

Count up to take away: when the numbers are close

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

When two numbers are close, start on the smaller one and jump up to the bigger one. The number of jumps is the answer to the take-away.

→ For $12 - 9$, stand on 9 and jump 10, 11, 12: three little jumps, so the answer is 3.

→ For $16 - 13$, stand on 13 and jump up to 16: three jumps.

MODEL THIS ON THE BOARD

CLOSE SCORES ON THE PITCH

- 1 Our team scored 12 points and the visitors scored 9. Find $12 - 9$ by counting up.
- 2 Stand on the smaller number 9.
- 3 Jump up: 10, then 11, then 12.
- 4 Three little jumps. So $12 - 9 = 3$.

LESSON ARC

Open with the match score $12-9$ and leave the gap hanging. On the number-line interactive, walk $12 - 9$ the long way first (nine jumps back), then the short way (stand on 9, jump 10, 11, 12). Vote long or short, then predict jump-counts for $11 - 8$ and $14 - 12$. Try It Together runs $16 - 13$ with pupils at the board counting aloud. One copybook line locks $12 - 9 = 3$, then Class Challenge banks four close take-aways. Maths-talk contrasts close vs far pairs before the toolkit recap.

TEACHING MOVES

1. **Getting Started.** Pose the $12-9$ match gap and take three hands-up answers. Listen for three or a small gap, then hold it open — do not settle the number yet. Point them at the number line next.
2. **Watch and Notice.** Run the long way first and let the class feel all nine jumps back — a quiet puff lands the point. Then stand on 9 and count up 10, 11, 12. Pause hard on the board line: the jumps are the answer. Before $11 - 8$ and $14 - 12$, hold a jump-count prediction. Vote long or short after the first pair.
3. **Try It Together.** Revoice $12 - 9$ (nine back, three up), then call $16 - 13$. One pupil stands on 13 and makes little jumps while the class counts aloud. Push: the answer is the number of jumps, not the landing on 16. Ask which way needs fewer if counting all the way back needs thirteen.
4. **Write the take-away in your copy.** Pupils write $12 - 9 = 3$ once in the maths copy. Walk the row glancing at the minus sign and the 3 — whole-class copybook practice, not marking.
5. **Class Challenge.** Keep it brisk. Before each item ask count-back or count-up — which needs fewer jumps here? Pupils take turns at the board; class confirms before Check. On $15 - 12$ hold for agreement that three jumps is the answer, not the landing on 15.

6. **What Did We Notice?**. Hold 12 and 9 beside 12 and 2. Ask which pair for counting up, which for counting back. Revoice: counting up wins when the numbers sit near each other. If someone offers $12 - 2$, agree counting back two is quicker there — the tool depends on the gap.

COMMON MISCONCEPTIONS

⚠ A pupil starts on the bigger number and tries to count up from there, or counts the landing number as the answer (says 16 for $16 - 13$).

Pause and revoice: we stand on the smaller one and jump up to the bigger. Point at the three little jumps on the number line — the jumps are the answer, not where we land.

⚠ Pupils always count up, even when the gap is big — they treat counting up as the new default instead of a choice.

Sketch $12 - 2$ beside $12 - 9$. Counting up from 2 needs ten jumps; counting back two is quicker. Revoice: the tool depends on how close the numbers sit.

⚠ Pupils count the starting mark as one jump, so $12 - 9$ becomes four instead of three.

Replay on the number line: stand still on 9 (no jump yet), then hop to 10, 11, 12 while the class counts each hop. Three hops, answer three.

DIFFERENTIATION

EMERGING

- Stay with gaps of 1 or 2 on the number-line interactive ($10 - 9$, $11 - 9$) so pupils only track one or two jumps before the class moves to three.
- Pre-mark the smaller number with a finger or counter on the line; pupil only makes the upward jumps and counts them.

DEVELOPING

- After each Class Challenge item, ask why count-up beat count-back on that pair — one sentence justification before the next.
- Give $17 - 14$ as a silent think-time prediction: how many jumps, and how do you know, before anyone touches the line.

PROFICIENT

- Pose $20 - 17$ on the board: predict the jump count without drawing, then prove it on the line. Stretch: find a pair near 20 where counting back would actually be quicker, and say why.

✓ **Cross-curricular:** Keep the GAA/blitz frame — after PE, pupils compare two team scores that finished close and count up the winning margin.

ANSWER KEY

Scaffold: visual check on the page

Q1: 3

Q2: 2 points

Q3: 2

Q4: 4

Q5: 3 points

Q6: 2 points

a) **Always** : Close numbers need only a few jumps up, so counting up is quicker.

b) **Always** : Each jump is one unit, so the jump count is the difference.

c) **Never** : Counting up suits numbers that are close, like 12 take away 9; for 19 take away 3, count back.

d) **Never** : When numbers are close, counting up needs fewer jumps than counting all the way back.

EXTENSION SHEET · STRETCH ANSWERS

S1: 4

S2: 7

S3: 6

S4: 4