*

DO: Give the student one event card.

SAY: *Where does it go?*

WAIT. The student pegs the card, points, gazes, or places it with help.

SAY: *Yes. Going home is in the afternoon.*

Step 6 — the days of the week

DO: Use the days chart. Sing, sign or say the day names together, in the order of the week. Touch each card as you name it.

SAY: *Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday.*

DO: Put the marker on today. Use the real day.

SAY: *Today is Monday.*

WAIT. The student points to, gazes at, or names a day. Any answer in any modality is an answer.

Worked examples

Do these with the teacher. Use things to touch, or use what you can see here. The student says or shows each answer; the teacher puts the answer down.

Worked example 1 — put the pictures in order

3 picture cards are mixed up: wake up, eat breakfast, go to school. Put them in order. Say the order words.

Three picture cards in a row: a person waking up, a person eating breakfast, a person walking to school with a bag.

Three picture cards in a row: a person waking up, a person eating breakfast, a person walking to school with a bag.

Working

Comment

Look at the 3 cards.

Wake up. Eat breakfast. Go to school.

What comes at the start?

Wake up is first.

Working	Comment
What comes after that?	Eat breakfast is next.
What comes at the end?	Go to school is last.

∴ First: wake up. Next: eat breakfast. Last: go to school.

Worked example 2 — what time of the day?

Sort 3 cards: eat breakfast, go home from school, go to bed.

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

Working	Comment
Eat breakfast.	Breakfast is in the morning.
Go home from school.	Home time is in the afternoon.
Go to bed.	Bed is at night-time.

∴ Breakfast — morning. Go home — afternoon. Go to bed — night-time.

Worked example 3 — the visual schedule

The schedule strip shows: arrive, read, eat lunch, go home. What comes after read?

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

Working	Comment
Look at the strip.	The pictures are in order.
Find read.	Here it is.
Look at the next picture.	Eat lunch.

∴ After read, we eat lunch.

Worked example 4 — the days of the week

The day chant goes: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday. What day comes after Tuesday?

Working	Comment
Say the day names in order.	Monday, Tuesday, Wednesday ...
Find Tuesday.	Here it is.
The next name is Wednesday.	Tuesday, then Wednesday.

∴ Wednesday comes after Tuesday.

Practice questions

The teacher gives all the words in the student's own way. The student answers by saying, signing, pointing, gazing, placing, or choosing on the device. The teacher puts the answer down. No question needs speech. No question needs reading.

Q1. Put the pictures in order.

Three picture cards mixed up: a person eating breakfast, a person waking up, a person



walking to school with a bag.

Three picture cards mixed up: a person eating breakfast, a person waking up, a person walking to school with a bag.

- a. The first card is ____
- b. The next card is ____
- c. The last card is ____

Q2. Say the order words: *first, next, last*.

The routine is: put on socks, put on shoes, walk to school.

- a. Socks are ____.
- b. Shoes are ____.
- c. Walking to school is ____.

Q3. What time of the day?

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

- a. Eat breakfast — ____
- b. Go home from school — ____
- c. Go to bed — ____

Q4. Sort the cards into morning, afternoon and night-time.

The cards are: cook dinner, eat breakfast, play sport after school.

- a. Morning: ____
- b. Afternoon: ____
- c. Night-time: ____

Q5. The visual schedule.

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

- a. What do we do first? ____
- b. What comes after read? ____
- c. What do we do last? ____

Q6. The string line.

A string line with 3 time symbols along it: morning on the left, afternoon in the middle, night-time on the right.

A string line with 3 time symbols along it: morning on the left, afternoon in the middle, night-time on the right.

The teacher holds up the card *go to bed*. Where does the card go? Point to, look at, or place the card.

Q7. The days of the week.

The day chant goes: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday.

- a. What day comes after Monday? ____
- b. What day comes after Friday? ____
- c. How many days in a week? ____

Q8. Today.

The teacher puts the marker on today's day on the days chart, using the real day.

Say or show: Today is ____.

Q9. First, next, last — the shared story.

The teacher tells a short story with 3 events: *The bus comes. Sam gets on the bus. Sam gets off the bus.*

- a. What happens first? ____
- b. What happens next? ____
- c. What happens last? ____

Q10. Put 3 event cards on the string line. Say the time word for each one.

The cards are: wake up, go home from school, go to bed.

- a. The morning card is ____
- b. The afternoon card is ____
- c. The night-time card is ____

Observation checkpoint — the VC2MFDM02 part of Checkpoint 4 (4 marks)

*These items are 4B's contribution to **Checkpoint 4** (Chapter 4 — Measurement, 8 marks across VC2MFDM01 and VC2MFDM02; 4 marks per owned CD). Run one-to-one or in a small group, as observed practical tasks and as oral or aided sequencing of the day (TOC §7). There is no timed element and no written response; the guidance durations are for a teacher planning the week, not a limit on the student.*

Administration — binding for every item

- Observe each item on **at least 3 separate occasions**. A single observation is not evidence. The recorded judgement is the student's **best sustained** response, not an average and not the most recent (TOC D10).
- Assisted and partial responses are scored, not zeroed: hand-over-hand, partial physical prompt, co-active movement, eye-gaze and aided communication (device, picture exchange, sign) are legitimate observed responses (TOC D10).
- Deliver every instruction in the student's own modality. No task depends on the student reading anything.
- Run the items inside the student's real day where you can: the schedule item on the student's own schedule strip, the day-name moment at the days chart.
- Guidance: about 10 minutes per occasion, spread across the week.

Item 1 — sequence with ordinal language (1 mark)

Materials: 3 picture cards from a familiar routine the student knows (wake up, eat breakfast, go to school), mixed up.

Script: [Place the 3 cards in front of the student.] Say: "Put the pictures in order." [Wait for the student to place, point, gaze, or order them with help.] Then, pointing to each card in turn: "Which one is first? Which one is next? Which one is last?" [Wait for the answer in any modality.]

Award the mark when the student shows the order and shows first, next and last, in any modality, with or without assistance.

Item 2 — follow the visual schedule (1 mark)

Materials: the student's own visual schedule strip, with the marker.

Script: [Point to the strip.] Say: "What do we do first?" [Wait.] Do the event together. [Come back to the strip.] Say: "Done. What comes next?" [Wait for the student to move the marker, point, gaze, or choose on the device.]

Award the mark when the student follows the schedule to say or show what comes first and what comes next, in any modality, with or without assistance.

Item 3 — connect events to times of the day (1 mark)

Materials: the 3 time symbols (morning, afternoon, night-time); 3 pictographs: eat breakfast, go home from school, go to bed.

Script: [Place the 3 time symbols.] Say: "Morning. Afternoon. Night-time." [Hold up each pictograph, one at a time.] Say: "Where does this one go?" [Wait for the student to place, point, gaze, or choose.]

Award the mark when the student connects all 3 events to the right time of the day, in any modality, with or without assistance.

Item 4 — order events on the string line and refer to the time of the day (1 mark)

Materials: the string line with the 3 time symbols placed along it (morning, afternoon, night-time); the same 3 pictographs, mixed up.

Script: Say: "Put the pictures on the line." [The student pegs, places, points or gazes, with help if needed.] Then, for each card on the line: "Morning, afternoon or night-time?" [Wait for the student to say, sign or show the time word for at least one placement.]

Award the mark when the student places the events in order along the line and refers to morning, afternoon or night-time for a placement, in any modality, with or without assistance.

Rubric — in the language of the achievement standard

The achievement standard extract for VC2MFDM02: “*They order and connect familiar events to times of the day.*”

Item	What is observed	Marks
1	ordering familiar events, with ordinal language (first, next, last)	1
2	ordering events by following a visual schedule (first, next)	1
3	connecting familiar events to times of the day (morning, afternoon, night-time)	1
4	ordering events and connecting them to times of the day, with a placement referred to a time	1
Total for VC2MFDM02		4

The CD carries two distinct ideas — ordering events, and connecting events to times of the day — and they are scored separately (TOC §7). Items 1 and 2 score ordering. Item 3 scores connecting. Item 4 scores both together.

Day-name recognition (VC2MFDM02 . E05) is observed in teaching and recorded as supporting evidence; the 4 marks map to the achievement standard extract.

Record the modality the student used on each occasion.

Record

Item	Occasion 1	Occasion 2	Occasion 3	Best sustained response	Mark
1 — sequence with ordinal language					/1
2 — follow the visual schedule					/1
3 — connect events to times of the day					/1
4 — order on the string line and refer to a time					/1

Teacher note — handoff. This subtopic hands forward to the Foundation book’s VC2MFM02 (days of the week and times of the day), where the week is a repeating sequence (TOC §5). The next step is the same ideas at Foundation, not new ideas here.

Answers

Q1. a. Wake up b. Eat breakfast c. Go to school.

Q2. a. first b. next c. last.

Q3. a. Morning b. Afternoon c. Night-time.

Q4. a. Eat breakfast b. Play sport after school c. Cook dinner.

Q5. a. Arrive b. Eat lunch c. Go home.

Q6. At the night-time end of the line, by the moon and stars.

Q7. a. Tuesday b. Saturday c. 7 (seven).

Q8. The answer is the real day on the chart. It changes with the day; the teacher records what the student says or shows.

Q9. a. The bus comes b. Sam gets on the bus c. Sam gets off the bus.

Q10. a. Wake up b. Go home from school c. Go to bed.

Fully-worked solutions

Q1.

Three picture cards mixed up: a person eating breakfast, a person waking up, a person walking to school with a bag.

Three picture cards mixed up: a person eating breakfast, a person waking up, a person walking to school with a bag.

What comes at the start? Wake up. What comes after that? Eat breakfast. What comes at the end? Go to school.

∴ First: wake up. Next: eat breakfast. Last: go to school.

Q2.

Socks go on first. Shoes go on after the socks. Then we walk to school.

∴ a. first b. next c. last.

Q3.

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

Three time symbols: a sun low in the sky for morning, a sun high in the sky for afternoon, and a moon and stars for night-time.

Breakfast is in the morning. Home from school is in the afternoon. Bed is at night-time.

∴ a. Morning b. Afternoon c. Night-time.

Q4.

Eat breakfast — morning. Play sport after school — school finishes in the afternoon. Cook dinner — dinner is at night-time.

∴ a. Eat breakfast b. Play sport after school c. Cook dinner.

Q5.

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

A visual schedule strip with 4 pictures in order: arrive, read, eat lunch, go home. A marker sits on the first picture.

Look at the strip. The first picture is arrive. The picture after read is eat lunch. The last picture is go home.

∴ a. Arrive b. Eat lunch c. Go home.

Q6.

A string line with 3 time symbols along it: morning on the left, afternoon in the middle,
night-time on the right.

A string line with 3 time symbols along it: morning on the left, afternoon in the middle, night-time on the right.

We go to bed at night-time. The night-time symbol is at the end of the line, by the moon and stars.

∴ The card goes at the night-time end of the line.

Q7.

Say the day names in order: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday. After Monday comes Tuesday. After Friday comes Saturday. A week has 7 days: seven days.

∴ a. Tuesday b. Saturday c. 7 (seven).

Q8.

Look at the marker on the days chart. The marker sits on today. Say or show the name of that day.

∴ The real day on the chart.

Q9.

The story has 3 events. The bus comes. Sam gets on the bus. Sam gets off the bus. The bus comes at the start. Sam gets on after that. Sam gets off at the end.

∴ a. The bus comes b. Sam gets on the bus c. Sam gets off the bus.

Q10.

A string line with 3 time symbols along it: morning on the left, afternoon in the middle,
night-time on the right.

A string line with 3 time symbols along it: morning on the left, afternoon in the middle, night-time on the right.

Wake up is in the morning. Go home from school is in the afternoon. Go to bed is at night-time. Put each card by its time symbol.

∴ a. Wake up b. Go home from school c. Go to bed.

Checkpoint 4 (CP4) — Chapter 4: Measurement — comparing things and the shape of the day

Mathematics Towards Foundation D · ClassBasics workbook · Level D

Observation checkpoint — practical comparison of real objects and events, and oral or aided sequencing of the day. The teacher reads, signs or presents everything on these pages in the student's own communication way. The student reads nothing and is never required to speak or write.

Instrument information

Instrument	Checkpoint 4 (CP4) — Chapter 4 assessment
Book and band	ClassBasics <i>Mathematics Towards Foundation D</i> (book code BK_MathsADD) — Foundation Level D, the exit level of the Towards Foundation continuum. Level D is a progression level, not a year level; no age is implied anywhere in this instrument.
Chapter coverage	Chapter 4 — Measurement: length, capacity, mass and duration by direct comparison (4A); sequencing routines and connecting events to times of the day (4B)
Content descriptions assessed	VC2MFDM01 (4A) and VC2MFDM02 (4B) — each scored separately, 4 marks per content description
Marks	8 — 4 marks per owned content description
Structure	Part A: four 1-mark observation items, one per attribute named in VC2MFDM01 (length, capacity, mass, duration), with duration scored on its own ; Part B: four 1-mark observation items for VC2MFDM02 (ordinal sequencing, visual schedule, connecting events to times of the day, string-line ordering)
Format	Observed practical comparison of real objects and events; oral or aided sequencing of the day
Timing	Untimed. A guidance duration for planning is about 10 minutes per occasion, spread across the week. This is never a limit on the student. Nothing in this checkpoint is timed, and no event is measured against a clock.
Occasions	Evidence is gathered across at least three separate occasions . The recorded mark is the student's best sustained response — not an average and not the most recent occasion.
Permitted materials	The materials lists below, and the student's own communication system. No worksheets, no written responses, no calculator, no rulers, balances, scales or measuring cups. There are no multiple-choice items in this instrument; the MCQ bank keyed to these content descriptions belongs to the digital question layer.
Recording	Record every occasion on the CP4 recording sheet: <u>_MathsADD_CP4_Rubric</u> .md. The recording space for this checkpoint is that sheet.

Conditions

- **All instructions are delivered in the student's own communication modality** — spoken language, sign, AAC device, picture exchange, eye-gaze, or a combination. No task depends on the student reading anything.

- **No task requires speech.** Every response channel is accepted: a look, a gaze, a reach, a point, a placed card, a lift, a movement of the body, a vocalisation, a sign, a picture, or a word on the device. Where the student directs and the adult places or pours, record it as the student's response.
 - **Assisted and partial responses are scored, never zeroed.** Hand-over-hand, partial physical prompt, co-active movement, eye-gaze and aided communication are legitimate observed responses at Level D. A rubric that scores only independent performance has failed the achievement standard.
 - **The student's communication system is to hand and in reach** on every occasion. If it is not, note that on the recording sheet — it is part of the evidence, not a detail.
 - **This is a school-designed assessment instrument.** It is written by the school for its own students against the Victorian Curriculum F–10 Mathematics Version 2.0 content descriptions named above. It is not a VCAA instrument and has not been reviewed or endorsed by VCAA.
 - Whole pages may be removed from the printed booklet for distribution, provided only whole pages are removed.
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Teacher guidance — before you begin

CP4 gathers the evidence Chapter 4 has been building: identifying and comparing the attributes of objects and events — length, capacity, mass and duration — using direct comparison (4A, VC2MFDM01), and sequencing familiar routines and connecting familiar events to times of the day (4B, VC2MFDM02).

All four attributes are scored, and duration is scored on its own (TOC §7). Duration is the attribute students most often lose — it is invisible, it cannot be held, and it is compared only by starting two events at the same time and seeing which is done first. Give it its own item, its own occasion record and its own mark.

Reasoning is scored, not just the answer (TOC §7). VC2MFDM01 requires the student to use comparative language. For Part A, the comparison method (objects side by side; the pour; the heft; the two events started together) and the comparative language (longer / shorter; holds more / holds less; heavier / lighter; takes longer / done first / still going) are the reasoning at this level. Record them as part of the observation.

What CP4 never asks. No units — formal or informal — and no estimation (D12): no “how many blocks long”, no rulers, balances, scales or measuring cups. No clocks and no timed measurement: no clock face is read anywhere in this book; duration is event-against-event, never student-against-clock. In Part A the two events happen at the same time, so no sequencing is involved; in Part B there is no duration ask — what comes first, next and last, never what takes longer.

Part B runs inside the student's real day where you can: the schedule item on the student's own schedule strip, the day-name moment at the days chart. Day-name recognition (VC2MFDM02 . E05) is observed in teaching and recorded as supporting evidence; the 4 marks map to the achievement standard extract, “*They order and connect familiar events to times of the day.*”

Part A — VC2MFDM01 · length, capacity, mass and duration by direct comparison · 4 marks

Assessed content description: VC2MFDM01 — *identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparison* (quoted verbatim from maths_AD.json). **Section:** 4A. **Marks:** 4 — one separately scored observation per attribute, each worth 1 mark.

Item L — length (1 mark)

Materials: two pencils of different lengths.

Script: Put the pencils in front of the student and say: “Which pencil is longer? Show me. Tell me.”

Look for: the comparison method (side by side, ends lined up) and the communicated difference. **Prompt where needed:** line the pencils up and model “longer / shorter”.

Award 1 mark where the student engages with the direct comparison and communicates the difference using the comparative language of length, in any modality, with any level of assistance. Award 0 only where the student does not yet engage with the comparison even with full assistance, across the occasions.

Item C — capacity (1 mark)

Materials: a cup full of water, a jug, a tray.

Script: Say: “Pour the water into the jug. Watch.” Then: “Which holds more? Show me. Tell me.”

Look for: the pour (independent, hand-over-hand or co-active all count) and the communicated difference. Prompt where needed: point to the jug that is not full and model “holds more / holds less”. For a student who avoids wet input, the student directs the pour by point or gaze and the adult pours; the comparison is watched, not touched.

Award 1 mark where the student engages with the direct comparison and communicates the difference using the comparative language of capacity, in any modality, with any level of assistance. Award 0 only where the student does not yet engage with the comparison even with full assistance, across the occasions.

Item M — mass (1 mark)

Materials: a tin of spaghetti and a bag of marshmallows.

Script: Place one in each of the student’s hands (co-actively where needed) and say: “Lift. Which is heavier? Show me. Tell me.”

Look for: the heft and the communicated difference. Prompt where needed: model “heavier / lighter”. Where holding is not possible, heft with the student’s hands co-actively, or present the two objects on the student’s open palms.

Award 1 mark where the student engages with the direct comparison and communicates the difference using the comparative language of mass, in any modality, with any level of assistance. Award 0 only where the student does not yet engage with the comparison even with full assistance, across the occasions.

Item D — duration (1 mark, scored on its own)

Materials: a pair of shoes with buckles and a pair of shoes with Velcro, worn by two people.

Script: Say: “We put on our shoes. We start at the same time. Ready. Go.” Start both events together, then ask: “Which is done first? Which takes longer? Show me. Tell me.”

Look for: the watch-and-compare and the communicated difference. Prompt where needed: narrate “still going / done first” and model “takes longer”. Do not time the events and do not count seconds — duration here is event-against-event only (VC2MFDM01.E03).

Award 1 mark where the student engages with the direct comparison and communicates the difference using the comparative language of duration, in any modality, with any level of assistance. Award 0 only where the student does not yet engage with the comparison even with full assistance, across the occasions.

Response set — how the student can answer, Part A

- **Object action:** line the pencils up; pour the water; lift the tin and the bag; watch the two events started together.
 - **Gesture, eye-gaze, switch or AAC:** direct the comparison by gaze or switch with the adult acting; choose, gaze at or press the matching picture card (length, capacity, mass, duration) or the comparative word-symbol card; select the word on the device.
 - **Speech or sign:** say or sign the comparative word — longer / shorter; holds more / holds less; heavier / lighter; takes longer / done first.
-

Part B — VC2MFDM02 · sequencing routines and connecting events to times of the day · 4 marks

Assessed content description: VC2MFDM02 — *sequence familiar routines and events using simple ordinal language and connect familiar events to times of the day, including morning, afternoon and night-time* (quoted verbatim from maths_AD.json). **Section:** 4B. **Marks:** 4 — one mark per observation item, each scored separately.

The CD carries two distinct ideas — ordering events, and connecting events to times of the day — and they are scored separately (TOC §7). Items 1 and 2 score ordering. Item 3 scores connecting. Item 4 scores both together.

Item 1 — sequence with ordinal language (1 mark)

Materials: 3 picture cards from a familiar routine the student knows (wake up, eat breakfast, go to school), mixed up.

Script: Place the 3 cards in front of the student and say: “Put the pictures in order.” Wait for the student to place, point, gaze, or order them with help. Then, pointing to each card in turn: “Which one is first? Which one is next? Which one is last?” Wait for the answer in any modality.

Award the mark when the student shows the order and shows first, next and last, in any modality, with or without assistance.

Item 2 — follow the visual schedule (1 mark)

Materials: the student’s own visual schedule strip, with the marker.

Script: Point to the strip and say: “What do we do first?” Wait. Do the event together. Come back to the strip and say: “Done. What comes next?” Wait for the student to move the marker, point, gaze, or choose on the device.

Award the mark when the student follows the schedule to say or show what comes first and what comes next, in any modality, with or without assistance.

Item 3 — connect events to times of the day (1 mark)

Materials: the 3 time symbols (sun low in the sky — morning; sun high in the sky — afternoon; moon and stars — night-time); 3 pictographs: eat breakfast, go home from school, go to bed.

Script: Place the 3 time symbols and say: “Morning. Afternoon. Night-time.” Hold up each pictograph, one at a time, and say: “Where does this one go?” Wait for the student to place, point, gaze, or choose.

Award the mark when the student connects all 3 events to the right time of the day, in any modality, with or without assistance.

Item 4 — order events on the string line and refer to the time of the day (1 mark)

Materials: the string line with the 3 time symbols placed along it (morning, afternoon, night-time); the same 3 pictographs, mixed up.

Script: Say: “Put the pictures on the line.” The student pegs, places, points or gazes, with help if needed. Then, for each card on the line: “Morning, afternoon or night-time?” Wait for the student to say, sign or show the time word for at least one placement.

Award the mark when the student places the events in order along the line and refers to morning, afternoon or night-time for a placement, in any modality, with or without assistance.

Response set — how the student can answer, Part B

- **Object action:** place or peg the cards in order; move the marker along the schedule strip; sort the pictographs under the time symbols.
- **Gesture, eye-gaze, switch or AAC:** point to or gaze at the order, the next picture, or the time symbol; push a card to its place; choose *first*, *next*, *last*, *morning*, *afternoon* or *night-time* on the device.
- **Speech or sign:** say or sign the order words and the time words; take part in a spoken or signed chant that names the routine.

After the third occasion

Transfer each mark from the recording sheet to the summary there: VC2MFDM01 /4, VC2MFDM02 /4 — checkpoint total /8. The rubric wording and the occasion record are on `_MathsADD_CP4_Rubric.md`. Both content descriptions appear again in the end-of-level review (REV), worth 2 marks each, before reporting against the Level D achievement standard. This chapter hands forward to Foundation's VC2MFM01 and VC2MFM02, where direct comparison grows into comparison with reasoning communicated, and the week becomes a repeating sequence.

Checkpoint 4 (CP4) — Rubric and recording sheet

Mathematics Towards Foundation D · ClassBasics workbook · Level D

Chapter 4 — Measurement: comparing things, and the shape of the day. This sheet is for the teacher to fill in. The student reads nothing and writes nothing here. Whole pages may be removed from the printed booklet for distribution, provided only whole pages are removed.

Instrument	Checkpoint 4 (CP4) — scoring rubric and observation record
Book and band	ClassBasics <i>Mathematics Towards Foundation D</i> (BK_MathsADD) — Foundation Level D, Towards Foundation. A progression level, not a year level; no age implied.
Content descriptions assessed	VC2MFDM01, VC2MFDM02 — each scored separately, 4 marks per content description
Marks	8
Conditions	Observed practical comparison and sequencing, untimed; no clocks and no timed measurement; evidence across at least three separate occasions; the recorded marks are the student's best sustained response. School-designed assessment instrument, not a VCAA instrument; not reviewed or endorsed by VCAA.

Student: _____ Communication system used: _____

The scoring model — the whole of the mark scheme

Each content description is scored out of **4**, as separately scored observation items (TOC §7: 4 marks per owned CD; 8 marks in all for Chapter 4). Every mark is awarded or not awarded on the student's **best sustained** response across **at least three separate occasions**:

- **1 mark** — the observation described for that item is seen, in any modality, **with any level of assistance**. Assisted and partial responses score: hand-over-hand, partial physical prompt, co-active movement, eye-gaze and aided communication (AAC device, picture exchange, sign) are legitimate observed responses at Level D. A rubric that scores only independent performance has failed the achievement standard.
- **0 marks** — no observable response yet, across the occasions. This is not a failure. Record what was offered, keep teaching, then observe again.

Rules that bind the judgement:

- A single observation is not evidence at Level D. Response varies with fatigue, seizure activity, medication, sensory load, pain, and whether the student's communication system is to hand.
 - The recorded judgement is the student's **best sustained** response — not an average, and not the most recent occasion.
 - Nothing is timed and no event is measured against a clock. Duration is event-against-event only. No units — formal or informal — and no estimation anywhere in this checkpoint.
 - **Reasoning is scored, not just the answer.** Record the comparison method and the comparative language the student used — they are the reasoning at this level, not an extra demand.
-

Record A — VC2MFD01 · length, capacity, mass and duration by direct comparison · 4 marks

Content description (quoted verbatim from maths_AD.json): “*identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparison.*”

Achievement standard extract carried on this CD (quoted verbatim): “*Students identify the attributes of mass, capacity, length and duration using direct comparison in practical situations.*”

Award 1 mark per item where the student **identifies the attribute of length / capacity / mass / duration using direct comparison in a practical situation**: the student engages with the direct comparison **and** communicates the difference using the comparative language of that attribute, in any modality, whether independent, partial or assisted.

Item	Attribute	Observation	Occasion 1	Occasion 2	Occasion 3	Further	Best sustained	Mark
L	length	engages with the side-by-side comparison and communicates <i>longer / shorter / the same</i>						/1
C	capacity	engages with the pour and communicates <i>holds more / holds less</i>						/1
M	mass	engages with the heft and communicates <i>heavier / lighter</i>						/1
D	duration (scored on its own)	engages with the two events started together and communicates <i>takes longer / done first / still going</i>						/1

All four attributes named in the CD are scored, with duration scored on its own because it is the one students most often lose (TOC §7). For each occasion, record: the objects or events used, the comparison method, the comparative language the student used, the modality, and the support given.

Best sustained total for VC2MFDM01: ____ / 4

Record B — VC2MFDM02 · sequencing routines and connecting events to times of the day · 4 marks

Content description (quoted verbatim from `maths_AD.json`): “*sequence familiar routines and events using simple ordinal language and connect familiar events to times of the day, including morning, afternoon and night-time.*”

Achievement standard extract carried on this CD (quoted verbatim): “*They order and connect familiar events to times of the day.*”

The CD carries two distinct ideas — ordering events, and connecting events to times of the day — and they are scored separately (TOC §7): Items 1 and 2 score ordering; Item 3 scores connecting; Item 4 scores both together.

Item	Idea scored	Observation	Occasion 1	Occasion 2	Occasion 3	Further	Best sustained	Mark
1 — sequence with ordinal language	ordering	shows the order of 3 familiar events and shows first, next and last						/1
2 — follow the visual schedule	ordering	follows the schedule to say or show what comes first and what comes next						/1
3 — connect events to times of the day	connecting	connects all 3 events to morning, afternoon and night-time						/1
4 — string line	ordering and connecting	places the events in order along the line and refers to morning, afternoon						/1

Item	Idea scored	Observation	Occasion 1	Occasion 2	Occasion 3	Further	Best sustained	Mark
		or night-time for a placement						

For each occasion, record: the cards and symbols used, whether the item ran inside the student’s real day, the ordinal and time words the student used, the modality, and the support given. Day-name recognition (VC2MFDM02 . E05) is recorded as supporting evidence, not as one of the 4 marks.

Best sustained total for VC2MFDM02: ____ / 4

Checkpoint 4 summary

Content description	Section	Best sustained mark
VC2MFDM01 — identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparison	4A	___ / 4
VC2MFDM02 — sequence familiar routines and events using simple ordinal language and connect familiar events to times of the day	4B	___ / 4
Checkpoint 4 total		___ / 8

Both content descriptions are assessed again, worth 2 marks each, in the end-of-level review (REV) before reporting against the Level D achievement standard.

Recorded by: _____ **Date:** _____