Cambridge Primary Mathematics 0096 · Stage 2

CM2-B9

X Marks the Spot!

Gp Position and transformation · A 30-minute lesson with a 15-minute short version.

Learning intention

For learners

We are learning to describe movement using position and direction.

Success criteria

- I can show describing movement with objects.
- I can draw or diagram the same maths.
- I can record my answer and explain how the story supports it.
- I can use TWM.04 while I work.

Learning objectives

2Gp.01 Describe movement using position and direction.

TWM.04 Convincing: give evidence to back up or challenge an idea or answer.

30-minute lesson

Governed source lesson: Across First, Then Up · Application · Following a two-part rule in the order it is given

1 Find the maths in the story

4 min

2Gp.01

Read-along: Listen with highlighting and pause at the passage used by “Across First, Then Up”.

Teacher: The letter in the folder gives a rule with three parts: start at zero, go across, then go up. Put your figure on the starting place and follow the rule in that order for the clue four, one. Say each part of the rule out loud as you do it, so the saying and the sliding happen together. Mark where you land.

Learners: Notice the story evidence and say the maths question in their own words.

2 Model it with objects

5 min

2Gp.01

Read-along: Replay the source passage while building the quantities, shapes or measures it supplies.

Teacher: Now run the same clue backwards: go up one street first, then across four. Mark where you land this time with a different colour. Look at your two marks. Say whether they are in the same place, and say which part of the rule you changed to get there.

Learners: Build a concrete model and check that each part matches the read-along.

3 Try the concrete task

6 min

2Gp.01

Read-along: Keep the relevant story page visible as the class tests the model.

Teacher: Try the clue three, three the same two ways, across first and then up first. Mark both landings. Say what happened this time and why, using the two numbers as your reason rather than the picture. Then try four, one again and say why that one behaved differently.

Learners: Change or compare the objects, then explain what stayed the same and what changed.

4 Draw the maths

5 min

2Gp.01

Read-along: Return to the same story evidence before learners make a pictorial record.

Teacher: Model a clear drawing, diagram or mark for the concrete work without adding a quantity the story does not supply.

Learners: Draw the model and label the important parts with maths language.

5 Record and solve

6 min

2Gp.01

Read-along: Use the read-along once more as the evidence check for the abstract record.

Teacher: Give your partner a clue and the rule together, saying the starting place, then across, then up, in the order the letter gives them. Your partner follows exactly what you say and nothing more. If they land somewhere you did not mean, say which part of your sentence sent them there.

Learners: Record the result with suitable numbers, words or symbols and link it back to the picture.

6 Reflect and convince

4 min

TWM.04

Read-along: Show the source passage and invite a final evidence-based check.

Teacher: Name the Thinking and Working Mathematically focus: Convincing: give evidence to back up or challenge an idea or answer.

Learners: Use the concrete model, drawing and record together to justify the answer.

Read-along routes

Shared maths question

How does X Marks the Spot! help us explore describing movement?

Evidence required

Show the story evidence, a concrete model, a pictorial record and a matching abstract record.

Solo

Read independently, pause at the named source passage and complete the shared maths model.

Supported

Read with the audio and use the teacher's pause points, objects and response frame.

Listening

Listen with the text highlighted, build the same model and give the explanation orally.

Assessment check

The learner meets 2Gp.01 by showing and explaining the objective through the story model. Evidence for TWM.04 is visible when the learner demonstrates this Thinking and Working Mathematically focus: Convincing: give evidence to back up or challenge an idea or answer.

15-minute short version

1 Story question

4 min

2Gp.01

Read-along: Listen to the passage used by “Across First, Then Up”.

Teacher: The letter in the folder gives a rule with three parts: start at zero, go across, then go up. Put your figure on the starting place and follow the rule in that order for the clue four, one. Say each part of the rule out loud as you do it, so the saying and the sliding happen together. Mark where you land.

Learners: Name the maths question and the story evidence.

2 Build, draw and record

7 min

2Gp.01

Read-along: Replay the evidence while learners move from objects to a drawing and a record.

Teacher: Now run the same clue backwards: go up one street first, then across four. Mark where you land this time with a different colour. Look at your two marks. Say whether they are in the same place, and say which part of the rule you changed to get there.

Learners: Make one concrete model, draw it and add numbers, words or symbols.

3 Check and explain

4 min

TWM.04

Read-along: Return to the source page for the final check.

Teacher: Ask learners to demonstrate: Convincing: give evidence to back up or challenge an idea or answer.

Learners: Explain why the model answers the story question.

Learner activity

Concrete, pictorial, abstract: Describing movement

Use the read-along evidence for every part. Do not add a number or measure that the story does not give.

1. Build the story maths with objects.

2. Draw the same model and label its important parts.

3. Record the result with suitable numbers, words or symbols.

4. Explain how your evidence uses TWM.04.