

Mathematics Towards Foundation D

Chapter 2 — Number: acting out situations — adding, taking away and sharing

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Adding to and taking away from collections, including simple financial situations

This section is written for the teacher. Every instruction is delivered in the student's own communication modality — spoken language, sign, AAC device, picture exchange, eye-gaze, or a combination of these. The student does not need to read anything. The mathematics is carried in the materials, the pictures, the teacher's script and the student's communication system.

represent practical situations, including simple financial situations, involving addition, subtraction and quantification up to at least 10 with physical and virtual materials and use matching or counting strategies
— VC2MFDN05

Achievement standard (extract). “Students represent practical situations that involve quantifying, equal sharing between 2, and adding and taking away one from a collection up to 10.” — Victorian Curriculum F–10 Mathematics Version 2.0, Foundation Level D achievement standard, quoted from the authority file `maths_AD.json`. The equal-sharing part of this sentence is delivered and assessed in 2B (VC2MFDN06).

Owns VC2MFDN05 · **Strand** Number · **Range** collections up to at least 10.

Elaborations owned. The six elaboration ids below are carried for MCQ, short-answer and coverage linkage. They are a join key, not a teaching order (TOC decision D9). All text is quoted verbatim from the Victorian Curriculum F–10 Mathematics Version 2.0, Foundation Level D, via the authority file `S:\Files\projects\mcq-system\data\vc2_books\maths_AD.json`.

- VC2MFDN05.E01 — “counting all to find the total of a combined collection up to at least 10; for example, counting collections of strawberries and pears separately and then combining them in a bowl and counting the whole collection”
- VC2MFDN05.E02 — “using role-play and materials to represent mathematical relationships in stories; for example, role-playing ‘Five kangaroos were drinking at the river and 3 hopped away’, drawing a picture and using materials to represent the situation, and recording the result of the action with a numeral”
- VC2MFDN05.E03 — “using counting strategies, including counting all, counting on from the larger number and counting back, using concrete materials, number lines, ten-frames and counting charts”
- VC2MFDN05.E04 — “actively engaging in situations that involve quantifying or comparing collections; for example, engaging with the question ‘Do we have enough glue sticks for our group so that each person has one?’”
- VC2MFDN05.E05 — “role-playing using 10 one-dollar coins to pay for items that are priced at \$1 and communicating parts of the transaction; for example, saying ‘I spent 7 one-dollar coins’ or ‘I spent \$7’; ‘I had \$10, I spent \$7 and now I have \$3’”
- VC2MFDN05.E06 — “modelling practical situations involving ‘adding to’ or ‘taking away’ with collections of at least 10 objects in digital or physical format”

Materials

Gather the materials before the session. Offer them in more than one size and more than one texture, so the student can touch, hold and see them in the way that suits them best. Where an action needs pointing, offer an eye-gaze alternative. Where an action needs small hand movements, offer big objects or a switch that does not.

- counters in two colours (blocks, buttons, large beads)
- two bowls and two plates
- a ten-frame and ten counters that fit it
- numeral cards from 0 to 10 — each card shows the numeral and the number word together, for example **7 seven**
- a number line from 0 to 10
- a counting chart: numeral cards from 0 to 10 in a row
- ten \$1 coins — real coins where possible
- everyday items for the shop role-play, each with a \$1 price tag: apple, banana, biscuit, cup

- a tablet or interactive whiteboard showing objects that can be added and taken away by touch, switch or eye-gaze (the *virtual materials* of the content description)
- the student's own communication system, within reach for the whole session

Teacher note — the coin. Use real \$1 coins where you can. The Australian one-dollar coin was first issued in 1984, and the kangaroo side shows five kangaroos — a real collection of five to count on the coin itself. Source: Royal Australian Mint, One Dollar, retrieved 2026-08-17.

Theory

The verb of this subtopic is **represent**, not calculate. The student acts out situations with materials — physical and virtual — and says, signs, points to or gazes at the result. The result is recorded with a numeral. There are no number sentences here: +, – and = are not written by students at this level (TOC decisions D11, and the Chapter 2 plan in TOC §3).

We act it out

Say: “Today we play with things. We put more in. We take some away. We count to find out how many.”

Show the two actions with real objects, before any numbers are named.

- **Adding to:** hold up three counters, then put two more into the same bowl. Say: “More come in.”
- **Taking away:** hold up five counters, then take two out of the bowl. Say: “Some go away.”

Two panels. Left: counters going into a bowl, labelled adding to. Right: counters coming out of a bowl, labelled taking away.

Two panels. Left: counters going into a bowl, labelled adding to. Right: counters coming out of a bowl, labelled taking away.

Do each action several times with different objects. Let the student add and take away with their own hands, with a switch, or by telling you what to move.

Adding to

Adding to means more comes. The collection gets bigger.

Say: “Look. 3 apples here. Here come 2 more apples. Now we count them all.”

Count every object, one number word for each object. The last number word says how many altogether.

Taking away

Taking away means some go. The collection gets smaller.

Say: “6 biscuits on the plate. I eat 2. Some are gone. We count what is left.”

Count the objects that are left. The last number word says how many are left. If all the objects go, the collection is empty. Empty is 0 — zero.

Ways to count

Three counting ways are used in this subtopic (VC2MFDN05.E03). They are strategies, not written methods. All of them start with the materials.

Count all. Touch each object and say one number word for each one. The last number word says how many.

Count on from the larger number. When two groups come together, start with the big group in your head, then count the small group on. Say: “7 in the frame ... 8, 9. Nine altogether.” The student may hold the big number on a numeral card while counting the other group on.

Count back. When objects go away, start at the number and count back as each one leaves. Say: “6 on the plate ... take one away ... 5 ... take one away ... 4. Four left.”

The ten-frame, the number line and the counting chart all support these ways.

Matching. One thing for each person. Matching tells us *enough* or *not enough* without counting everything twice (VC2MFDN05 . E04). Give one cup to each person at the table. Is there a cup for everyone?

Recording with a numeral

After every action, the result goes down as a numeral (VC2MFDN05 . E02). The student records in the way that works for them:

- pick up the matching numeral card, or
- point to the matching numeral card, or
- gaze at the matching numeral card, or
- write the numeral, or
- select the numeral on their communication device.

The numeral is the record. No other notation is used or required.

Money — paying with one-dollar coins

This is where money enters at this level. Everything costs whole dollars: \$1. There are no cents, no change and no rounding here (TOC §6).

In the shop role-play (VC2MFDN05 . E05):

- every item has a \$1 price tag
- the student pays with \$1 coins — one coin for each dollar
- the student counts the coins spent and the coins left
- the student communicates parts of the transaction, in whatever modality they use: “I spent \$3.” “I have \$7 left.”

The teacher models the language first. The student joins in with voice, sign, device or gesture.

Worked examples

Do these with the student. Use the real materials. The teacher says all the words; the student looks, touches, moves and responds in their own modality.

Worked example 1 — putting two groups together

3 oranges in one bowl. 5 apples in a second bowl. Put all the fruit into one bowl. How many pieces of fruit are there altogether?

Working	Comment
Count the oranges: 1, 2, 3.	Touch each orange.
Count the apples: 1, 2, 3, 4, 5.	Touch each apple.
Put all the fruit into one bowl.	The two groups come together.
Count all the fruit: 1, 2, 3, 4, 5, 6, 7, 8.	One number word for each piece. The last word says how many.
Show the numeral card 8.	The numeral is the record.

Two bowls, one with 3 oranges and one with 5 apples, then all 8 pieces of fruit together in one bowl.

Two bowls, one with 3 oranges and one with 5 apples, then all 8 pieces of fruit together in one bowl.

∴ 3 oranges and 5 apples make 8 pieces of fruit altogether.

Worked example 2 — taking away

6 biscuits on a plate. 2 biscuits are eaten. How many biscuits are left?

Working	Comment
Count the biscuits on the plate: 1, 2, 3, 4, 5, 6.	Touch each biscuit.
Take 2 biscuits away, one at a time.	Say: “One is eaten. Another one is eaten.”
Count the biscuits left: 1, 2, 3, 4.	Touch each biscuit that is still on the plate.
Show the numeral card 4.	The numeral is the record.

A plate with 6 biscuits, 2 biscuits moving away, and 4 biscuits left on the plate.

A plate with 6 biscuits, 2 biscuits moving away, and 4 biscuits left on the plate.

∴ 6 biscuits, 2 are eaten, 4 biscuits are left.

Worked example 3 — counting on from the larger number

The ten-frame has 7 counters in it. 2 more counters come. How many counters are there now?

Say: “7 are in the frame. We do not count them again. We keep 7 in our head. Now we count the new ones on: 8, 9.”

Put the 2 counters into the frame, one at a time, and count on: “8 ... 9.”

Show the numeral card 9.

A ten-frame with 7 counters in it, 2 more counters moving into the frame, 9 counters altogether.

A ten-frame with 7 counters in it, 2 more counters moving into the frame, 9 counters altogether.

∴ 7 and 2 more is 9.

Worked example 4 — paying with one-dollar coins

The student has 10 \$1 coins. Every item in the shop costs \$1. The student buys the apple, the banana and the biscuit.

Ten one-dollar coins in a row.

Ten one-dollar coins in a row.

Say: “The apple costs \$1. Pay 1 coin.” The student puts one coin down. Say: “The banana costs \$1. Pay 1 coin.” The student puts one coin down. Say: “The biscuit costs \$1. Pay 1 coin.” The student puts one coin down.

Count the coins spent: 1, 2, 3. Count the coins left: 1, 2, 3, 4, 5, 6, 7.

Model the words, then invite the student to communicate them in their own modality: “I had \$10. I spent \$3. I have \$7 now.”

Shop items with \$1 price tags: an apple, a banana, a biscuit and a cup, with one-dollar coins beside them.

Shop items with \$1 price tags: an apple, a banana, a biscuit and a cup, with one-dollar coins beside them.

∴ 3 coins spent, 7 coins left.

Practice questions

The teacher delivers every question in the student’s modality, with the picture and the materials. The student responds by saying, signing, pointing, gazing, moving objects or using their communication device. The teacher puts the response down.

Q1. Put together and count all.

Say: “4 bananas here. 3 oranges here. Put them all in the bowl. Count all the fruit.”

4 bananas in one group and 3 oranges in one group, then all the fruit together in a

bowl.

4 bananas in one group and 3 oranges in one group, then all the fruit together in a bowl.

- The student puts the fruit together and counts it.
- There are ____ pieces of fruit.
- The student shows the numeral card ____.

Q2. Fill the ten-frame.

Say: “5 counters in the frame. Here come 4 more. Put them in. How many now?”

A ten-frame with 5 counters in it, 4 more counters beside the frame, 9 counters altogether.

A ten-frame with 5 counters in it, 4 more counters beside the frame, 9 counters altogether.

- The student puts the 4 counters into the frame.
- Count all the counters: ____.
- The student shows the numeral card ____.

Q3. Count on from the larger number.

Say: “8 counters in the frame. 2 more come. Keep 8 in your head. Count on.”

A ten-frame with 8 counters in it and 2 more counters moving into the frame.

A ten-frame with 8 counters in it and 2 more counters moving into the frame.

- Say the counting on: “8, ____, ____.”
- There are ____ counters now.
- The student shows the numeral card ____.

Q4. Biscuits are eaten.

Say: “7 biscuits on the plate. I eat 2. How many are left?”

A plate with 7 biscuits, 2 biscuits moving away, 5 biscuits left on the plate.

A plate with 7 biscuits, 2 biscuits moving away, 5 biscuits left on the plate.

- The student takes 2 biscuits away. There are ____ left.
- Say: “Now I eat all the rest.” The student takes them all away. There are ____ left. The numeral card is ____.

Q5. People get off the bus.

Say: “9 people are on the bus. At the stop, 3 people get off. How many people are on the bus now?”

A bus with 9 people, 3 people getting off at a bus stop, 6 people left on the bus.

A bus with 9 people, 3 people getting off at a bus stop, 6 people left on the bus.

- The student moves 3 people off the bus.
- There are ____ people on the bus now.
- The student shows the numeral card ____.

Q6. Count back on the counting chart.

Say: “9 blocks in the tower. We take 5 away. Start at 9. Count back as we take them.”

A counting chart of numeral cards from 0 to 10, with a marker on 9 and 5 steps counted back to 4.

A counting chart of numeral cards from 0 to 10, with a marker on 9 and 5 steps counted back to 4.

- Say the counting back: “9, 8, 7, 6, 5, ____.”
- There are ____ blocks left.
- The student shows the numeral card ____.

Q7. Is there enough?

Say: “4 people sit at the table. Here are 3 cups. One cup for each person. Is there enough?”

4 people at a table and 3 cups, one cup matched to each of 3 people, 1 person with no cup.

4 people at a table and 3 cups, one cup matched to each of 3 people, 1 person with no cup.

- The student matches one cup to each person.
- Enough, or not enough? ____
- How many more cups do we need? ____

Q8. Act out the story.

Say: “3 birds are on the fence. 5 more birds come to the fence. Show me with the birds. How many birds are on the fence now?”

3 birds on a fence, 5 more birds flying to the fence, 8 birds altogether on the fence.

3 birds on a fence, 5 more birds flying to the fence, 8 birds altogether on the fence.

- The student acts out the story with the materials.
- There are ____ birds on the fence now.
- The student records the result with the numeral card ____.

Q9. Pay for 4 things.

Say: “You buy the apple, the banana, the biscuit and the cup. Each one costs \$1. Pay with the coins.”

The shop items and the coins are the same as Worked example 4.

- The student pays 1 coin for each item.
- The student counts the coins spent: ____.
- Say it: “I spent \$____.”

Q10. Coins left.

Say: “You have 5 one-dollar coins. You buy 2 things. Each one costs \$1. How many coins do you have now?”

- The student pays 2 coins.
- The student counts the coins left: ____.
- Say it: “I had \$5. I spent \$2. I have \$____ now.”

Q11. On the screen.

Say: “Look at the screen. 10 circles. Take 6 away.” The student takes the circles away by touch, switch or eye-gaze, on the tablet or interactive whiteboard.

A screen showing 10 circles, 6 of them crossed out, 4 circles left.

A screen showing 10 circles, 6 of them crossed out, 4 circles left.

- The student takes 6 circles away on the screen.
- There are ____ circles left.
- The student shows the numeral card ____.

Q12. Cars in the yard — count on from the larger number.

Say: “3 red cars and 4 blue cars are in the yard. How many cars altogether? Start with the big group. 4 blue cars — keep 4 in your head. Count the red cars on.”

A number line from 0 to 10, with a dot on 4 and 3 jumps forward landing on 7.

A number line from 0 to 10, with a dot on 4 and 3 jumps forward landing on 7.

- Say the counting on: “4, ____, ____, ____.”
- There are ____ cars altogether.
- The student shows the numeral card ____.

Observation tasks — towards the Chapter 2 checkpoint (VC2MFDN05 part)

The Chapter 2 checkpoint is observed role-play with materials and \$1 coins; the result is recorded with a numeral (TOC §7). The checkpoint assesses both CDs of Chapter 2 and is worth 8 marks in total. The four observations below are this subtopic’s part of the checkpoint: they assess VC2MFDN05 and contribute its 4 marks (4 marks per owned CD). The observations for VC2MFDN06 complete the checkpoint and are delivered in 2B.

The rubric is written in the language of the achievement standard extract carried for VC2MFDN05 in the authority file:

“Students represent practical situations that involve quantifying, equal sharing between 2, and adding and taking away one from a collection up to 10.”

Rules for these observations (TOC decisions D10, and TOC §7):

- Observe each task on **at least three separate occasions**. Response varies with fatigue, seizure activity, medication, sensory load, pain, and whether the student’s communication system is to hand. A single observation is not evidence.
- 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 at this level.
- Nothing is timed. There is no required reading and no required writing.

OT1. Adding to (1 mark)

Materials: 4 red counters, 3 blue counters, a bowl, numeral cards 0–10.

Say: “4 red counters here. 3 blue counters here. Put them all in the bowl. How many counters altogether?”

Look for: the student represents the adding-to situation with the materials (independently, hand-over-hand, by directing you, or by gaze) and quantifies the collection. The result is recorded with a numeral — card, point, gaze, device or writing.

Award 1 mark when the student represents the situation and gives the result, 7, with any level of assistance. Award 0 only when there is no observable response across the three occasions.

OT2. Taking away (1 mark)

Materials: 8 counters, a plate, numeral cards 0–10.

Say: “8 biscuits on the plate. I eat 3. How many biscuits are left?”

Look for: the student represents the taking-away situation — removing, directing you to remove, or indicating removal — and counts what is left. The result is recorded with a numeral.

Award 1 mark when the student represents the situation and gives the result, 5, with any level of assistance. Award 0 only when there is no observable response across the three occasions.

OT3. A counting strategy (1 mark)



Materials: ten-frame, 9 counters, numeral cards 0–10.

Say: “6 counters in the frame. 3 more come. How many now?” The student may count all, count on from the larger number, or count the new counters in one by one — any counting strategy with the materials is in scope (VC2MFDN05.E03).

Look for: the student uses a counting strategy with the materials and gives the result, 9, recorded with a numeral.

Award 1 mark when the student represents the situation and gives the result with any level of assistance. Award 0 only when there is no observable response across the three occasions.

OT4. Paying with one-dollar coins (1 mark)

Materials: ten \$1 coins, four items with \$1 price tags (apple, banana, biscuit, cup), numeral cards 0–10.

Say: “You have 10 one-dollar coins. Everything costs \$1. Buy the apple, the banana, the biscuit and the cup. Pay with the coins.”

Look for: the student pays one coin for each item, counts the coins spent (4) or the coins left (6), and communicates a part of the transaction in their own modality — for example “I spent \$4”, signed, spoken, selected on a device, or indicated with cards or gesture.

Award 1 mark when the student represents the buying situation and communicates a part of it, with any level of assistance. Award 0 only when there is no observable response across the three occasions.

Observation	What the rubric scores (achievement standard language)	Marks
OT1	represents a practical situation that involves adding to a collection up to 10, and quantifies it, recording the result with a numeral	1
OT2	represents a practical situation that involves taking away from a collection up to 10, and quantifies what is left, recording the result with a numeral	1
OT3	uses a counting strategy with concrete materials to quantify a collection up to 10, recording the result with a numeral	1
OT4	represents a simple financial situation with \$1 coins and communicates a part of the transaction	1
	VC2MFDN05 part of the checkpoint	4

Observation record — best sustained response across at least three occasions:

Task	Occasion 1 — date, response, assistance	Occasion 2 — date, response, assistance	Occasion 3 — date, response, assistance	Best sustained	Mark
OT1					/1
OT2					/1
OT3					/1
OT4					/1

Answers

Expected observed responses. The teacher records what the student actually does, in the student's own modality.

Q1. b. 7 c. 7.

Q2. b. 9 c. 9.

Q3. a. “8, 9, 10” b. 10 c. 10.

Q4. a. 5 b. 0, the numeral card 0.

Q5. b. 6 c. 6.

Q6. a. “9, 8, 7, 6, 5, 4” b. 4 c. 4.

Q7. b. Not enough c. 1 more cup.

Q8. b. 8 c. 8.

Q9. b. 4 c. “I spent \$4.”

Q10. b. 3 c. “I have \$3 now.”

Q11. b. 4 c. 4.

Q12. a. “4, 5, 6, 7” b. 7 c. 7.

OT1. 7 counters altogether; recorded with a numeral.

OT2. 5 biscuits left; recorded with a numeral.

OT3. 9 counters; any counting strategy with the materials; recorded with a numeral.

OT4. 4 coins spent, 6 coins left; a part of the transaction communicated, for example “I spent \$4” or “I have \$6 now”.

Fully-worked solutions

Step-by-step for the teacher, with the teacher's record. The symbols +, – and = appear in these teacher records only; they are never required of the student at this level (TOC decision D11).

Q1.

4 bananas in one group and 3 oranges in one group, then all the fruit together in a bowl.

4 bananas in one group and 3 oranges in one group, then all the fruit together in a bowl.

Count the bananas: 1, 2, 3, 4. Count the oranges: 1, 2, 3. Put all the fruit in the bowl. Count all: 1, 2, 3, 4, 5, 6, 7. The student shows the numeral card 7.

Teacher record: $4 + 3 = 7$.

$\therefore$ 7 pieces of fruit.

Q2.

A ten-frame with 5 counters in it, 4 more counters beside the frame, 9 counters altogether.

A ten-frame with 5 counters in it, 4 more counters beside the frame, 9 counters altogether.

Count the counters in the frame: 5. Put the 4 new counters in, counting each one: 6, 7, 8, 9. Count all the counters in the frame: 1, 2, 3, 4, 5, 6, 7, 8, 9. The student shows the numeral card 9.

Teacher record: $5 + 4 = 9$.

∴ 9 counters.

Q3.

A ten-frame with 8 counters in it and 2 more counters moving into the frame.

A ten-frame with 8 counters in it and 2 more counters moving into the frame.

Say: “8 in the frame. Keep 8 in your head.” Put the 2 counters in, one at a time, and count on: “9, 10.” The student shows the numeral card 10.

Teacher record: $8 + 2 = 10$.

∴ 10 counters.

Q4.

A plate with 7 biscuits, 2 biscuits moving away, 5 biscuits left on the plate.

A plate with 7 biscuits, 2 biscuits moving away, 5 biscuits left on the plate.

Count the biscuits: 7. Take 2 away, counting back: “6, 5.” Count what is left: 1, 2, 3, 4, 5. Then take all 5 away. The plate is empty. Empty is 0. The student shows the numeral card 0.

Teacher record: $7 - 2 = 5$, then $5 - 5 = 0$.

∴ a. 5 biscuits left. b. 0 biscuits left.

Q5.

A bus with 9 people, 3 people getting off at a bus stop, 6 people left on the bus.

A bus with 9 people, 3 people getting off at a bus stop, 6 people left on the bus.

Count the people on the bus: 9. Move 3 people off, counting back: “8, 7, 6.” Count the people still on the bus: 1, 2, 3, 4, 5, 6. The student shows the numeral card 6.

Teacher record: $9 - 3 = 6$.

∴ 6 people on the bus.

Q6.

A counting chart of numeral cards from 0 to 10, with a marker on 9 and 5 steps counted back to 4.

A counting chart of numeral cards from 0 to 10, with a marker on 9 and 5 steps counted back to 4.

Point to 9 on the counting chart. Take the blocks away one at a time and count back, moving the marker: “9, 8, 7, 6, 5, 4.” The marker is on 4. The student shows the numeral card 4.

Teacher record: $9 - 5 = 4$.

∴ 4 blocks left.

Q7.

4 people at a table and 3 cups, one cup matched to each of 3 people, 1 person with no cup.

4 people at a table and 3 cups, one cup matched to each of 3 people, 1 person with no cup.

Match one cup to each person: cup 1, cup 2, cup 3. One person has no cup. There are not enough cups. We need 1 more cup so that each person has one.

Teacher record: 4 people, 3 cups — 1 more cup needed.

∴ Not enough; 1 more cup.

Q8.

3 birds on a fence, 5 more birds flying to the fence, 8 birds altogether on the fence.

3 birds on a fence, 5 more birds flying to the fence, 8 birds altogether on the fence.

Put 3 birds on the fence. Put 5 more birds on the fence, one at a time. Count all the birds: 1, 2, 3, 4, 5, 6, 7, 8. The student records the result with the numeral card 8.

Teacher record: $3 + 5 = 8$.

$\therefore$ 8 birds on the fence.

Q9.

Pay 1 coin for each item: apple — 1 coin, banana — 1 coin, biscuit — 1 coin, cup — 1 coin. Count the coins spent: 1, 2, 3, 4.

Teacher record: 4 coins spent = \$4 spent.

$\therefore$ “I spent \$4.”

Q10.

Count the coins: 5. Pay 1 coin for each of the 2 things, counting back: “4, 3.” Count the coins left: 1, 2, 3.

Teacher record: $\$5 - \$2 = \$3$ left.

$\therefore$ “I had \$5. I spent \$2. I have \$3 now.”

Q11.

A screen showing 10 circles, 6 of them crossed out, 4 circles left.

A screen showing 10 circles, 6 of them crossed out, 4 circles left.

Count the circles on the screen: 10. The student takes 6 circles away by touch, switch or eye-gaze. Count the circles left: 1, 2, 3, 4. The student shows the numeral card 4.

Teacher record: $10 - 6 = 4$.

$\therefore$ 4 circles left.

Q12.

A number line from 0 to 10, with a dot on 4 and 3 jumps forward landing on 7.

A number line from 0 to 10, with a dot on 4 and 3 jumps forward landing on 7.

The big group is the 4 blue cars. Say: “Keep 4 in your head.” Count the red cars on, one at a time: “5, 6, 7.” On the number line, start at 4 and make 3 jumps forward: 5, 6, 7. The student shows the numeral card 7.

Teacher record: $3 + 4 = 7$, counted on from the larger number: $4 + 3 = 7$.

$\therefore$ 7 cars altogether.

OT1.

Put the 4 red counters and the 3 blue counters into the bowl. Count all: 1, 2, 3, 4, 5, 6, 7. The student records 7 with a numeral card, point, gaze, device or writing.

Teacher record: $4 + 3 = 7$.

$\therefore$ 7 counters; the student represents the adding-to situation and quantifies it.

OT2.

Count the biscuits: 8. Take 3 away, one at a time. Count what is left: 1, 2, 3, 4, 5. The student records 5 with a numeral card, point, gaze, device or writing.

Teacher record: $8 - 3 = 5$.

∴ 5 biscuits left; the student represents the taking-away situation and quantifies it.

OT3.

Put 6 counters in the ten-frame. Add 3 counters, one at a time. The student counts all (1 to 9) or counts on from 6 (“7, 8, 9”). The result is 9, recorded with a numeral.

Teacher record: $6 + 3 = 9$.

∴ 9 counters; the student uses a counting strategy with the materials.

OT4.

Count the coins: 10 \$1 coins. Pay 1 coin for each item: apple, banana, biscuit, cup — 4 coins paid. Count the coins spent: 4. Count the coins left: 6. The student communicates a part of the transaction: “I spent \$4” or “I have \$6 now” — spoken, signed, selected on a device, or shown with cards.

Teacher record: $\$10 - \$4 = \$6$ left.

∴ 4 coins spent, 6 coins left; the student represents a simple financial situation and communicates a part of it.

Equal sharing of a collection between 2

Chapter 2 — Number: acting out situations — adding, taking away and sharing

This section is for the teacher. The teacher reads all the words, holds the materials and leads every activity. The student watches, listens, touches and responds in their own way — with speech, sign, gesture, eye-gaze, a switch or a communication device. The student does not need to read, write or speak. Nothing here requires speech. A response with support is still a response.

represent practical situations that involve equal sharing of a collection of up to 10 physical or virtual objects and use counting strategies — VC2MFDN06, Victorian Curriculum F–10 Mathematics Version 2.0 (VCAA)

In this section the mathematics is **equal sharing between 2**. A collection of up to 10 objects is given out to **2 places**, one object at a time, until the collection is all gone. Both places end up with the same amount. That is an **equal share**. The action at the centre of the section is **“one for you, one for me”** — one object to each place, one at a time.

The student **shares**, **checks** the shares and **records** the result. The verb of this section is *represent*, never *calculate*: the student represents the sharing by acting it out with objects, by matching, by counting and by drawing. To say how many each place gets, the student uses **counting strategies** — counting each share by ones, subitising a small share, and checking with one-to-one correspondence. The result is recorded with a **numeral**. There are no number sentences and no symbols anywhere in this section.

The words of this section are **‘share’**, **‘each’**, **‘equal’**, **‘the same’**, **‘more’** and **‘left’**.

- A **collection** is a group of things: 6 beads, 8 cards, 10 balls.
- To **share** is to give things out. A **share** is what one place gets.
- **Equal** means the same. The shares are **equal** when both places get the same amount — one place does not get more.
- **One-to-one correspondence** means one thing matches one thing: each object in one share is paired with one object in the other share.
- A **counting strategy** is a way of using counting to answer a question — here, counting by ones or subitising to say how many are in a share.
- **Subitising** means seeing how many are in a small group without counting one by one (Section 1B). In this book subitising stops at 4. A share of 5 is counted by ones.

Sharing in this section is always between exactly 2 places. Sharing between 3 or more places, and grouping, are not part of this section. The collections here have up to 10 objects. There are no number sentences and no symbols.

Framework: content description, elaborations and achievement standard

Content description — VC2MFDN06, quoted verbatim:

represent practical situations that involve equal sharing of a collection of up to 10 physical or virtual objects and use counting strategies

Elaborations — VCAA’s examples of what this learning can look like. They are illustrations, not a checklist, and this section is not a walk through them in order. The content description is the expectation.

- VC2MFDN06.E01 — “sharing materials equally and using one-to-one correspondence to count the amount that each student receives; for example, sharing pieces of fruit between 2 students and counting the amount to show that they were shared equally, or sharing playing cards between players and each player counting the number of cards after the deal to ensure all players have the same amount”
- VC2MFDN06.E02 — “representing situations that involve counting several items; for example, starting with 8 beads or 6 one-dollar coins and then sharing them equally between 2 students by subitising or counting each group by ones to decide how many beads or coins each student will receive”

Achievement standard. This content description shares its achievement standard sentence with VC2MFDN05 (Section 2A): VCAA gives the two content descriptions one sentence, verbatim. Quoted verbatim:

Students represent practical situations that involve quantifying, equal sharing between 2, and adding and taking away one from a collection up to 10.

The judgement at the end of this section uses this sentence, scored for VC2MFDN06 against *equal sharing between 2*: how the student represents the equal sharing of a collection of up to 10 between 2, the counting strategies they use, and how they record the result with a numeral. Quantifying, and adding and taking away one from a collection, belong to Section 2A and are scored there.

What 'equal sharing between 2' means here

The curriculum says *equal sharing* and does not define the phrase at this level. In this section it is treated as: the collection is given out one object at a time to 2 places until it is all gone, and both places get the same amount. Every task in this section is answerable on that meaning alone.

Three ways to check that the shares are equal:

1. **Count each share by ones.** Count one share, then count the other, touching one object at a time. If both counts end at the same number, the shares are equal.
2. **Pair them, one against one.** Line the two shares up side by side and match one object against one object. If every object has a partner, the shares are equal. This is one-to-one correspondence.
3. **Subitise both shares.** A share of up to 4 can be seen without counting one by one. Two shares of 3 can be seen as the same. A share bigger than 4 is counted.

If one share has more, the shares are not equal. If the collection has an odd number of objects — 7 or 9 — the sharing ends with 1 object left: the shares are still the same (3 and 3, or 4 and 4), and 1 object is left over.

How the student responds

Every activity, worked example and practice task here accepts responses in at least three ways:

- **Object or photograph choice.** The student touches, reaches for, pushes towards or picks up an object, places an object at one of the 2 places, or chooses between photographs, symbols or numeral cards.
- **Gesture, eye-gaze, switch or AAC.** The student points, gestures, looks at, presses a switch or makes a selection on their AAC. AAC (augmentative and alternative communication) is a device, board, book or app that speaks or shows words for the student. Where pointing is needed, an eye-gaze response counts as pointing.
- **Speech, sign or drawing.** The student speaks, vocalises, signs, or draws or places a mark to show a share.

No activity here requires speech. If the student can speak, good; if not, also good — a response in any channel is a response.

Yes/no questions. Checking whether the shares are the same is a yes/no question, so the yes and the no must be supplied: the student's yes symbol, photograph or object and the student's no symbol, photograph or object, placed ready — or the yes and no keys on the student's switch or AAC page. Hold them up before you ask. Never assume a head nod or head shake.

Support counts. Hand-over-hand, partial physical prompts, moving together (co-active movement), modelled gestures and eye-gaze are all legitimate responses. A response with support is still a response, never nothing. Record the support you gave.

Materials: real objects first

At this level: real objects first, then photographs, then line drawings. The object is the page. Gather:

- **A collection of identical objects to share** — beads, counters, blocks, pegs, playing cards, pieces of fruit, crackers or one-dollar coins (real or pretend). Have collections of 4, 6, 7, 8, 9 and 10 ready, so the student can share right across the range up to 10.
- **Exactly 2 places to share between** — 2 plates, 2 mats, 2 trays or 2 baskets, or a photograph of each of the 2 people sharing, placed at the table.

- **A bag, box or packet** to hold the collection before it is shared.
- **Numerical cards 0 to 10**, the student's AAC number page, or paper and a pen — one of these, ready for recording how many each place gets.
- **The student's communication system** — switch, AAC device, symbol board, photographs or objects of reference — with a way to say 'more', a way to say 'the same', a way to say 'different', and the student's yes and no ready.

Keep the objects identical so the shares are easy to see — the point is *one for you, one for me*, not what is being shared. Offer the objects in more than one size and texture, and objects that are easy to grip, so the sharing does not depend on fine motor control. A student who cannot place small objects can place large ones, push objects into a basket, press a switch so a partner places them, or show the place for each object with eye-gaze. Choose objects that fit the student and respect their age — the objects change with the student; the mathematics does not.

Coins in this section are objects to count and share, not money to spend — spending money belongs to Section 2A, and it stays there.

Virtual materials. VC2MFDN06 names physical **and virtual** objects; real objects come first, and a screen is one variation, not the main material. Where you use a screen (see Further opportunities), use a program or app that accepts **switch or touch input**, and say which input the student uses.

Teaching sequence (teacher script)

One sequence, six stages. The words in “quotes” are the read-aloud script. The actions in (brackets) are what you do. Pause where it says pause — the pause is where the student responds. Keep every count at 10 or less.

Before you start:

- Set up exactly 2 places to share to — plates, mats, baskets, or photographs of the 2 people sharing.
- Have bags of identical objects ready — 6 to start, then 8, 10, and a bag of 7 for the last stages.
- Have numeral cards 0 to 10 (or the student's AAC number page) to hand.
- Have the student's communication system with you, with 'more', 'the same', 'different', yes and no available on it.
- Pick a time when the student is rested and comfortable.

Stage 1 — Watch a share between 2 (VC2MFDN06.E01)

(Put the 2 plates in front of the student. Bring out the bag with 6 muffins, real or pretend.)

“Time to share. One for you, one for me.”

(Put one muffin down at the first plate, then one at the second plate. Go back and forth, one object at a time, pausing after each one.)

“One for you. One for me. One for you. One for me. One for you. One for me.”

(When all 6 muffins are out — 3 and 3 — touch each group in turn.)

“Look. The same. 3 and 3.”

(Count each share slowly, touching one muffin at a time.)

“One, two, three. 3.” Pause. “One, two, three. 3. The shares are equal.”

Pause. Let the student see or touch the two groups. Watch: does the student look between the plates, follow the objects as they land one at a time, or reach towards the objects?

Stage 2 — You share: one for you, one for me (VC2MFDN06.E02)

(Put the bag of 8 beads in front of the student. Gesture to the 2 mats in turn.)

“Share the beads. One for you, one for me.”

Pause after each give. Watch: does the student take one bead and place it, or hand it, at one mat — then take one for the other mat — one at a time, until all 8 beads are gone?

Support with hand-over-hand or a partial prompt if needed, and record the support. If the student pushes two beads over together, model one at a time: take one bead, place it, and say “One. One for you.”

When all the beads are out:

“All gone. Look — the same.”

Stage 3 — Check the shares, and say how you know (VC2MFDN06.E01)

Check the shares in two ways.

First, count each share, touching one bead at a time:

“One, two, three, four. 4.” Pause. “One, two, three, four. 4. 4 and 4. The same.”

Then pair the shares, one bead against one bead, in two lines side by side:

“Line them up. One for one. Look — every bead has a partner.”

Now ask the reasoning question, and pause:

“How do you know the shares are equal?”

Accept any response that shows the reason: the student counts both shares again, points along the paired lines, looks from one line to the other, or says or signs ‘the same’ or ‘both 4’. A response in any channel counts.

Stage 4 — Record the share with a numeral (VC2MFDN06.E02)

(Hold out the numeral cards, or open the number page on the student’s AAC.)

“How many for each?”

Pause. Wait for the student to choose, look at, press or say the numeral 4. If the student draws or places marks instead, one mark for each bead in a share, that is a record too.

“Each gets 4.”

Recording is with a numeral only — never a number sentence.

Stage 5 — 1 left over (reasoning)

(Put out 2 plates and the bag of 7 strawberries, real or pretend.)

“Share the strawberries. One for you, one for me.”

(Share one at a time until each plate has 3 and 1 strawberry is left in the bag.)

“Look — 3 and 3. The shares are equal. And 1 is left.” Pause. “Can both plates get 1 more?”

(Hold up the student’s yes and no before you ask. Wait for the response.)

“No — there is only 1 left. We need 2.”

Record the share: each plate gets 3.

Stage 6 — Make the shares equal (reasoning)

(Put out 2 mats. Place 5 blocks on one mat and 3 blocks on the other.)

“Are the shares equal?”

(Hold up the student’s yes and no first. Wait for the response.)

“No. Which has more?”

Pause. Watch where the student looks, points, reaches or chooses. Then swap the mats’ positions and ask again, so the choice is by quantity, not by where a mat always sits.

“How can we make the shares equal?”

(Move 1 block from the share of 5 to the share of 3, slowly, with the student watching or guiding.)

“Look — 4 and 4. The same. Equal.”

(Check by pairing the blocks, one against one.)

Keep every request inside sharing, checking and recording. No number sentences, no symbols.

Worked examples

These worked examples are modelled with real objects. They are for the adult to lead; they are not written out for the student to read.

Worked example 1 — 6 muffins for 2 plates

Materials: 6 muffins (real or pretend); 2 plates.

1. Put out the 2 plates. Say: “One plate for you. One plate for me.” Pause.
2. Bring out the muffins. Say: “One for you, one for me.” Put one muffin on one plate, then one on the other, one at a time, pausing after each one.
3. When all 6 muffins are out, count each share, touching one muffin at a time: “One, two, three. 3.” Count the other share: “One, two, three. 3.”
4. Record: hold out the numeral cards. Each plate gets the numeral 3.

The shares are 3 and 3. The muffins are shared equally.

The student can take part by placing a muffin (with or without support), by counting with you, by choosing the numeral card, or by responding to the check in any channel.

Worked example 2 — 8 beads between 2

Materials: a bag of 8 beads; 2 mats.

1. Put the 2 mats out. Show the beads. Say: “Share the beads. One for you, one for me.” Pause.
2. The student gives out the beads one by one — one bead to one mat, then one bead to the other — until all 8 beads are gone. Support with hand-over-hand or a partial prompt if needed, and record the support you gave.
3. Check the shares by subitising: a share of 4 can be seen without counting one by one. Then count each share by ones to decide how many each student receives: “One, two, three, four. 4.” and “One, two, three, four. 4.”
4. Record: each student gets the numeral 4.

Variation: start with 6 one-dollar coins instead of 8 beads — each share is then 3, and a share of 3 can be subitised. The coins are objects to count and share here, not money to spend.

Worked example 3 — 10 tennis balls into 2 baskets

Materials: 10 tennis balls; 2 baskets (or 2 boxes or 2 hoops).

1. Put the 2 baskets out. Show the balls. Say: “Share the balls. One for you, one for me.”
2. Give out the balls one at a time into the baskets, until all 10 balls are gone.
3. A share of 5 is bigger than 4, so it is counted, not subitised. Count each basket by ones, touching or pointing to one ball at a time: “One, two, three, four, five. 5.” and the same again: “5 and 5. The same.”
4. Check by pairing too — one ball against one ball, in two lines. Every ball has a partner.
5. Record: each basket gets the numeral 5.

Worked example 4 — 7 strawberries for 2 plates



Materials: 7 strawberries (real or pretend); 2 plates.

1. Put out the 2 plates. Show the strawberries. Say: “Share the strawberries. One for you, one for me.”
2. Give out the strawberries one at a time: 3 to one plate, 3 to the other. 1 strawberry is left.
3. Count each share: “One, two, three. 3.” and “One, two, three. 3.” Say: “The shares are equal. 3 and 3. And 1 is left.”
4. Ask: “Can both plates get 1 more?” Hold up yes and no first. Answer: no — there is only 1 left, and both plates need 1.
5. Record: each plate gets the numeral 3. There is 1 left over.

Practice

Nine practice tasks. Each one sits inside sharing between 2, checking and recording, and each one accepts responses in the three ways set out in *How the student responds*. The adult reads the words, leads the task and records what the student does.

Practice 1 — Share 4 apples between 2 plates

Setup: 2 plates; a bag of 4 apples (real or pretend).

The adult asks: “Share the apples. One for you, one for me.”

Watch: the student gives out the apples one at a time until all 4 are gone — 2 and 2. A share of 2 can be subitised, seen without counting. Count each share with the student and ask: “How many for each?” The student chooses, looks at, presses or says the numeral 2.

Practice 2 — Deal the cards between 2 players

Setup: 2 players (the student and a partner, or 2 photographs of players); a packet of 8 identical playing cards, such as 8 red cards.

The adult asks: “Deal the cards. One for you, one for me.”

Watch: the student deals the cards one at a time until all 8 are gone. Then each player counts their own cards, touching one at a time: “One, two, three, four. 4.” Counting both deals shows the cards were shared equally. Record the numeral 4 for each player.

Practice 3 — Share 10 counters between 2 mats

Setup: 2 mats; a bag of 10 counters.

The adult asks: “Share the counters. One for you, one for me.”

Watch: the student gives out the counters one at a time until all 10 are gone — 5 and 5. A share of 5 is counted by ones, not subitised. Ask: “How many for each?” The student records the numeral 5.

Practice 4 — Are the shares equal?

Setup: two groups side by side on mats, made with real objects — the same (4 and 4) or different (4 and 2). Vary the groups across trials.

The adult holds up the student’s yes and no before asking: “Are the shares equal?” Pause and wait.

If the answer is no, ask: “Which has more?” Watch where the student looks, points, reaches or chooses. Swap the mats’ positions and ask again, so the choice is by quantity, not by where a mat always sits. The student can check first by pairing the objects, one against one, or by counting each share.

Practice 5 — Make the shares equal

Setup: 2 mats — one with 5 blocks, one with 3 blocks.

The adult asks: “Are the shares equal?” Hold up yes and no first. Then: “How can we make the shares equal?”

Watch: the student moves 1 block from the share of 5 to the share of 3 — with or without support — so the shares are 4 and 4. Check together by pairing, one against one, or by counting each share. A student who cannot move the block can show the move: pointing, eye-gaze, a switch press, or choosing the photograph of the equal shares.

Practice 6 — 9 biscuits between 2 plates

Setup: 2 plates; a bag of 9 biscuits (real or pretend).

The adult asks: “Share the biscuits. One for you, one for me.”

Watch: the student gives out the biscuits one at a time — 4 to each plate, with 1 biscuit left. Ask: “How many for each?” The student records the numeral 4. Ask: “Are the shares equal?” Hold up yes and no first. The shares are equal — 4 and 4 — and 1 biscuit is left over.

Practice 7 — Show the numeral

Setup: share a collection of 6 grapes between 2 plates, one at a time. Then hold out 2 numeral cards — 2 and 3 — or open the number page on the student’s AAC.

The adult asks: “How many for each? Show me.”

Watch: the student chooses, looks at, presses or says the numeral 3. Across trials, vary the collection — 4, 8 or 10 objects — and the cards offered, so the numeral is chosen for the share, not remembered from last time.

Practice 8 — How do you know?

Setup: any equal share the student has just made — for example, 4 and 4 counters on 2 mats.

The adult asks: “How do you know the shares are equal?” Pause and wait.

Watch for any response that shows the reason: the student counts both shares again, points along the objects one at a time, pairs the objects one against one, looks from one share to the other, or says or signs ‘the same’, ‘both 4’ or ‘equal’. A response in any channel counts; a partial response counts.

Practice 9 — Share on a screen

Setup: a program or app that accepts switch or touch input and shows objects being shared between 2 places one at a time.

The student presses the switch or touches the screen to give the next object, one at a time, until the collection (up to 10 objects) is all gone. Then the student checks the shares — by counting each group on the screen or by matching them — and shows how many each place gets on the number page of their AAC, or the adult records the numeral the student says, signs or selects. Say which input the student uses. Real objects come first; a screen is one variation, not the main material.

Keep everything inside sharing between 2, checking and recording. No number sentences, no symbols.

Further opportunities

Vary the setting and the materials — the mathematics does not change. Keep every one inside equal sharing between 2, one object at a time, collections of up to 10.

1. **Meal or break time.** Share pieces of fruit, crackers or grapes between 2 — “one for you, one for me”. Then check: are the shares equal? Count each share and record the numeral.
2. **Cooking.** After cooking, share muffins, biscuits or slices between the 2 people who made them. One at a time, until all are gone — then count each share and record how many each person gets. If there is 1 left over, say so: the shares are equal, and 1 is left.
3. **Games and sport.** Deal playing cards between 2 players, and let each player count the cards after the deal to see that both have the same. Or share tennis balls, beanbags or bowls between 2 baskets or 2 hoops, one at a time, then count each basket and record.

4. **Art or workshop time.** Share pegs, glue sticks, paintbrushes or pieces of paper between 2 at the table. The student gives them out one at a time, checks by pairing, one against one, and records how many each place gets.
5. **Music time.** Share beaters, shakers or drumsticks between 2 players or 2 drums, one at a time. Count each share and check that both players have the same.

Choose objects that fit the student and respect their age — the objects change with the student; the mathematics does not.

Observing and judging

Assessment in this section is observation. There are no tests, no written questions, no timed tasks and no multiple-choice items. Three rules:

1. **Observe on at least three separate occasions.** A single session is not evidence. A student's response varies with fatigue, pain, medication, seizure activity, sensory load, and whether their communication system is to hand.
2. **Record the best sustained response.** The judgement across the occasions is the student's best sustained response — not an average, and not the most recent session only.
3. **Assisted and partial responses count.** Hand-over-hand, partial physical prompts, co-active movement and eye-gaze are legitimate observed responses at this level. A judgement that scores only independent performance does not match the achievement standard, which says students *represent practical situations* that involve equal sharing between 2.

Look for:

- shares a collection of up to 10 between 2, one object at a time ('one for you, one for me'), until the collection is all gone
- checks that the shares are equal — by counting each share by ones, by pairing one object against one object, or by subitising shares of up to 4
- uses counting strategies to say how many are in each share
- records how many each place gets with a numeral — choosing, looking at, pressing, saying, signing or drawing it
- explains or demonstrates why the shares are equal, or what to do when they are not (which share has more; how to make them equal; 1 left over when the collection is odd)

These observations feed the Chapter 2 checkpoint, which scores VC2MFDN05 and VC2MFDN06 as separate observations.

Recording sheet

Copy this sheet for each student. Record at least three occasions, then record the judgement. This sheet is for the adult to fill in; the student does not read or write it.

Student: _____ **Communication system used:** _____

Occasion	Date	Setting	Objects used	What was asked or shown	Response seen	How they responded	Support given
1				share between 2 / are the shares equal / how many for each / how do you know / make it		object or photo / gesture, gaze, switch, AAC / speech, sign or drawing	no support / partial / hand-over-hand

Occasion	Date	Setting	Objects used	What was asked or shown	Response seen	How they responded	Support given
				equal			

2

3

Tick what you observed across the occasions:

- shares a collection of up to 10 between 2, one object at a time, until the collection is all gone
- checks that the shares are equal by counting each share, by pairing one object against one object, or by subitising shares of up to 4
- says or shows how many are in each share, using counting by ones or subitising
- records the share with a numeral
- explains or demonstrates why the shares are equal, or not equal
- handles the odd case: shares 7 or 9 objects and recognises that 1 is left over

Best sustained response across the occasions: _____

Judgement: shares, checks and records / shares, checks and records with support / participates with support

Judgement against the achievement standard

The judgement uses the achievement standard extract for this content description, quoted verbatim:

Students represent practical situations that involve quantifying, equal sharing between 2, and adding and taking away one from a collection up to 10.

This sentence is shared, verbatim, with VC2MFDN05 (Section 2A). For this section the operative words are *equal sharing between 2*: the evidence is the student sharing a collection of up to 10 between 2, one object at a time, checking with counting strategies that the shares are equal, and recording the result with a numeral. Quantifying, and adding and taking away one from a collection up to 10, are scored in Section 2A — the checkpoint scores each content description separately, despite the shared sentence.

Judgement	What you see
Shares, checks and records	The student shares a collection of up to 10 between 2, one object at a time, until the collection is all gone, checks by counting each share or by pairing one object against one object that the shares are equal, says how many each place gets, and records the share with a numeral, across most observed occasions.
Shares, checks and records with support	The student shares, checks or records with hand-over-hand, a partial physical prompt, co-active movement or modelling from an adult.
Participates with support	The student joins in the sharing experiences with adult support; a clear share, check or record is not yet observed. Keep offering the experiences and keep recording.

The judgement is made across at least three occasions and records the student's best sustained response.

Checkpoint 2 (CP2) — Chapter 2: Number — acting out situations

Mathematics Towards Foundation D · ClassBasics workbook · Level D

Observation checkpoint — role-play with materials and \$1 coins. 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; the result of each action is recorded with a numeral.

Instrument information

Instrument

Checkpoint 2 (CP2) — Chapter 2 assessment

Book and band

ClassBasics *Mathematics Towards Foundation D* (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 2 — Number: acting out situations — adding, taking away and sharing (sections 2A–2B)

Content descriptions assessed

VC2MFDN05 (2A) and VC2MFDN06 (2B) — each scored separately, 4 marks per content description

Marks

8 — 4 marks per owned content description

Structure

Four 1-mark observation tasks for VC2MFDN05 (adding to, taking away, a counting strategy, paying with \$1 coins); four 1-mark observation tasks for VC2MFDN06 (equal sharing between 2)

Format

Observed role-play with materials and \$1 coins; the result is recorded with a numeral

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.

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. 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 CP2 recording sheet: MathsADD_CP2_Rubric.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 object, a vocalisation, a sign, a picture, a word on the device, or a movement. Where the student directs and the adult places, 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.

- **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

CP2 gathers the evidence Chapter 2 has been building: adding to and taking away from collections, including simple financial situations with \$1 coins (2A, VC2MFDN05), and equal sharing of a collection between 2 (2B, VC2MFDN06). The verb in both content descriptions is **represent**, not calculate: the student acts out the situation with the materials and the result is recorded with a numeral.

What CP2 never asks. No number sentences: the student does not write +, – or = anywhere in this checkpoint — recording is with numerals (VC2MFDN05 . E02), and written number sentences belong to Foundation and Level 2, not here. No cents, no change and no 5-cent rounding — every price is \$1. Sharing is between 2 only: not grouping, not sharing among 3 or more.

One shared sentence, scored separately. The two content descriptions share one achievement standard sentence, verbatim: “*Students represent practical situations that involve quantifying, equal sharing between 2, and adding and taking away one from a collection up to 10.*” The operative words for Part A are quantifying, and adding and taking away; the operative words for Part B are equal sharing between 2. Each CD keeps its own 4 marks.

The coin. Use real \$1 coins where you can. The Australian one-dollar coin was first issued in 1984, and the kangaroo side shows five kangaroos — a real collection of five to count on the coin itself. Source: Royal Australian Mint, One Dollar, retrieved 2026-08-17.

What counts as a response. Acting on the materials with the student’s own hands, with a switch, by directing you, or by gaze; choosing, pointing to, gazing at, pressing, saying, signing or drawing the numeral that records the result. Assisted and partial responses count. Record the support you gave.

Part A — VC2MFDN05 · adding to and taking away, including simple financial situations · 4 marks

Assessed content description: VC2MFDN05 — *represent practical situations, including simple financial situations, involving addition, subtraction and quantification up to at least 10 with physical and virtual materials and use matching or counting strategies* (quoted verbatim from maths_AD.json). **Section:** 2A. **Marks:** 4 — one mark per observation task, each scored separately.

Task OT1 — adding to (1 mark)

Materials: 4 red counters, 3 blue counters, a bowl, numeral cards 0–10.

Script: Say: “4 red counters here. 3 blue counters here. Put them all in the bowl. How many counters altogether?”

Look for: the student represents the adding-to situation with the materials (independently, hand-over-hand, by directing you, or by gaze) and quantifies the collection. The result is recorded with a numeral — card, point, gaze, device or writing.

Award 1 mark when the student represents the situation and gives the result, 7, with any level of assistance. Award 0 only when there is no observable response across the occasions.

Task OT2 — taking away (1 mark)

Materials: 8 counters, a plate, numeral cards 0–10.

Script: Say: “8 biscuits on the plate. I eat 3. How many biscuits are left?”

Look for: the student represents the taking-away situation — removing, directing you to remove, or indicating removal — and counts what is left. The result is recorded with a numeral.

Award 1 mark when the student represents the situation and gives the result, 5, with any level of assistance. Award 0 only when there is no observable response across the occasions.

Task OT3 — a counting strategy (1 mark)

Materials: ten-frame, 9 counters, numeral cards 0–10.

Script: Say: “6 counters in the frame. 3 more come. How many now?” The student may count all, count on from the larger number, or count the new counters in one by one — any counting strategy with the materials is in scope (VC2MFDN05.E03).

Look for: the student uses a counting strategy with the materials and gives the result, 9, recorded with a numeral.

Award 1 mark when the student represents the situation and gives the result with any level of assistance. Award 0 only when there is no observable response across the occasions.

Task OT4 — paying with one-dollar coins (1 mark)

Materials: ten \$1 coins, four items with \$1 price tags (apple, banana, biscuit, cup), numeral cards 0–10.

Script: Say: “You have 10 one-dollar coins. Everything costs \$1. Buy the apple, the banana, the biscuit and the cup. Pay with the coins.”

Look for: the student pays one coin for each item, counts the coins spent (4) or the coins left (6), and communicates a part of the transaction in their own modality — for example “I spent \$4”, signed, spoken, selected on a device, or indicated with cards or gesture.

Award 1 mark when the student represents the buying situation and communicates a part of it, with any level of assistance. Award 0 only when there is no observable response across the occasions.

Response set — how the student can answer, Part A

- **Object action:** place counters in the bowl; remove counters from the plate; put counters on the ten-frame; hand over one coin per item.
 - **Gesture, eye-gaze, switch or AAC:** direct the action by gaze or switch with the adult placing; choose, gaze at or press the numeral card; select the numeral on the device.
 - **Speech or sign:** say or sign the result and, in OT4, a part of the transaction.
-

Part B — VC2MFDN06 · equal sharing of a collection between 2 · 4 marks

Assessed content description: VC2MFDN06 — *represent practical situations that involve equal sharing of a collection of up to 10 physical or virtual objects and use counting strategies* (quoted verbatim from maths_AD.json). **Section:** 2B. **Marks:** 4 — one mark per observation task, each scored separately.

Run Part B inside real routines where you can — snack time, art or workshop time, music time — with objects that fit the student and respect their age. The objects change with the student; the mathematics does not.

Task OT5 — share one at a time (1 mark)

Materials: 8 objects of one kind (biscuits at snack time, pegs, glue sticks or beaters); two places or two people to share between.

Script: Say: “8 here. 2 people. Share.” Look for the student dealing one object at a time — ‘one for you, one for me’ — until the collection is all gone, independently, hand-over-hand, or by directing you.

Award 1 mark when the student shares the collection between 2, one object at a time, until it is all gone, with any level of assistance. Award 0 only when there is no observable response across the occasions.

Task OT6 — check the shares are equal (1 mark)

Materials: the two shares from OT5; numeral cards if the student uses them.

Script: Say: “Are the shares the same?” Look for the student checking by counting each share by ones, by pairing one object against one object, or by subitising shares of up to 4.

Award 1 mark when the student checks that the shares are equal, using any of these ways, with any level of assistance. Award 0 only when there is no observable response across the occasions.

Task OT7 — say and record the share (1 mark)

Materials: the two shares; numeral cards 0–10, or the numerals on the student’s device.

Script: Say: “How many for each?” The student says, signs, selects, points to, gazes at, presses or draws the numeral for each share.

Award 1 mark when the student says or shows how many are in each share and the share is recorded with a numeral, with any level of assistance. Award 0 only when there is no observable response across the occasions.

Task OT8 — the odd case, and making it equal (1 mark)

Materials: 7 objects; two places or two people.

Script: Say: “7 now. Share.” After the student shares one at a time, look for the student noticing the 1 left over. Then say: “What do we do?” Look for the student explaining or demonstrating — which share has more, that 1 is left over, or how to make the shares equal (one more object, or an adult takes the leftover).

Award 1 mark when the student handles the odd case — shares the 7 and recognises that 1 is left over, and explains or demonstrates what to do — with any level of assistance. Award 0 only when there is no observable response across the occasions.

Response set — how the student can answer, Part B

- **Object action:** deal the objects one at a time; pair the shares one against one; place the leftover to one side.
 - **Gesture, eye-gaze, switch or AAC:** direct the dealing by gaze or switch with the adult placing; choose, gaze at or press the numeral for each share; select ‘same’ or ‘not the same’ on the device.
 - **Speech or sign:** say or sign the share, ‘same’ or ‘not the same’, and what to do with the leftover.
-

After the third occasion

Transfer each mark from the recording sheet to the summary there: VC2MFDN05 /4, VC2MFDN06 /4 — checkpoint total /8. The rubric wording and the occasion record are on `_MathsADD_CP2_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.

Checkpoint 2 (CP2) — Rubric and recording sheet

Mathematics Towards Foundation D · ClassBasics workbook · Level D

Chapter 2 — Number: acting out situations. 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 2 (CP2) — 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	VC2MFDN05, VC2MFDN06 — each scored separately, 4 marks per content description
Marks	8
Conditions	Observed role-play, untimed; result recorded with a numeral; 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 tasks (TOC §7: 4 marks per owned CD; 8 marks in all for Chapter 2). 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 task 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.
- **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. There is no number sentence, no symbol and no algorithm anywhere in this checkpoint; the result of each action is recorded with a numeral.
-

Record A — VC2MFDN05 · adding to and taking away, including simple financial situations · 4 marks

Content description (quoted verbatim from `maths_AD.json`): “*represent practical situations, including simple financial situations, involving addition, subtraction and quantification up to at least 10 with physical and virtual materials and use matching or counting strategies.*”

Achievement standard extract carried on this CD (quoted verbatim): “*Students represent practical situations that involve quantifying, equal sharing between 2, and adding and taking away one from a collection up to 10.*” This sentence is shared, verbatim, with VC2MFDN06. For this record the operative words are *quantifying*, and *adding and taking away ... from a collection up to 10*; equal sharing between 2 is scored under Record B.

Task	Observation	Occasion 1	Occasion 2	Occasion 3	Further	Best sustained	Mark
OT1 — adding to	represents a practical situation that involves adding to a collection up to 10, and quantifies it, recording the result with a numeral						/1
OT2 — taking away	represents a practical situation that involves taking away from a collection up to 10, and quantifies what is left, recording the result with a numeral						/1
OT3 — a counting strategy	uses a counting strategy with concrete materials to quantify a collection up to 10, recording the result with a numeral						/1
OT4 — paying with one-dollar coins	represents a simple financial situation with \$1						/1

Task	Observation	Occasion 1	Occasion 2	Occasion 3	Further	Best sustained	Mark
	coins and communicat es a part of the transaction						

For each occasion, record: the situation, what the student did with the materials, the numeral that recorded the result, the modality, and the support given.

Best sustained total for VC2MFDN05: ____ / 4

Record B — VC2MFDN06 · equal sharing of a collection between 2 · 4 marks

Content description (quoted verbatim from `maths_AD.json`): “*represent practical situations that involve equal sharing of a collection of up to 10 physical or virtual objects and use counting strategies.*”

Achievement standard extract carried on this CD (quoted verbatim): “*Students represent practical situations that involve quantifying, equal sharing between 2, and adding and taking away one from a collection up to 10.*” This sentence is shared, verbatim, with VC2MFDN05. For this record the operative words are *equal sharing between 2*; the checkpoint scores each content description separately despite the shared sentence.

Task	Observation	Occasion 1	Occasion 2	Occasion 3	Further	Best sustained	Mark
OT5 — share one at a time	shares a collection of up to 10 between 2, one object at a time, until the collection is all gone						/1
OT6 — check the shares are equal	checks that the shares are equal by counting each share by ones, by pairing one object against one object, or by subitising shares of up to 4						/1
OT7 — say and record the share	says or shows how many are in each share, and records the share						/1

Task	Observation	Occasion 1	Occasion 2	Occasion 3	Further	Best sustained	Mark
OT8 — the odd case, and making it equal	with a numeral shares 7 objects and recognises that 1 is left over; explains or demonstrate s what to do						/1

For each occasion, record: the routine and the objects used, the size of the collection shared, how the student shared and checked, the numeral that recorded each share, the modality, and the support given.

Best sustained total for VC2MFDN06: ____ / 4

Checkpoint 2 summary

Content description	Section	Best sustained mark
VC2MFDN05 — represent practical situations, including simple financial situations, involving addition, subtraction and quantification up to at least 10	2A	___ / 4
VC2MFDN06 — represent practical situations that involve equal sharing of a collection of up to 10 physical or virtual objects	2B	___ / 4
Checkpoint 2 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:** _____