

Cambridge Primary Mathematics 0096 · Stage 1

CM1-B8

Zero, Zilch, Nada

Np Place value, ordering and rounding · A 30-minute lesson with a 15-minute short version.

Learning intention

For learners

We are learning to understand zero as none of something.

Success criteria

- I can show zero as none 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

1Np.01

Understand zero as none of something.

TWM.04

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

30-minute lesson

Governed source lesson: Ten Sets of Ten · Concept · Ten groups of ten as one hundred, and why the total holds

1

Find the maths in the story

4 min**1Np.01**

Read-along: Listen with highlighting and pause at the passage used by “Ten Sets of Ten”.

Teacher: Take one slot strip and drop a chip into each slot, counting aloud from one. Stop when the strip is full and say the number. Turn the strip round and count it again from the other end. Tell your partner whether the number changed.

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

2

Model it with objects

5 min**1Np.01**

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

Teacher: Fill every one of your ten strips the same way and line them up. Count the strips, and say how many chips are in each one. Then count the strips by tens, touching one strip for each number word, and say what you land on.

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

3

Try the concrete task

6 min

1Np.01

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

Teacher: Harry does not take Mr. Huffy's word for it. Count your hundred three different ways and write the answer in a box each time: by tens along the strips, by tens down the strips after you turn the whole row sideways, and by ones along one strip and then tens for the rest. Read your three boxes out to your partner.

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

4

Draw the maths

5 min

1Np.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

1Np.01

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

Teacher: Slide one whole strip off into the lid and count the strips that are left. Count those by tens and say the number. Put the strip back and count again. Tell your partner what has to be true about the strips before the count comes out at a hundred.

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 Zero, Zilch, Nada help us explore zero as none?

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 1Np.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**1Np.01**

Read-along: Listen to the passage used by “Ten Sets of Ten”.

Teacher: Take one slot strip and drop a chip into each slot, counting aloud from one. Stop when the strip is full and say the number. Turn the strip round and count it again from the other end. Tell your partner whether the number changed.

Learners: Name the maths question and the story evidence.

2

Build, draw and record

7 min**1Np.01**

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

Teacher: Fill every one of your ten strips the same way and line them up. Count the strips, and say how many chips are in each one. Then count the strips by tens, touching one strip for each number word, and say what you land on.

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: Zero as none

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.
