

Rounding to the nearest 10

CURRICULUM ALIGNMENT

NUM.PVT.3 explore equivalent numerical expressions of numbers using the base ten system.

INTERACTIVES Number Line · challenge, display, explore

WHAT THIS LESSON TEACHES

Rounding to the nearest 10 means swapping a number for the closest ten so it is easier to work with or talk about. Look at the units digit: 5 or more rounds up, 4 or less rounds down.

→ 37 rounds to 40 because 37 sits closer to 40 than to 30 on the number line.

→ In 42 the units digit is 2 so it rounds down to 40; in 68 the units digit is 8 so it rounds up to 70.

MODEL THIS ON THE BOARD

ROUNDING A JAR OF 37 SWEETS

- 1 Find 37 on the number line between 30 and 40.
- 2 The units digit is **7**, which is 5 or more, so round up.
- 3 37 is closer to **40** than to 30.
- 4 So 37 rounds to 40.

DISCUSSION STARTER

REFLECT Which digit do you look at when rounding — and why does that digit decide?

LESSON ARC

Open cold with the sweet-jar question — is 37 nearer 30 or 40 — before any number line shows. Then bring up the number-line interactive running 30 to 50 and walk 42, 68, 35, 90, landing the halfway rule slowly on 35. Pupils take turns dragging the marker for 24, 51, 76, 45, then record each number and its nearest ten in their copy with the units digit underlined. The Class Challenge builds to 198 rolling over into 200.

TEACHING MOVES

1. **Getting Started.** Ask the sweet-jar question with no number line in view — take three hands-up, not call-outs. You only want the idea that 37 sits between two tens; hold the pupil who says 'closer to 40' for the next step.
2. **Watch and Notice.** Point at each marker as you narrate. On 42 say 'two steps past forty, so it drops back'. On 35, pause before revealing it and land the halfway rule slowly: 'exactly in the middle, so the rule decides — a 5 rounds up.' Circle the units digit each time.
3. **Try It Together.** Pupils take turns dragging the marker on the number-line interactive; the class agrees or corrects aloud. On 51, watch for pupils rounding up just because 51 is bigger than 50 — redirect to 'which ten is closer?'. On 45, make the whole class say 'a five rounds up' before anyone touches the marker.
4. **Write the Nearest Ten in Your Copy.** Walk the room and glance for the underlined units digit, not just the answer — that underline is the thinking you want to see. If a pupil has the right answer but nothing underlined, ask them which digit they used.

5. **Class Challenge.** Keep board work brisk — pupils take turns, check each answer, class confirms before moving on. On 85 ask for the rule first. On 198 let pupils predict where the marker lands before it's checked, then flag that 190 rolls over to 200 and 200 is still the nearest ten.
6. **What Did We Notice?.** Listen for pupils naming the units digit as the decider. Revoice a strong answer: 'the units digit tells us how far past the last ten we've gone — that's all we need.' Head off 'bigger always rounds up' with 51 dropping to 50.

COMMON MISCONCEPTIONS

⚠ Pupils round 51 up to 60 because 'it's more than 50' — they think being bigger than a ten means rounding up.

Drag the marker to 51 on the number line and ask the class to count steps to 50 versus steps to 60. One step back, nine steps forward — 'which ten is it closer to?' The units digit 1 is small, so it drops down.

⚠ At 45 pupils split — some round down to 40 because '45 is between, so leave it' or 'it's not past the middle yet'.

Show on the number line that 45 sits exactly on the midpoint between 40 and 50 — neither is closer. That's why we need a rule, not a look: a 5 always rounds up. Have the class chant it before the marker moves.

⚠ On 198, pupils write 190 for the tens or freeze because rounding up seems to break the hundred.

Drag the marker from 198 up and let them watch it land on 200. Say '200 is twenty tens — it's still a ten, we just rolled into a new hundred.' Point back to 190 → 200 as the same rule doing bigger work.

DIFFERENTIATION

EMERGING

- Keep these pupils on two-digit numbers with the number line only running 20 to 30 or 40 to 50, so there is just one midpoint to judge.
- Give them the number line already labelled and ask only 'which ten is closer?' before adding the units-digit rule.

DEVELOPING

- After the copy work, ask them to find a number that rounds to 60 and a different one that rounds to 60 the other way — one below, one above.
- Pose: which numbers between 40 and 50 round down? List all of them and say what they have in common.

PROFICIENT

- Narrate a harder variant at the board: round 1,995 to the nearest ten and explain the double roll-over into thousands — or pull these pupils ahead into the Student Activity Book page while the class finishes the Class Challenge.
- Ask: 'a number rounds to 70. What is the smallest it could have been, and the largest?' Have them justify the boundaries in their copy.

✓ **Cross-curricular:** Tie to Geography — pupils round the populations of nearby towns to the nearest ten and say roughly how many people live there.

ANSWER KEY

Scaffold: visual check on the page

Q1: 20

Q2: 50

Q3: 50

Spot: When a number is exactly halfway, the rule is to round **up**. 35 rounds to **40**.

EXTENSION SHEET · STRETCH ANSWERS

S1: 3000

S2: 700

S3: 300