

Cambridge Primary Mathematics 0096 · Stage 2

CM2-B5

Shark Swimathon

Ni Integers and powers · A 30-minute lesson with a 15-minute short version.

Learning intention

For learners

We are learning to estimate, add and subtract 2-digit numbers (no regrouping).

Success criteria

- I can show subtracting 2-digit numbers 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.07 while I work.

Learning objectives

2Ni.04

Estimate, add and subtract 2-digit numbers (no regrouping).

TWM.07

Critiquing: compare ideas, pictures or methods and weigh up their strengths.

30-minute lesson

Governed source lesson: Take the Day's Laps Off the Sign · Fluency · Subtracting a two-digit number from a two-digit number, trading a ten when the ones will not give

1

Find the maths in the story

4 min**2Ni.04**

Read-along: Listen with highlighting and pause at the passage used by "Take the Day's Laps Off the Sign".

Teacher: Each pair builds 75 on the lap sign card with 7 ten-rods and 5 single cubes. Then say the number twice: seventy-five, seven tens and five ones. Slide rods into the left column and cubes into the right so tens and ones never mix. Leave the sign standing; every subtraction today starts from a sign.

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

2

Model it with objects

5 min**2Ni.04**

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

Teacher: The sign reads 75 before Tuesday and 61 after it. Take 61 off 75 with the blocks — one cube from five cubes, six rods from seven rods. Write $75 - 61 = 14$ on the recording strip. Say out loud why nothing had to be broken open: there were enough ones to give.

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

3

Try the concrete task

6 min

2Ni.04

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

Teacher: Build 61 again and take away the 17 laps the team swam on Wednesday. One cube cannot give up seven, so trade one rod for ten cubes and count eleven ones. Take 7 ones and 1 ten, write $61 - 17 = 44$, and check your sign against the number the book announces.

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

4

Draw the maths

5 min

2Ni.04

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

2Ni.04

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

Teacher: Build 44 and take away Thursday's 19 laps: trade a rod, count fourteen ones, take 9 ones and 1 ten. Write $44 - 19 = 25$ under the other two subtractions. Ring the two that needed a trade and be ready to say what the ring means.

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

6

Reflect and convince

4 min

TWM.07

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

Teacher: Name the Thinking and Working Mathematically focus: Critiquing: compare ideas, pictures or methods and weigh up their strengths.

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

Read-along routes

Shared maths question

How does Shark Swimathon help us explore subtracting 2-digit numbers?

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 2Ni.04 by showing and explaining the objective through the story model. Evidence for TWM.07 is visible when the learner demonstrates this Thinking and Working Mathematically focus: Critiquing: compare ideas, pictures or methods and weigh up their strengths.

15-minute short version

1

Story question

4 min

2Ni.04

Read-along: Listen to the passage used by "Take the Day's Laps Off the Sign".

Teacher: Each pair builds 75 on the lap sign card with 7 ten-rods and 5 single cubes. Then say the number twice: seventy-five, seven tens and five ones.

Slide rods into the left column and cubes into the right so tens and ones never mix. Leave the sign standing; every subtraction today starts from a sign.

Learners: Name the maths question and the story evidence.

2

Build, draw and record

7 min

2Ni.04

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

Teacher: The sign reads 75 before Tuesday and 61 after it. Take 61 off 75 with the blocks — one cube from five cubes, six rods from seven rods. Write $75 - 61 = 14$ on the recording strip. Say out loud why nothing had to be broken open: there were enough ones to give.

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

3

Check and explain

4 min

TWM.07

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

Teacher: Ask learners to demonstrate: Critiquing: compare ideas, pictures or methods and weigh up their strengths.

Learners: Explain why the model answers the story question.

Learner activity

Concrete, pictorial, abstract: Subtracting 2-digit numbers

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.07.
