

# Mathematics Towards Foundation D

## Chapter 5 — Space: shapes, and where things are

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## Sorting, naming and recognising familiar shapes in the environment

*Every instruction in this section is delivered in the student's own communication modality — spoken language, sign, AAC device, picture exchange, eye-gaze or a combination. The student does not read anything. The mathematics is carried in the materials, the pictures and the teacher's words — never in prose the student must decode.*

*sort and name familiar shapes and objects, and recognise and describe familiar shapes within objects in familiar environments* — VC2MFDSP01, Victorian Curriculum Mathematics F–10 Version 2.0 (VCAA), Foundation Level D

**Achievement standard extract (Foundation Level D):** “Students name, create and sort familiar shapes and objects into like groups and identify familiar shapes in their environment.”

All curriculum text in this section — the content description, the achievement standard extract and every elaboration quotation — is quoted verbatim from the authority file `maths_AD.json`.

**The shapes named in this section are circles, squares, triangles and rectangles.** That set is VCAA's own — VC2MFDSP01.E02 and VC2MFDSP01.E05 name exactly these shapes. Other shapes do not need names at Level D.

**Elaboration ids carried for MCQ, short-answer and coverage linkage:** VC2MFDSP01.E01, VC2MFDSP01.E02, VC2MFDSP01.E03, VC2MFDSP01.E04, VC2MFDSP01.E05. The elaborations are VCAA's illustrations of the content description, not a syllabus: this section is taught from the content description above, not as a walk through E01 to E05.

### What this section teaches (teacher notes)

The student:

- **sorts** familiar shapes and objects by one feature and communicates how they sorted — the content description says *sort and name*, so the reason for the sort is part of the mathematics and is scored, not just the piles
- **names** the four shapes: circle, square, triangle and rectangle
- **groups** objects and communicates what they can see or feel about them — colour, size, how they feel, what they are (the elaboration's attributes: texture, colour, size and category)
- **recognises and describes** familiar shapes within pictures and within everyday objects — on bicycles, toy vehicles and kitchen items; describing at Level D is saying or showing the shape's name and what can be seen about it: round or straight, colour, size
- **makes** familiar shapes with materials — the content description's verbs are *sort, name, recognise and describe*, but the achievement standard extract carried on VC2MFDSP01 says students *name, create and sort*, so students are given simple opportunities to make shapes and making is observed in the checkpoint; creating shapes as content-description content belongs to the Foundation book's VC2MFDSP01

**Boundaries.** This section owns VC2MFDSP01 and no other code.

- Position words — *inside, underneath, on top of, behind* — and following directions belong to 5B (VC2MFDSP02).
- Real three-dimensional objects appear here **only as places to find two-dimensional shapes in** — the wheel of a bicycle is a circle, the top of a plate is a circle. Classifying the objects themselves by their three-dimensional shape is Foundation and Level 1, and is not done here.
- Sorting also appears in 6A (VC2MFDST01), where students sort collected data to answer a question with only 2 outcomes. Here the student sorts shapes and objects by a feature and says how they sorted. There is no survey and no data question in this section.

**Builds on:** 1A–1C (number words and counting — used here to count sides and to count the groups), and 4A's comparison words (*bigger, smaller* — used when sorting by size).

**Hands forward to:** the Foundation book's VC2MFSP01 — sorting, naming, creating and finding shapes. The next step adds creating shapes as its own content and giving reasons; the four shape names and the sorting in this section carry straight across.

## 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 — VC2MFDSP01.E01–VC2MFDSP01.E05 — and they are not a teaching order.

*sorting a collection of shapes or objects based on one feature (such as the number of sides, colour or size) and describing how they have been sorted — VC2MFDSP01.E01*

*sorting a collection of pattern blocks based on shape, and correctly naming the collections as circles, rectangles, squares and triangles — VC2MFDSP01.E02*

*sorting and grouping objects and communicating attributes such as texture, colour, size and category; for example, sorting pieces of paper into 2 colours or sorting cutlery into 2 groups — VC2MFDSP01.E03*

*identifying familiar shapes within a picture or illustration in a story — VC2MFDSP01.E04*

*recognising and naming shapes that are rectangles, squares, triangles and circles in parts of the everyday environment such as on bicycles, toy vehicles or kitchen pantry items — VC2MFDSP01.E05*

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

## Theory

### The four shapes

Shapes are all around us. In this section we use four shape names: **circle**, **square**, **triangle** and **rectangle**.

Four shape cards: a circle, a square, a triangle and a rectangle, with the name of each shape.

*Four shape cards: a circle, a square, a triangle and a rectangle, with the name of each shape.*

A **circle** is round. It goes round and round. It has no straight sides.

A **triangle** has 3 straight sides. Touch the sides: one, two, three.

A triangle with a dot on each of its 3 sides.

*A triangle with a dot on each of its 3 sides.*

A **square** has 4 straight sides. The sides are all the same.

A **rectangle** has 4 straight sides. Two sides are long and two sides are short.

### Sorting means making groups

To **sort** means to look at things and put the ones that match together.

We sort by one thing to look at. That thing is called a **feature**. A feature is something you can see about a thing — its colour, its size, the shape, the number of sides.

Here the shapes are sorted by colour:

Shape cards sorted into 2 groups by colour: red shapes in one group, blue shapes in the other.

*Shape cards sorted into 2 groups by colour: red shapes in one group, blue shapes in the other.*

After we sort, we say how we sorted: *I sorted by colour.*

The same shapes can be sorted a different way — by shape, or by size. The sort changes. The shapes stay the same.

## **Naming a shape**

Look at the shape. Is it round? It is a **circle**.

Does it have straight sides? Count the sides.

- 3 sides — it is a **triangle**
- 4 sides, all the same — it is a **square**
- 4 sides, two long and two short — it is a **rectangle**

Three shapes for naming: a square, a circle and a triangle.

*Three shapes for naming: a square, a circle and a triangle.*

Say the name out loud, sign it, or show it on your device.

## **Grouping things**

We can sort things too, not only shapes.

Pieces of paper can be sorted by colour. Cutlery can be sorted into 2 groups: spoons here, forks there. Things can be sorted by how they feel — smooth here, rough there — or by size — big here, small there.

Six pieces of paper sorted into 2 groups: 3 red pieces in one group, 3 blue pieces in the other.

*Six pieces of paper sorted into 2 groups: 3 red pieces in one group, 3 blue pieces in the other.*

After we group, we say what we can see: *Red here. Blue there. I sorted by colour.*

## **Making shapes**

We can make shapes too.

3 sticks can make a triangle. 4 sticks can make a square. A loop of string can make a circle.

3 sticks put together to make a triangle.

*3 sticks put together to make a triangle.*

4 sticks put together to make a square.

*4 sticks put together to make a square.*

A loop of string laid in the shape of a circle.

*A loop of string laid in the shape of a circle.*

Make the shape, then say its name. Making is one way to show what you know.

## **Shapes in pictures**

Shapes hide in pictures. A picture in a story can have shapes in it:

A picture from a story: a house with a rectangle door, a square window and a triangle roof, and a circle sun.

*A picture from a story: a house with a rectangle door, a square window and a triangle roof, and a circle sun.*

The door is a rectangle. The window is a square. The roof is a triangle. The sun is a circle.

Look at a picture. Find the shapes. Say the names.

## **Shapes around us**

Real things have shapes in them. We look **at the thing** and find the shapes **in it**.

On a bicycle, the wheels are circles. The frame has triangles in it.

A bicycle with the circles on the wheels marked and a triangle on the frame marked.  
*A bicycle with the circles on the wheels marked and a triangle on the frame marked.*

On a toy vehicle, a window can be a rectangle or a square.

In the kitchen, the top of a plate is a circle. A cracker can be a square. A sandwich cut corner to corner is a triangle.

Kitchen items: a circle plate, a square cracker and a triangle sandwich.  
*Kitchen items: a circle plate, a square cracker and a triangle sandwich.*

Say what you see: *The wheel is a circle. It is round.* That is describing the shape.

## Materials

Set out before the session starts:

- **shape cards** — circles, squares, triangles and rectangles in 2 colours and 2 sizes, big enough to hold or to gaze at; plain and textured cards where possible (felt, corrugated)
- **pattern blocks or shape blocks** — use the circles, squares, triangles and rectangles; other shapes in a set stay in the box at this level
- **sticks and string** — 4 or more sticks the same length, and a loop of string, for making shapes; a sensory tray works too for drawing shapes
- **objects for grouping** — pieces of paper in 2 colours, cutlery (spoons and forks), and objects with different textures (smooth tiles, rough sponges)
- **everyday objects with shapes in them** — a bicycle or a photo of one, toy vehicles, kitchen items (a plate, crackers, a sandwich)
- **pictures from a story** — a large picture of an everyday scene (a house, a street, a park) with shapes in it
- **2 hoops, plates or mats** — spaces to sort into; two marked spaces on the table work too
- **the student's communication system to hand** — device, picture cards, shape-name cards, or the signs the student uses

**Design notes, applied to every activity here:** materials are offered in more than one size and texture; nothing requires a precise grip — pushing a shape into its group replaces picking up and placing wherever that helps; every pointing response has an eye-gaze version (the student looks at the shape or the group, and the teacher names what was chosen); every spoken response has a sign, picture-card or AAC version. Making a shape works in any way — placing sticks, moving the loop of string, drawing in a sensory tray, working hand-over-hand, or directing while the teacher places (the student points or gazes, the teacher puts the stick where the student says). Participation in a modelled activity is a response, not a warm-up.

## Teaching sequence (teacher script)

Deliver each step in the student's modality. The words in quotes are the student-facing script — short, concrete, present tense. Have the shape-name cards and the student's communication system in view. Adult notes use the curriculum's words — *sort, feature, attribute*; the words the student hears are the simple ones — *put in groups, one thing to look at, what you can see*.

### Step 1 — meet the four shapes

Set up: the four shape cards, one of each.

SAY: *"These are shapes."* [Hold up each card, one at a time.] *"This is a circle. Circle."* ... *"This is a square. Square."* ... *"This is a triangle. Triangle."* ... *"This is a rectangle. Rectangle."*

DO: trace the edge of the circle with a finger. SAY: *"A circle is round. Round and round."* Trace the sides of the triangle. SAY: *"A triangle has 3 sides. Touch: one, two, three."*

WATCH: does the student look at, touch or gaze at each shape? Any response counts.

### Step 2 — sort shapes by one feature

Set up: a mixed set of shape cards in 2 colours.

SAY: *“Let’s sort. Watch me.”*

DO: sort the cards by colour, one group here, one group there. SAY: *“Red here. Blue there. I sorted by colour.”*

DO: mix the cards again. SAY: *“You sort.”* [The student sorts — by colour, by shape or by size, placing, pushing, gazing or directing. Accept any one feature.]

SAY: *“How did you sort?”* [Accept any answer: a word, a sign, a device message, a gaze at the colour card, a point to the groups.] Model if the student wants a model: *“You sorted by shape.”*

WATCH: the reason is the mathematics. Record what the student says or shows, in their own modality.

### **Step 3 — name the shape**

Set up: the four shape cards face up.

SAY: *“Show me the triangle.”* [The student points, gazes, places a hand, or pushes a counter onto the card.] *“Yes. Triangle.”*

Take turns: teacher names, student shows; then student names, teacher shows. A student who names uses their own way — speech, sign, device, or giving the shape-name card.

WATCH: does the name go with the matching shape, in any modality, with or without help?

### **Step 4 — group things, say what you see**

Set up: pieces of paper in 2 colours.

SAY: *“Sort the paper.”* [Sort into 2 colour groups.] SAY: *“How did you sort?”* ... *“By colour.”*

Set up: the cutlery — spoons and forks.

SAY: *“Sort the cutlery. Spoons here. Forks there.”* SAY: *“Spoons and forks. You sorted by what they are.”*

Set up: objects that feel different — smooth tiles, rough sponges.

SAY: *“Feel this. Smooth. Feel this. Rough. Smooth here. Rough there.”*

WATCH: the student groups and then communicates what they sorted by — colour, size, how it feels, what it is. Teacher-facing, these are the attributes named in VC2MFDSP01.E03: texture, colour, size and category.

### **Step 5 — make a shape**

Set up: the sticks and the loop of string.

SAY: *“Make a triangle.”* [Put 3 sticks together, hand-over-hand if that helps.] SAY: *“One, two, three sides. A triangle. You made a triangle.”*

SAY: *“Make a square.”* [4 sticks.] SAY: *“One, two, three, four sides. A square.”*

SAY: *“Make a circle.”* [Lay the string in a loop.] SAY: *“Round and round. A circle.”*

WATCH: making shows the student knows the shape. A shape made with help, or directed by gaze while the teacher places, still counts. SAY: *“What did you make?”* — the name is the answer to listen for.

### **Step 6 — find shapes in a picture**

Set up: a large picture from a story — a house, a street or a park.

SAY: *“Look at the picture. Find a circle.”* [The student points or gazes; the teacher names what was found.] SAY: *“What shape is the door? ... A rectangle.”*

WATCH: the student finds a shape inside a bigger picture and says or shows its name. This is VC2MFDSP01.E04 — shapes within a picture or illustration in a story.

### Step 7 — find shapes around us

Set up: the bicycle or its photo; toy vehicles; the kitchen items.

SAY: “Look at the bicycle. The wheels are circles. Find a circle.” ... “The frame has triangles. Find a triangle.”

SAY: “Look at the toy vehicle. What shape is the window?”

SAY: “Look at the plate. What shape is the top? ... A circle. It is round.”

WATCH: the student recognises the shape in the real thing and describes it — *The wheel is a circle. It is round.* The object is the place to look; the shape is what is found. The objects themselves are not sorted by their three-dimensional shape at this level.

### Step 8 — same mathematics, different materials

Repeat any step with different materials and in different places: shape cards one day, pattern blocks the next, the kitchen and the bike rack on another. Change the feature — colour today, size tomorrow — and keep the four shape names the same everywhere. SAY: “A circle is a circle — on the card, on the plate, on the bicycle.”

### Worked examples

*Work these together. Use the materials, or look at the pictures. The teacher says the words; the student does, looks, says or signs.*

#### Worked example 1 — sort the shapes, say how

Shape cards: red circles, red triangles, blue circles and blue triangles, all mixed up. Sort them by one feature. Then say how you sorted.

| Working                                                                  | Comment                                    |
|--------------------------------------------------------------------------|--------------------------------------------|
| Look at the shapes. Pick one thing to look at: the colour.               | One feature at a time.                     |
| Put the red shapes in one group. Put the blue shapes in the other group. | The ones that match go together.           |
| Say it: <i>Red here. Blue there. I sorted by colour.</i>                 | Saying how you sorted is part of the work. |
| ∴ 2 groups — red and blue. Sorted by colour.                             |                                            |

Shape cards sorted into 2 groups by colour: red shapes in one group, blue shapes in the other.

*Shape cards sorted into 2 groups by colour: red shapes in one group, blue shapes in the other.*

#### Worked example 2 — name the shapes

Three shapes:

Three shapes for naming: a square, a circle and a triangle.

*Three shapes for naming: a square, a circle and a triangle.*

Name each shape.

| Working                                                         | Comment                                 |
|-----------------------------------------------------------------|-----------------------------------------|
| Look at the first shape. It has 4 straight sides, all the same. | Count the sides: one, two, three, four. |
| It is a square.                                                 | 4 sides, all the same — square.         |
| Look at the second shape. It is round.                          | No straight sides.                      |
| It is a circle.                                                 | Round — circle.                         |

Look at the third shape. Count the sides: one, two, three. 3 straight sides.  
It is a triangle. 3 sides — triangle.

∴ Square, circle, triangle.

### Worked example 3 — sort the paper

Six pieces of paper — red and blue, all mixed up (VC2MFDSP01.E03). Sort them into 2 groups. Say how you sorted.

Look at the paper. Pick one thing to look at: the colour. One feature at a time.  
Put the red pieces in one group. Count: one, two, three. 3 red pieces.  
Put the blue pieces in the other group. Count: one, two, three. 3 blue pieces.  
Say it: *Red here. Blue there. I sorted by colour.* The reason goes with the groups.  
∴ 2 groups — 3 red, 3 blue. Sorted by colour.

Six pieces of paper sorted into 2 groups: 3 red pieces in one group, 3 blue pieces in the other.

*Six pieces of paper sorted into 2 groups: 3 red pieces in one group, 3 blue pieces in the other.*

### Worked example 4 — shapes on a bicycle

Look at the bicycle (VC2MFDSP01.E05). Find the shapes in it.

A bicycle with the circles on the wheels marked and a triangle on the frame marked.

*A bicycle with the circles on the wheels marked and a triangle on the frame marked.*

Look at the wheels. A wheel goes round and round. Round, no straight sides.  
The wheels are circles. The shape in the wheel is a circle.  
Look at the frame. Count the sides: one, two, three. 3 straight sides.  
The frame has a triangle in it. 3 sides — triangle.

∴ On the bicycle: circles on the wheels, a triangle in the frame.

### Practice tasks

*The teacher gives every task in the student's modality. The student says, signs, points, looks, places or uses their device. The teacher records the response on the line. A response with help — hand-over-hand, co-active movement, a partial physical prompt, a model — still counts. Nothing here is timed, and nothing requires the student to read or write.*

**Q1.** Name the shape.

A circle.

*A circle.*

SAY: “What is this shape?”

Teacher records: \_\_\_\_\_

**Q2.** Name the shape. Count the sides first.

A triangle.

*A triangle.*

SAY: “*Count the sides. What is this shape?*”

Teacher records: \_\_\_\_ sides; the shape is a \_\_\_\_

**Q3.** Sort the shape cards by colour.

Materials: shape cards in 2 colours, mixed up; 2 hoops.

SAY: “*Sort the shapes by colour.*” Then: “*How did you sort?*”

Teacher records: \_\_\_\_

**Q4.** Sort the pattern blocks by shape (VC2MFDSP01.E02).

Pattern blocks sorted into 4 groups by shape: circles, squares, triangles and rectangles.

*Pattern blocks sorted into 4 groups by shape: circles, squares, triangles and rectangles.*

Materials: pattern blocks — circles, squares, triangles and rectangles, mixed up.

SAY: “*Sort the blocks. Put the same shapes together.*” Then, for each group: “*What are these?*”

Teacher records: the groups are \_\_\_\_, \_\_\_\_, \_\_\_\_ and \_\_\_\_

**Q5.** Sort the paper (VC2MFDSP01.E03).

Materials: pieces of paper in 2 colours.

SAY: “*Sort the paper into 2 groups. How did you sort?*”

Teacher records: \_\_\_\_

**Q6.** Sort the cutlery (VC2MFDSP01.E03).

Cutlery sorted into 2 groups: spoons in one group, forks in the other.

*Cutlery sorted into 2 groups: spoons in one group, forks in the other.*

Materials: spoons and forks, mixed up.

SAY: “*Sort the cutlery into 2 groups. How did you sort?*”

Teacher records: \_\_\_\_

**Q7.** Make a triangle.

Materials: sticks.

SAY: “*Make a triangle. How many sticks do you need?*”

Teacher records: \_\_\_\_ sticks

**Q8.** Make a circle.

Materials: a loop of string, or a sensory tray.

SAY: “*Make a circle. What did you make?*”

Teacher records: \_\_\_\_

**Q9.** Find the shapes in the picture (VC2MFDSP01.E04).

A picture from a story: a house with a rectangle door, a square window and a triangle roof, and a circle sun.

*A picture from a story: a house with a rectangle door, a square window and a triangle roof, and a circle sun.*

SAY: “*Look at the picture. Find a circle. Find a triangle. What shape is the window?*”

Teacher records: the circle is \_\_\_\_; the triangle is \_\_\_\_; the window is a \_\_\_\_

**Q10.** Shapes on the bicycle (VC2MFDSP01.E05).

Materials: a bicycle, a toy bicycle, or a photo of one.

SAY: “*Look at the bicycle. What shape are the wheels? Find a triangle.*”

Teacher records: the wheels are \_\_\_\_; the triangle is \_\_\_\_

**Q11.** Shapes in the kitchen (VC2MFDSP01.E05).

Kitchen items: a circle plate, a square cracker and a triangle sandwich.

*Kitchen items: a circle plate, a square cracker and a triangle sandwich.*

Materials: a plate, a cracker, a sandwich cut corner to corner.

SAY: “*What shape is the top of the plate? What shape is the cracker? What shape is the sandwich?*”

Teacher records: the plate is a \_\_\_\_; the cracker is a \_\_\_\_; the sandwich is a \_\_\_\_

**Q12.** Sort the shapes a different way.

Materials: the shape cards from Q3, back together.

SAY: “*Sort the shapes again. A different way. How did you sort?*”

Teacher records: \_\_\_\_

## Answers

**Q1.** Circle.

**Q2.** 3 sides; triangle.

**Q3.** 2 colour groups; *by colour*.

**Q4.** Circles, rectangles, squares and triangles; *by shape*.

**Q5.** 2 colour groups; *by colour*.

**Q6.** Spoons in one group, forks in the other; *by what they are* — spoons and forks.

**Q7.** 3 sticks.

**Q8.** A circle.

**Q9.** The circle is the sun; the triangle is the roof; the window is a square.

**Q10.** The wheels are circles; the triangle is in the frame.

**Q11.** Circle; square; triangle.

**Q12.** Any feature that is not colour — for example *by shape* or *by size* — with the reason said or shown.

## Fully-worked solutions

**Q1.**

A circle.

*A circle.*

The shape is round. It goes round and round. It has no straight sides.

∴ The shape is a circle.

**Q2.**

A triangle.

*A triangle.*

Count the straight sides: one, two, three. The shape has 3 sides.

∴ 3 sides — the shape is a triangle.

**Q3.**

Shape cards sorted into 2 groups by colour: red shapes in one group, blue shapes in the other.

*Shape cards sorted into 2 groups by colour: red shapes in one group, blue shapes in the other.*

Pick one feature — the colour. Put the red shapes in one group and the blue shapes in the other. Say the reason: *I sorted by colour.*

∴ 2 groups — sorted by colour.

**Q4.**

Pattern blocks sorted into 4 groups by shape: circles, squares, triangles and rectangles.

*Pattern blocks sorted into 4 groups by shape: circles, squares, triangles and rectangles.*

Put the same shapes together. The blocks are sorted by shape. Name each group: the circles, the rectangles, the squares and the triangles.

∴ 4 groups — circles, rectangles, squares and triangles — sorted by shape (VC2MFDSP01.E02).

**Q5.**

Six pieces of paper sorted into 2 groups: 3 red pieces in one group, 3 blue pieces in the other.

*Six pieces of paper sorted into 2 groups: 3 red pieces in one group, 3 blue pieces in the other.*

Look at the paper. The feature is the colour. Red pieces in one group, blue pieces in the other. Say the reason: *I sorted by colour.*

∴ 2 groups — sorted by colour (VC2MFDSP01.E03).

**Q6.**

Cutlery sorted into 2 groups: spoons in one group, forks in the other.

*Cutlery sorted into 2 groups: spoons in one group, forks in the other.*

Look at the cutlery. The feature is what they are. Spoons in one group, forks in the other. Say the reason: *Spoons here. Forks there.*

∴ 2 groups — sorted by what they are (VC2MFDSP01.E03).

**Q7.**

3 sticks put together to make a triangle.

*3 sticks put together to make a triangle.*

A triangle has 3 sides. One stick makes one side. Put 3 sticks together: one, two, three sides.

∴ 3 sticks make a triangle.

**Q8.**

A loop of string laid in the shape of a circle.

*A loop of string laid in the shape of a circle.*

A circle is round. Lay the string round and round.

∴ The string makes a circle.

**Q9.**

A picture from a story: a house with a rectangle door, a square window and a triangle roof, and a circle sun.

*A picture from a story: a house with a rectangle door, a square window and a triangle roof, and a circle sun.*

Look at the picture. The sun is round — a circle. The roof has 3 sides — a triangle. The window has 4 sides, all the same — a square.

∴ The circle is the sun, the triangle is the roof, and the window is a square (VC2MFDSP01.E04).

**Q10.**

A bicycle with the circles on the wheels marked and a triangle on the frame marked.

*A bicycle with the circles on the wheels marked and a triangle on the frame marked.*

Look at the bicycle. The wheels go round and round — circles. The frame has 3 straight sides in it — a triangle.

∴ The wheels are circles, and the triangle is in the frame (VC2MFDSP01.E05).

**Q11.**

Kitchen items: a circle plate, a square cracker and a triangle sandwich.

*Kitchen items: a circle plate, a square cracker and a triangle sandwich.*

Look at the kitchen items. The top of the plate is round — a circle. The cracker has 4 sides, all the same — a square. The sandwich has 3 sides — a triangle.

∴ The plate is a circle, the cracker is a square, and the sandwich is a triangle (VC2MFDSP01.E05).

## Q12.

The shapes are sorted again, by a different feature. One way: by shape — circles here, triangles there. Another way: by size — big here, small there. The reason is said or shown.

∴ A different sort — for example by shape or by size — with the reason.

## Observed checkpoint task — CP5, the VC2MFDSP01 part (4 marks)

Chapter checkpoint CP5 observes the two Chapter 5 CDs — VC2MFDSP01 and VC2MFDSP02 — for 8 marks: observed sort-and-name with shapes, and positional description in the real classroom. The part below is this section's contribution: VC2MFDSP01, 4 marks, scored separately. The positional-language items are 5B's part and are scored there.

Run it as its own short session, one-to-one or in a small group, with materials on the desk, on **at least three separate occasions** — response at this level varies with fatigue, sensory load, pain, medication and whether the student's communication system is to hand. The recorded judgement is the student's **best sustained** response across the occasions: not an average, not the most recent. Nothing is timed. There is no written response — the teacher records. The digital MCQ layer keyed to VC2MFDSP01 is separate and is not this assessment.

## Script

Materials: shape cards — a circle, a square, a triangle and a rectangle; a mixed set of shape cards or pattern blocks in 2 colours and 2 sizes; sticks and a loop of string; a bicycle, a toy bicycle or a photo of one; a kitchen item such as a plate or a cracker, or a photo of kitchen items; the student's communication system.

1. SAY: *"What is this shape?"* [Show each of the four shape cards, one at a time. Wait for the answer in any modality — word, sign, device, gaze at the matching shape-name card.]
2. SAY: *"Sort these."* [Place the mixed set of shape cards or pattern blocks in front of the student.] Then: *"How did you sort?"* [Accept any feature — colour, size, shape — and any way of saying it.]
3. SAY: *"Make a shape with the sticks or the string. What did you make?"* [Making can be placing, moving the string, drawing in a sensory tray, hand-over-hand, or directing while the teacher places.]
4. SAY: *"Look at the bicycle. Find a circle."* Then: *"Look at the plate. What shape is the top?"* [A photo of the items works in place of the real things. Accept a point, a gaze, a word, a sign or a device message.]

Deliver every prompt in the student's own communication modality. Repeat on at least three separate occasions and record the best sustained response. Vary the materials across occasions — shape cards one day, pattern blocks another, the real bicycle and the kitchen items on a third — so the judgement is about the shapes, not one familiar set.

**Scoring — 4 marks, each scored on its own.** The rubric wording follows the achievement standard extract carried on VC2MFDSP01: *"Students name, create and sort familiar shapes and objects into like groups and identify familiar shapes in their environment."*

| Mark | Look for                                                                                                           | Source of the language                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | The student names the familiar shapes — circle, square, triangle and rectangle — in any modality.                  | <i>"Students name ... familiar shapes"</i> — achievement standard extract carried on VC2MFDSP01                                         |
| 1    | The student makes a familiar shape — with sticks, string, drawing or directing — and says or shows what they made. | <i>"create"</i> — same extract; the content description's verbs are sort, name, recognise and describe, and creating shapes as content- |

| Mark | Look for                                                                                                                          | Source of the language                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                                                                                                   | description content belongs to the Foundation book's VC2MFSP01, but the achievement standard extract carried on this CD includes <i>create</i> , so making is observed here |
| 1    | The student sorts shapes or objects into like groups and communicates how they sorted — the reason is scored, not just the piles. | <i>“sort familiar shapes and objects into like groups”</i> — same extract; VC2MFDSP01 says <i>sort and name</i> , so the sort is scored with the reason (TOC §3)            |
| 1    | The student identifies a familiar shape in their environment — on the bicycle, on a kitchen item, or in a picture.                | <i>“identify familiar shapes in their environment”</i> — same extract                                                                                                       |

### Scoring notes.

- A single observation is not evidence. Score the best sustained response across at least three occasions.
- Assisted and partial responses are scored, not zeroed: hand-over-hand, co-active movement, a partial physical prompt, eye-gaze and aided communication are legitimate observed responses at Level D. A rubric that scores only independent performance has failed the achievement standard.
- Real objects in this task are places to find two-dimensional shapes in — the wheel is a circle, the top of the plate is a circle. The objects themselves are not classified by their three-dimensional shape; that is Foundation and Level 1.
- A student who sorts by a feature the materials do not show (a student who sorts by *shiny and not shiny*, say) has still sorted by one feature and still communicates it; score the sort and the reason.

### Where this section sits

- **Before it:** 1A–1C give the number words and counting used here — counting sides, counting the groups; 4A's comparison words (*bigger, smaller*) support sorting by size.
- **After it, in this book:** 5B — describing where things are in a familiar space, with position words like *inside, underneath* and *on top of* (VC2MFDSP02).
- **Beyond this book:** the Foundation book's VC2MFSP01 — sorting, naming, creating and finding shapes. This section's job is to hand a student over who sorts shapes and objects by a feature and says how, names the four shapes, and finds them in pictures and in the world around them.

## Position and location: describing where things are in a familiar space

*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, says, signs, points, gazes, touches, moves or places things. The student does not need to read. The student does not need to write.*

*describe the position and location of objects or people in relation to themselves or known objects within a familiar space — VC2MFDSP02, content description, quoted verbatim from maths\_AD.json*

*They describe the position and the location of objects or people in relation to themselves in a familiar space. — VC2MFDSP02, achievement standard extract, quoted verbatim from maths\_AD.json*

*The three elaborations below are quoted verbatim from the authority file (maths\_AD.json). They are VCAA's illustrations of the content description, not the syllabus. The content description is the expectation; the elaboration ids (E01–E03) are the join keys for MCQ and coverage linkage.*

*following directions with multiple steps or directions; for example, participating in chants, songs or rhymes with repeated actions, completing an art or drawing activity, locating a tool or completing a job — VC2MFDSP02.E01*

*communicating where items are located in relation to other items within a space, using familiar terms; for example, playing a hiding game and when asked 'Where is Aseema hiding?', responding with 'Behind the bookshelf' — VC2MFDSP02.E02*

*describing the position of an item in relation to other items in a space using language such as 'inside', 'underneath' and 'on top of'; for example, when asked 'Where are the scissors kept?', responding with 'In the box on the bottom shelf' — VC2MFDSP02.E03*

**Teacher notes — what this subtopic is, and where its edges are.** This subtopic is position and location language, spoken, signed or aided. The student says or shows where things are — **inside, underneath, on top of, behind, in, on** — in relation to themselves or in relation to known objects, in a space they know well. The where-words are taught with real things in the real room first, then in pictures.

**The where-words are frame-dependent words** (house rule, `CONTESTED_TERMS.md` Rule 1b): *behind* and *on top of* get their meaning from the thing or person they are tied to — behind *me* is not behind *you*. The content description supplies the frame: “*in relation to themselves or known objects within a familiar space*”. Every task in this subtopic states the frame — where the thing is in relation to *what* — and no question here is answerable on any other frame than the one given with it.

This subtopic owns VC2MFDSP02 and no other code. Sorting and naming shapes is subtopic 5A (VC2MFDSP01). Sequencing routines and events with *first*, *next*, *last* is subtopic 4B (VC2MFDSP02) — the multi-step directions here are about **where**, not about **when**.

### The edges, binding:

- **No maps, no grids, no coordinates.** The space is the real room, the real things in it, or a picture of them.
- **No left, no right, and no route directions.** The where-words of this subtopic are inside, underneath, on top of, behind, in and on. Giving and following directions to move people and objects along a route is Foundation (VC2MFDSP01) and Level 1. The multi-step directions here stay in one place: pick up, put, find.
- **No reading and no writing.** Every instruction is delivered in the student's own communication modality. The student answers by speaking, signing, pointing, gazing, placing, moving or choosing on a device.

**Materials.** A table, chairs, a box, a bag, a cup, pencils, scissors, a shelf or bookshelf, a rug or mat, and everyday things in more than one size and texture. Activities with small things also work with big things. A task that asks for a point also works with a look, a gaze, a reach, a placed object, a sign, or a message on a communication device. Every question in this subtopic can be answered in any of these ways; the communication load is never the mathematics.

**Assessment note.** Evidence for this subtopic is gathered by observation, across at least three separate occasions, and the recorded judgement is the student's best sustained response — not an average, not the most recent. Assisted and partial responses count: hand-over-hand, a partial physical prompt, co-active movement, eye gaze and aided

communication are legitimate observed responses. The observed task for this subtopic sits at the end of this section as part of Checkpoint 5.

## Theory

### **Where is it?**

Everything is somewhere. The word *where* asks about the place.

A cup on top of a table.

*A cup on top of a table.*

Where is the cup? The cup is **on top of** the table.

Where-words say where: **inside, underneath, on top of, behind, in, on.**

A where-word always comes with another thing. On top of *the table*. Inside *the box*. Behind *the chair*. The other thing says where.

### **On top of and underneath**

A cup on top of a box, and a ball underneath a table.

*A cup on top of a box, and a ball underneath a table.*

The cup is **on top of** the box.

The ball is **underneath** the table.

### **Inside**

A pencil inside a box.

*A pencil inside a box.*

The box has the pencil in it. The pencil is **inside** the box.

### **Behind**

A bag behind a chair.

*A bag behind a chair.*

The bag is **behind** the chair. You cannot see all of the bag.

### **From you**

A where-word can start from you.

A student sits on a rug. A chair is behind the student.

*A student sits on a rug. A chair is behind the student.*

I sit on the rug. The rug is **underneath** me.

The chair is **behind** me.

I am **inside** the room.

### **A space you know**

A familiar space is a place you know well. This room. The kitchen. Outside.

Known objects are things you know. Your bag. Your cup. Your chair.

The where-words work in all of these places.

### **Follow the directions**

A direction tells you what to do.

Step 1. Pick up the pencil. Step 2. Put the pencil inside the bag.

Do step 1. Then do step 2.

Songs and chants with actions give directions too. We do the actions together.

A job has steps too: find the tool, then put the tool in its place. Then say where the tool is.

## Teacher script

*This script is the deliverable for the teaching sequence. Deliver every line in the student's own communication modality — speak it, sign it, give it on the student's device, or pair it with a picture or an object. Adult notes are in [square brackets]; the words for the student are in quote marks.*

## Materials

- a table, a chair, a box, a bag, a cup
- pencils and scissors — real, and safe to hold
- a shelf or a bookshelf
- a rug or a mat
- a ball and counters in more than one size and texture — a big soft ball, small hard counters, textured counters
- picture cards that show the where-words — one card shows on top of, one shows inside, one shows underneath, one shows behind
- a song or chant with actions that the student knows
- a tablet or screen with a placing activity (virtual materials) — optional
- the student's communication system to hand — device, picture cards, or the signs the student uses, with the where-words ready

*Every task that asks for a point also works with an eye gaze. Every task that asks for picking up also works with placing, pushing, or hand-over-hand movement. A task that asks for small finger work has a big-object version. Offer both without being asked.*

## Set up the communication

- Have these words ready in the student's communication system: *where, here, in, on, on top of, inside, underneath, behind, me, you, step, done*.
- Say the where-word at the same time as the action, every time: "The cup is on top of the table." [Place the cup as you say it.]
- Give the student time to answer after each ask.
- Watch for the answer in any form: a look, a gaze, a reach, a point, a vocalisation, a sign, a picture, a word on the device, or a movement — moving a thing to the right place is an answer.
- An answer with help is still an answer. Record what the student shows.

## Step 1 — Where?

[Put the cup on the table.]

Say: "Where is the cup?" [Wait.]

Say: "The cup is on top of the table." [Touch the cup, then the table, as you say it.]

Ask again: "Where is the cup?" The student answers in their own way — a word, a sign, a point, a gaze, or the where-word card.

## Step 2 — On top of and underneath

[Use the box and the ball.]

Say: "The ball is on top of the box." [Place it.]

Say: "The ball is underneath the table." [Place it.]

Say: “Put the ball on top of the box.” The student places the ball, points to the right place, gazes, or moves with help.

Then: “Where is the ball?” [On top of the box.]

Say: “Put the ball underneath the table.” Then: “Where is the ball?”

### **Step 3 — Inside**

[Use the box and the pencil.]

Say: “The pencil is inside the box.” [Place it.]

Say: “Where is the pencil?” [Wait for inside — in any modality.]

Use the real room: “Where are the scissors kept?” [Answer with a where-word: in the box, on the shelf.]

### **Step 4 — Behind**

[Use the chair and the bag.]

Say: “The bag is behind the chair.” [Place it.] Say: “Where is the bag?”

Play a hiding game. Hide a thing behind something big — or have a person hide. Ask: “Where is it?” [Behind the chair. Behind the bookshelf.] This is the game VC2MFDSP02.E02 names.

### **Step 5 — From you**

Say: “Where are you?” Help the answer: “I am inside the room.”

Say: “The rug is underneath me.” [Touch the rug.] Say: “The chair is behind me.” [Point behind.]

The student says, signs, points or gazes — or places a thing in relation to themselves with help.

### **Step 6 — Two steps**

Give a direction with 2 steps.

Say: “Step 1: pick up the pencil.” [Wait. Help as needed.] Say: “Step 2: put the pencil inside the bag.” [Wait. Help as needed.]

Say: “Where is the pencil?” [Inside the bag.]

Then: “Put the bag on top of the chair. Where is the bag?”

### **Step 7 — Songs, chants, art and jobs**

A song or chant with actions: do the actions together. The actions are directions. [Choose a song or chant the student knows and likes. Do the actions with the student — co-active movement or hand-over-hand works. This is the participation VC2MFDSP02.E01 names.]

An art activity: “Put the ball underneath the table.” For a student who does not draw: place a picture of the ball, point to the right picture, or gaze at it.

A job: “Find the scissors. Put the scissors inside the box.” Then: “Where are the scissors?”

### **Step 8 — Same words, other places**

The same where-words work in every familiar space: this room, the kitchen, outside.

Say: “Where is your bag?” [Ask in each space the student knows.]

On a tablet, the student drags a thing to a place — or uses their switch or gaze access if that is their way.

Say: “Inside is inside. Underneath is underneath. The words stay the same.”

## 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 — where is the cup?

A cup on top of a table.

*A cup on top of a table.*

Say where the cup is.

| Working                        | Comment                             |
|--------------------------------|-------------------------------------|
| Look at the cup and the table. | Two things: the cup, and the table. |
| The cup is up, on the table.   | The table is under the cup.         |
| Say the where-word: on top of. | On top of goes with up-on.          |

∴ The cup is on top of the table.

### Worked example 2 — where are the scissors kept?

Scissors inside a box. The box is on the bottom shelf.

*Scissors inside a box. The box is on the bottom shelf.*

Where are the scissors kept?

| Working                     | Comment                          |
|-----------------------------|----------------------------------|
| Look at the scissors.       | They are in the box.             |
| Say the where-word: inside. | The scissors are inside the box. |
| Look at the box.            | The box is on the bottom shelf.  |
| Say both together.          | In the box, on the bottom shelf. |

∴ The scissors are in the box on the bottom shelf.

### Worked example 3 — the hiding game

Aseema hides behind a bookshelf.

*Aseema hides behind a bookshelf.*

Where is Aseema hiding?

| Working                     | Comment                      |
|-----------------------------|------------------------------|
| Look for Aseema.            | You cannot see all of her.   |
| The bookshelf is there.     | Aseema is at the back of it. |
| Say the where-word: behind. | Behind the bookshelf.        |

∴ Aseema is behind the bookshelf.

### Worked example 4 — follow two steps

Step 1. Pick up the pencil. Step 2. Put the pencil inside the bag.

Where is the pencil now?

| Working                                   | Comment                            |
|-------------------------------------------|------------------------------------|
| Do step 1: pick up the pencil.            | One step at a time.                |
| Do step 2: put the pencil inside the bag. | The where-word says where: inside. |

| Working             | Comment           |
|---------------------|-------------------|
| Look at the pencil. | It is in the bag. |

∴ The pencil is inside the bag.

### Worked example 5 — where are you?

A student sits on a rug. A chair is behind the student. The student is inside the room.  
*A student sits on a rug. A chair is behind the student. The student is inside the room.*

Say where things are, from you.

| Working                     | Comment               |
|-----------------------------|-----------------------|
| The rug is under you.       | Underneath me.        |
| The chair is at your back.  | Behind me.            |
| The room is all around you. | I am inside the room. |

∴ The rug is underneath me. The chair is behind me. I am inside the room.

### Practice questions

*The teacher gives all the words in the student's own way. The student says or does the answer — speak, sign, point, gaze, place, or choose on the device. The teacher puts the answer down.*

**Q1.** Say where the cup is.

A cup on top of a table.

*A cup on top of a table.*

- a. The cup is \_\_\_\_ the table.

**Q2.** Say where the bag is.

A bag underneath a chair.

*A bag underneath a chair.*

- a. The bag is \_\_\_\_ the chair.

**Q3.** Say where the pencil is.

A pencil inside a box.

*A pencil inside a box.*

- a. The pencil is \_\_\_\_ the box.

**Q4.** Say where the ball is.

A ball behind a box.

*A ball behind a box.*

- a. The ball is \_\_\_\_ the box.

**Q5.** Put the counter where the teacher says. Then say where it is.

- a. "Put the counter on top of the box." The counter is \_\_\_\_  
 b. "Put the counter inside the box." The counter is \_\_\_\_  
 c. "Put the counter underneath the chair." The counter is \_\_\_\_

**Q6.** Follow the steps.

Step 1. Pick up the pencil. Step 2. Put the pencil inside the bag.

- a. Where is the pencil? \_\_\_\_

Then: put the bag on top of the chair.

- b. Where is the bag? \_\_\_\_

**Q7.** The hiding game.

Aseema hides behind a bookshelf.

*Aseema hides behind a bookshelf.*

- a. Where is Aseema hiding? \_\_\_\_

**Q8.** Where are you?

- a. The rug is underneath \_\_\_\_  
b. The chair is behind \_\_\_\_

**Q9.** Choose the right picture.

Picture A: a ball inside a box. Picture B: a ball on top of a box. Picture C: a ball underneath a table.

*Picture A: a ball inside a box. Picture B: a ball on top of a box. Picture C: a ball underneath a table.*

- a. Show me *inside*. Picture \_\_\_\_  
b. Show me *on top of*. Picture \_\_\_\_  
c. Show me *underneath*. Picture \_\_\_\_

**Q10.** In your room.

- a. Where are the scissors kept? \_\_\_\_

**Q11.** The chant with actions.

We chant and do: hands on top of my head — hands behind my back.

- a. Where are your hands now? \_\_\_\_

**Q12.** Say both where-words.

A cup on top of a table. A bag underneath the table.

*A cup on top of a table. A bag underneath the table.*

- a. The cup is \_\_\_\_ the table.  
b. The bag is \_\_\_\_ the table.

**Q13.** Where are you?

A student inside a room.

*A student inside a room.*

- a. I am \_\_\_\_ the room.

**Q14.** Make it true.

The pencil is inside the bag. The bag is underneath the table.

- a. Where is the pencil? \_\_\_\_

**Observation checkpoint — VC2MFDSP02 (4 marks)**

*These items are 5B's contribution to **Checkpoint 5** (Chapter 5 — Space: shapes, and where things are, 8 marks across VC2MFDSP01–VC2MFDSP02). 4 marks per owned CD. Run in the real classroom, one-to-one or in a small group,*

*with real things the student knows. 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.
- 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.
- Deliver every instruction in the student's own modality. No task depends on the student reading anything.
- No maps, no grids, no coordinates; no left or right; no route. The space is the room the student is in.
- Guidance: about 10 minutes per occasion, spread across the week.

### **Item 1 — position in relation to themselves (1 mark)**

Materials: the student's seat or rug; their bag; their cup.

Script: [Seat the student. Place the bag behind the student. Place the rug or mat underneath.] Say: "Where is the bag?" [Wait for an answer in any modality.] If the student answers without the self-frame, model it: "Behind — me." [Wait.] Say: "Where is the rug?" [Underneath me.]

Award the mark when the student describes the position of a thing in relation to themselves, in any modality, with or without assistance.

### **Item 2 — where items are in relation to other items (1 mark)**

Materials: real things from the room — the scissors and their box, or a familiar shelf.

Script: Say: "Where are the scissors kept?" [Wait for a where-word in any modality — in the box, on the shelf.] Then hide a thing behind something in the room. Say: "Where is it?" [Behind the chair. Behind the door.]

Award the mark when the student communicates where an item is in relation to another item, using a where-word, in any modality, with or without assistance. (VC2MFDSP02.E02)

### **Item 3 — inside, underneath, on top of (1 mark)**

Materials: the box, the ball, the table or chair; the three picture cards.

Script: Say: "Put the ball inside the box." [Wait; assist as needed.] Say: "Put the ball on top of the box." [Wait.] Say: "Put the ball underneath the table." [Wait.] For a student who points or gazes: [Show the three picture cards.] Say: "Show me inside." Say: "Show me on top of." Say: "Show me underneath."

Award the mark when the student shows all three — inside, underneath and on top of — in any modality, with or without assistance. (VC2MFDSP02.E03)

### **Item 4 — following directions with multiple steps (1 mark)**

Materials: a pencil, the bag, the chair.

Script: Say: "Step 1: pick up the pencil." [Wait; assist as needed.] Say: "Step 2: put the pencil inside the bag." [Wait; assist as needed.] Then: Say: "Where is the pencil?"

Award the mark when the student follows the 2-step direction — with assistance where needed — and says or shows where the pencil is now. (VC2MFDSP02.E01)

### **Rubric — in the language of the achievement standard**

The achievement standard extract for VC2MFDSP02: *"They describe the position and the location of objects or people in relation to themselves in a familiar space."*

| Item                        | Position and location observed                                      | Marks    |
|-----------------------------|---------------------------------------------------------------------|----------|
| 1                           | describing the position of objects in relation to themselves        | 1        |
| 2                           | describing the location of items in relation to other items         | 1        |
| 3                           | using ‘inside’, ‘underneath’ and ‘on top of’ to describe position   | 1        |
| 4                           | showing the where-words by following directions with multiple steps | 1        |
| <b>Total for VC2MFDSP02</b> |                                                                     | <b>4</b> |

*Record the modality the student used on each occasion. The familiar space is the student’s own room — run the items there, with the student’s own things, so the space is truly familiar.*

*Teacher note — handoff. This subtopic hands forward to the Foundation book’s VC2MFSP02 (position and location with multi-step directions). The next step is giving and following directions to move along a route — that belongs to Foundation, not to this book.*

## Answers

**Q1.** a. on top of.

**Q2.** a. underneath.

**Q3.** a. inside.

**Q4.** a. behind.

**Q5.** a. on top of the box. b. inside the box. c. underneath the chair.

**Q6.** a. inside the bag. b. on top of the chair.

**Q7.** a. behind the bookshelf.

**Q8.** a. me. b. me.

**Q9.** a. A b. B c. C.

**Q10.** a. Sample answer: in the box on the shelf. Any true where-word for your room is right.

**Q11.** a. behind me.

**Q12.** a. on top of. b. underneath.

**Q13.** a. inside.

**Q14.** a. inside the bag.

## Fully-worked solutions

**Q1.**

A cup on top of a table.

*A cup on top of a table.*

The cup is up, on the table. The where-word is on top of.

∴ The cup is on top of the table.

**Q2.**

A bag underneath a chair.

*A bag underneath a chair.*

The bag is down, under the chair. The where-word is underneath.

∴ The bag is underneath the chair.

**Q3.**

A pencil inside a box.

*A pencil inside a box.*

The pencil is in the box. The where-word is inside.

∴ The pencil is inside the box.

**Q4.**

A ball behind a box.

*A ball behind a box.*

The ball is at the back of the box. You cannot see all of the ball. The where-word is behind.

∴ The ball is behind the box.

**Q5.**

Put the counter where the teacher says. Then say where it is.

- a. On top of the box.
- b. Inside the box.
- c. Underneath the chair.

∴ The counter is on top of the box, then inside the box, then underneath the chair.

**Q6.**

Step 1: pick up the pencil. Step 2: put the pencil inside the bag. The pencil is now in the bag. Then the bag goes on top of the chair.

∴ The pencil is inside the bag. The bag is on top of the chair.

**Q7.**

Aseema hides behind a bookshelf.

*Aseema hides behind a bookshelf.*

You cannot see all of Aseema. The bookshelf is there. Aseema is at the back of it.

∴ Aseema is behind the bookshelf.

**Q8.**

The where-word starts from you. The rug is under you. The chair is at your back.

∴ The rug is underneath me. The chair is behind me.

**Q9.**

Picture A: a ball inside a box. Picture B: a ball on top of a box. Picture C: a ball underneath a table.

*Picture A: a ball inside a box. Picture B: a ball on top of a box. Picture C: a ball underneath a table.*

- a. Inside: the ball is in the box. That is picture A.
- b. On top of: the ball is up on the box. That is picture B.
- c. Underneath: the ball is under the table. That is picture C.

∴ Inside is A, on top of is B, underneath is C.

**Q10.**

Look at the scissors in your room. Say where they are, with a where-word.

∴ Sample answer: in the box on the shelf. Any true where-word for your room is right.

**Q11.**

Hands go on top of the head. Then hands go behind the back. The hands are at your back.

∴ Your hands are behind you — behind me.

**Q12.**

A cup on top of a table. A bag underneath the table.

*A cup on top of a table. A bag underneath the table.*

The cup is up, on the table: on top of. The bag is down, under the table: underneath.

∴ The cup is on top of the table. The bag is underneath the table.

**Q13.**

A student inside a room.

*A student inside a room.*

The room is all around you. The where-word is inside.

∴ I am inside the room.

**Q14.**

The pencil is inside the bag. The bag is underneath the table. The pencil stays in the bag.

∴ The pencil is inside the bag.



# Checkpoint 5 (CP5) — Chapter 5: Space — shapes, and where things are

## Mathematics Towards Foundation D · ClassBasics workbook · Level D

*Observation checkpoint — sort-and-name with shapes, and positional description in the real classroom. 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.*

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### Instrument information

#### Instrument

Checkpoint 5 (CP5) — Chapter 5 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 5 — Space: sorting, naming and recognising familiar shapes (5A); position and location in a familiar space (5B)

#### Content descriptions assessed

VC2MFDSP01 (5A) and VC2MFDSP02 (5B) — each scored separately, 4 marks per content description

#### Marks

**8** — 4 marks per owned content description

#### Structure

Part A: four 1-mark observations for VC2MFDSP01 (name, create, sort with the reason, identify in the environment); Part B: four 1-mark observations for VC2MFDSP02 (position in relation to themselves, location in relation to other items, inside / underneath / on top of, multi-step directions)

#### Format

Observed sort-and-name with shapes; positional description in the real classroom

#### 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 CP5 recording sheet: \_MathsADD\_CP5\_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 or pushed object, 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, 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

CP5 gathers the evidence Chapter 5 has been building: sorting and naming familiar shapes and objects, and recognising familiar shapes within objects in familiar environments (5A, VC2MFDSP01); describing the position and location of objects or people in relation to themselves or known objects within a familiar space (5B, VC2MFDSP02).

**The reason is scored, not just the piles.** The content description says *sort and name*, so communicating how the sort was done is part of the mathematics. A student who sorts by a feature the materials do not obviously show — shiny and not shiny, say — has still sorted by one feature and still communicates it; score the sort and the reason.

**The four shape names are circle, square, triangle and rectangle.** That set is VCAA's own (VC2MFDSP01.E02, VC2MFDSP01.E05). Real objects in Part A are places to find two-dimensional shapes in — the wheel is a circle, the top of the plate is a circle. The objects themselves are not classified by their three-dimensional shape at this level.

**Part B runs in the real classroom**, with real things the student knows — their seat, their bag, their cup, the scissors and their box. The where-words of this checkpoint are *inside*, *underneath*, *on top of*, *behind*, *in* and *on*. Every task states the frame — where the thing is in relation to *what* — because *behind* and *on top of* get their meaning from the thing or person they are tied to.

**What CP5 never asks.** No maps, no grids, no coordinates. No left, no right, and no route directions — the multi-step directions in Part B stay in one place (pick up, put, find); giving and following directions along a route is Foundation (VC2MFSP02). No survey and no data question — sorting collected data to answer a two-outcome question is Chapter 6 (VC2MFDST01). Nothing is timed; nothing is written.

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## Part A — VC2MFDSP01 · sorting, naming and recognising familiar shapes · 4 marks

**Assessed content description:** VC2MFDSP01 — *sort and name familiar shapes and objects, and recognise and describe familiar shapes within objects in familiar environments* (quoted verbatim from `maths_AD.json`). **Section:** 5A. **Marks:** 4 — one separately scored observation per mark.

Materials for the whole part: shape cards — a circle, a square, a triangle and a rectangle; a mixed set of shape cards or pattern blocks in 2 colours and 2 sizes; sticks and a loop of string, or a sensory tray; a bicycle, a toy bicycle or a photo of one; a kitchen item such as a plate or a cracker, or a photo of kitchen items; the student's communication system.

Script, in four steps, each step one mark:

1. Say: "What is this shape?" Show each of the four shape cards, one at a time. Wait for the answer in any modality — word, sign, device, gaze at the matching shape-name card.
2. Say: "Sort these." Place the mixed set of shape cards or pattern blocks in front of the student. Then: "How did you sort?" Accept any feature — colour, size, shape — and any way of saying it.

3. Say: “Make a shape with the sticks or the string. What did you make?” Making can be placing, moving the string, drawing in a sensory tray, hand-over-hand, or directing while the teacher places.
4. Say: “Look at the bicycle. Find a circle.” Then: “Look at the plate. What shape is the top?” A photo of the items works in place of the real things. Accept a point, a gaze, a word, a sign or a device message.

Vary the materials across occasions — shape cards one day, pattern blocks another, the real bicycle and the kitchen items on a third — so the judgement is about the shapes, not one familiar set.

| Mark | Look for                                                                                                                          | Language source                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| 1    | The student names the familiar shapes — circle, square, triangle and rectangle — in any modality.                                 | <i>“Students name ... familiar shapes”</i>                 |
| 1    | The student makes a familiar shape — with sticks, string, drawing or directing — and says or shows what they made.                | <i>“create”</i>                                            |
| 1    | The student sorts shapes or objects into like groups and communicates how they sorted — the reason is scored, not just the piles. | <i>“sort familiar shapes and objects into like groups”</i> |
| 1    | The student identifies a familiar shape in their environment — on the bicycle, on a kitchen item, or in a picture.                | <i>“identify familiar shapes in their environment”</i>     |

All four phrases come from the achievement standard extract carried on VC2MFDSP01: *“Students name, create and sort familiar shapes and objects into like groups and identify familiar shapes in their environment.”*

Award each mark where the observation is met on the student’s best sustained response across at least three occasions, with any level of assistance. Award 0 only where no observable response is seen across the occasions.

### Response set — how the student can answer, Part A

- **Object action:** place or push shapes into groups; put sticks together or lay the string in a loop; touch the shape found on the bicycle or the plate; draw the shape in a sensory tray.
- **Gesture, eye-gaze, switch or AAC:** gaze at the matching shape or shape-name card; switch-select; choose the shape name or the feature word (*colour, size, shape*) on the device; direct the placing by gaze or switch with the adult placing.
- **Speech or sign:** say or sign the shape names, the feature sorted by, and what was made.

## Part B — VC2MFDSP02 · position and location in a familiar space · 4 marks

**Assessed content description:** VC2MFDSP02 — *describe the position and location of objects or people in relation to themselves or known objects within a familiar space* (quoted verbatim from `maths_AD.json`). **Section:** 5B.

**Marks:** 4 — one mark per observation item, each scored separately.

Run Part B in the student’s own room, with the student’s own things, so the space is truly familiar. No maps, no grids, no coordinates; no left or right; no route.

### Item 1 — position in relation to themselves (1 mark)

Materials: the student’s seat or rug; their bag; their cup.

Script: Seat the student. Place the bag behind the student; place the rug or mat underneath. Say: “Where is the bag?” Wait for an answer in any modality. If the student answers without the self-frame, model it: “Behind — me.” Wait. Say: “Where is the rug?”

Award the mark when the student describes the position of a thing in relation to themselves — behind me, underneath me, inside the room — in any modality, with or without assistance.

### Item 2 — where items are in relation to other items (1 mark)

Materials: real things from the room — the scissors and their box, or a familiar shelf.

Script: Say: “Where are the scissors kept?” Wait for a where-word in any modality — in the box, on the shelf. Then hide a thing behind something in the room and say: “Where is it?”

Award the mark when the student communicates where an item is in relation to another item, using a where-word — behind the chair, behind the door — in any modality, with or without assistance (VC2MFDSP02 . E02).

### Item 3 — inside, underneath, on top of (1 mark)

Materials: the box, the ball, the table or chair; three picture cards showing inside, on top of and underneath.

Script: Say: “Put the ball inside the box.” Wait; assist as needed. Say: “Put the ball on top of the box.” Wait. Say: “Put the ball underneath the table.” Wait. For a student who points or gazes: show the three picture cards and say “Show me inside”, “Show me on top of”, “Show me underneath”.

Award the mark when the student shows all three — inside, underneath and on top of — in any modality, with or without assistance (VC2MFDSP02 . E03).

### Item 4 — following directions with multiple steps (1 mark)

Materials: a pencil, the bag, the chair.

Script: Say: “Step 1: pick up the pencil.” Wait; assist as needed. Say: “Step 2: put the pencil inside the bag.” Wait; assist as needed. Then say: “Where is the pencil?”

Award the mark when the student follows the 2-step direction — with assistance where needed — and says or shows where the pencil is now, in any modality, with or without assistance (VC2MFDSP02 . E01). The steps stay in one place: pick up, put, find — no route.

### Response set — how the student can answer, Part B

- **Object action:** place or push the ball or counter to the named place; carry out the steps — pick up, put inside; hide and find in the room.
  - **Gesture, eye-gaze, switch or AAC:** point to or gaze at the place or the where-word card; choose *inside*, *underneath*, *on top of*, *behind* or *behind me* on the device; switch-select.
  - **Speech or sign:** say or sign the where-word with the thing it goes with — the bag is behind me; the pencil is inside the bag.
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### After the third occasion

Transfer each mark from the recording sheet to the summary there: VC2MFDSP01 /4, VC2MFDSP02 /4 — checkpoint total /8. The rubric wording and the occasion record are on `_MathsADD_CP5_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 the Foundation book’s VC2MFSP01 and VC2MFSP02 — sorting, naming, creating and finding shapes, and position and location with route directions.





# Checkpoint 5 (CP5) — Rubric and recording sheet

## Mathematics Towards Foundation D · ClassBasics workbook · Level D

Chapter 5 — Space: shapes, and where things are. 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 5 (CP5) — 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 | VC2MFDSP01, VC2MFDSP02 — each scored separately, 4 marks per content description                                                                                                                                                                                                                            |
| Marks                         | 8                                                                                                                                                                                                                                                                                                           |
| Conditions                    | Observed sort-and-name with shapes; positional description in the real classroom; untimed; 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 5). 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; nothing is written. Vary the materials across occasions so the judgement is about the mathematics, not one familiar set.
- **The reason is scored, not just the piles** — where the item asks the student to say or show how they sorted, the communicated reason is part of the mark.

## Record A — VC2MFDSP01 · sorting, naming and recognising familiar shapes · 4 marks

**Content description** (quoted verbatim from `maths_AD.json`): “sort and name familiar shapes and objects, and recognise and describe familiar shapes within objects in familiar environments.”

**Achievement standard extract carried on this CD** (quoted verbatim): *“Students name, create and sort familiar shapes and objects into like groups and identify familiar shapes in their environment.”*

| Item                            | Observation                                                                                           | Occasion 1 | Occasion 2 | Occasion 3 | Further | Best sustained | Mark |
|---------------------------------|-------------------------------------------------------------------------------------------------------|------------|------------|------------|---------|----------------|------|
| 1 — name                        | names the familiar shapes: circle, square, triangle and rectangle                                     |            |            |            |         |                | /1   |
| 2 — create                      | makes a familiar shape — sticks, string, drawing or directing — and says or shows what they made      |            |            |            |         |                | /1   |
| 3 — sort with the reason        | sorts shapes or objects into like groups and communicates how they sorted                             |            |            |            |         |                | /1   |
| 4 — identify in the environment | identifies a familiar shape in their environment — on the bicycle, on a kitchen item, or in a picture |            |            |            |         |                | /1   |

For each occasion, record: the materials used (shape cards, pattern blocks, the bicycle, the kitchen items), the shapes the student named, made, sorted and found, the reason the student gave for the sort, the modality, and the support given. Real objects here are places to find two-dimensional shapes in; the objects themselves are not classified by their three-dimensional shape.

**Best sustained total for VC2MFDSP01:** \_\_\_\_ / 4

## Record B — VC2MFDSP02 · position and location in a familiar space · 4 marks

**Content description** (quoted verbatim from `maths_AD.json`): *“describe the position and location of objects or people in relation to themselves or known objects within a familiar space.”*

**Achievement standard extract carried on this CD** (quoted verbatim): *“They describe the position and the location of objects or people in relation to themselves in a familiar space.”*

| Item                              | Observation                                                                                                    | Occasion 1 | Occasion 2 | Occasion 3 | Further | Best sustained | Mark |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------|------------|------------|------------|---------|----------------|------|
| 1 — in relation to themselves     | describes the position of a thing in relation to themselves — behind me, underneath me                         |            |            |            |         |                | /1   |
| 2 — in relation to other items    | communicates where an item is in relation to another item, using a where-word — in the box, behind the chair   |            |            |            |         |                | /1   |
| 3 — inside, underneath, on top of | shows all three — inside, underneath and on top of — by placing, pointing, gazing or choosing the picture card |            |            |            |         |                | /1   |
| 4 — multi-step directions         | follows the 2-step direction — pick up, put inside — and says or shows where the thing is now                  |            |            |            |         |                | /1   |

For each occasion, record: the room and the things used, the where-words the student said or showed, whether the frame was themselves or a known object, the modality, and the support given. No maps, grids or coordinates; no left or right; the steps stay in one place.

**Best sustained total for VC2MFDSP02: \_\_\_\_ / 4**

## Checkpoint 5 summary

| Content description                                                                                                                        | Section | Best sustained mark |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------|
| VC2MFDSP01 — sort and name familiar shapes and objects, and recognise and describe familiar shapes within objects in familiar environments | 5A      | ___ / 4             |
| VC2MFDSP02 — describe the position and location of objects or people in relation to themselves or known objects within a familiar space    | 5B      | ___ / 4             |
| <b>Checkpoint 5 total</b>                                                                                                                  |         | ___ / 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:** \_\_\_\_\_