

Counting back 1, 2: and taking away 0

CURRICULUM ALIGNMENT

NUM.OPS.2

select, make use of and represent a range of addition and subtraction strategies.

NUM.NCT.2

demonstrate proficiency in using and applying different counting strategies.

INTERACTIVES Number Line Jumps · challenge, display, explore

WHAT THIS LESSON TEACHES

Stand on the start number on the number line and make little jumps back of 1 or 2 to find what is left. Taking away 0 means no jump at all: you stay on the same number.

→ For $9 - 2$, stand on 9 and jump back twice to land on 7.

→ $12 - 0 = 12$: no jump at all.

MODEL THIS ON THE BOARD

AOIFE HOPS BACK ON THE YARD LINE

- 1 Stand on square 9.
- 2 Hop back 1 to land on 8.
- 3 Hop back 1 more to land on 7.
- 4 So $9 - 2 = 7$.

LESSON ARC

Open with the hopscotch hook: Aoife on square 9 hops back 2 — five seconds of quiet think-time, then three answers. Model on the number-line interactive: $9 - 2$ and $6 - 1$ as little jumps back toward 0, then freeze on $12 - 0$ so the counter never moves. Pupils take turns at the board on four more take-aways, saying the landing number before anyone checks. Brief copybook beat writing $9 - 2 = 7$. Class Challenge runs four brisk practice items, watching hard for the zero trap. Close with maths talk on why taking away zero changes nothing.

TEACHING MOVES

1. **Getting Started.** Show the hopscotch image and read the prompt once. Give a full five seconds of quiet think-time before any hands. Take three answers only — do not settle the landing number yourself; the number-line interactive in the next step will.
2. **Watch and Notice.** Run $9 - 2$ first: two little jumps back, land on 7. Ask ‘which way do the jumps go?’ before you accept the landing. Then $6 - 1$ as one jump back to 5. On $12 - 0$ there is no third interactive — point at the start number and pause. Revoice: ‘nothing leaves, so we stay right where we are — no jump at all.’
3. **Try It Together.** Call the four in order: $8 - 1$, $11 - 2$, $15 - 0$, $14 - 2$. Before each new pupil, set the start number on the line and clear any jumps. On $15 - 0$, pause before anyone touches the counter: ‘how many jumps this time?’ Listen for ‘none’ or ‘stay put’. The rest of the class counts the jumps aloud.
4. **Write $9 - 2 = 7$ in your copy.** Pupils write $9 - 2 = 7$ once in their maths copy. Walk the row glancing at the $-$ and $=$ signs only — this is whole-class copybook practice, not marking.

5. **Class Challenge.** Keep the board work brisk: pupils take turns, class says the landing number out loud before moving on. On $13 - 0$ watch for anyone who still tries a jump — revoice ‘zero means nothing leaves, so the counter stays’. No scores, no timers, no re-teaching each item.
6. **What Did We Notice?.** Ask: ‘What happens when we take away zero — and why?’ Listen for ‘nothing leaves’ or ‘we stay put’. If a pupil says ‘zero does nothing’, press gently: ‘so what is $12 - 0$?’ Revoice once: zero means no jump, so the number stays the same.

COMMON MISCONCEPTIONS

⚠ On a take-away, pupils jump the counter forward toward the bigger numbers instead of back toward 0.

Freeze the interactive mid-jump. Point at 0 on the line and ask ‘which way is take-away?’ Rebuild $9 - 2$ with two slow jumps back only — one jump per second — and have the class chant ‘back... back... seven’.

⚠ On a zero take-away, pupils still make one jump — they treat ‘take away’ as ‘must move the counter’ even when the amount is 0.

Stop before the counter moves. Ask ‘how many leave?’ and wait for ‘none’. Revoice: ‘zero means nothing leaves, so we stay put — no jump at all.’ Point at the start number still sitting on the line.

⚠ Pupils count the starting square as the first jump, so $9 - 2$ lands on 8 or 6 instead of 7.

Reset the counter on 9. Say ‘we start standing on nine — jumps leave from here’. Make the two jumps slowly while the class counts only the hops, not the start spot.

DIFFERENTIATION

EMERGING

- Stay on take-away 1 only at the board ($5 - 1$, $8 - 1$) until the back-direction of the jump is secure; bring zero in last with teacher finger on the counter.
- Pre-place the counter on the start number yourself so the pupil only decides how many jumps — none, one, or two.

DEVELOPING

- After a correct landing, ask ‘how do you know?’ and wait for ‘I jumped back two’ or ‘zero means stay put’ before the next pupil.
- On a non-zero item, cover the landing number with your hand and ask the class to say it before the counter moves.

PROFICIENT

- On the zero items, press: ‘tell us why the counter must not move — use the words nothing leaves’.
- Narrate a harder variant from the front: start on 18, take away 2, then take away 0 — what is the landing each time, and which one needed no jump?

✚ **Cross-curricular:** Tie back to PE hopscotch in the yard — stand on a numbered square and hop back 1 or 2 to match the take-away.

ANSWER KEY

Scaffold: visual check on the page

Q1: 8

Q2: 4

Q3: 6

Q4: 12

Q5: 9

Q6: No, 15

a) Always : Each jump of 1 moves one step toward 0, so two jumps always land two less.

b) Always : Zero jumps means the counter stays put on the start number.

c) Never : One jump back from 8 lands on 7, not 6.

d) Never : Taking away 0 needs no jumps at all.

EXTENSION SHEET · STRETCH ANSWERS

S1: 10

S2: 15

S3: 8

S4: 5