

Estimate, then count

CURRICULUM ALIGNMENT

NUM.PVT.2b

use estimation to quickly determine number values and number calculations.

INTERACTIVES [Estimation Game · challenge, explore](#)

WHAT THIS LESSON TEACHES

An estimate is a careful guess about how many, made before you count. After you count, the gap tells how far your estimate was from the real number.

→ Estimate 9 counters, then count 8: the gap is 1.

→ Estimate 15 cubes, then count 14: the gap is 1.

MODEL THIS ON THE BOARD

CLASSROOM COUNTER SPILL

- 1 Look at a spill of counters on the desk. The bulk looks near two tens, so estimate **20**.
- 2 Count one by one: there are **18** counters.
- 3 Find the gap: $20 - 18 = 2$. The estimate was 2 away.

LESSON ARC

Open with the secret jar held high so pupils only see the bulk — more than ten, fewer than ten, or about ten — and keep every guess silent. Model two counter spills: show the bulk, take a careful nearer-ten estimate, count slowly one by one, then name the gap out loud. Try It Together and Class Challenge walk fresh board sets the same way with pupils taking turns. Pupils rule three copybook columns — My estimate, Count, Gap — for the four challenge sets. Finish by opening the jar and naming the gap from the opening whisper.

TEACHING MOVES

1. **Getting Started.** Hold the jar or cloth bag up so the class sees bulk, not single cubes. Take only three hands-up answers — more than ten, fewer than ten, or about ten — then set the jar aside unopened. Do not count yet; the reveal closes the lesson.
2. **Watch and Notice.** Spill real counters first so the routine is physical: show the bulk, model a careful nearer-ten estimate, count one by one, name the gap. Match each board spill next; if a total numeral appears early, cover it until after estimates. On the second spill invite two hands-up estimates before you reveal — stress that close counts, a wild guess does not.
3. **Try It Together.** Give five seconds of silent think-time before anyone shares. One pupil writes the class estimate; then reveal and name the gap together in plain words. Rotate four pupils across fresh sets and listen for nearer ten or nearer twenty rather than random numbers.
4. **Class Challenge.** Keep the four sets brisk: estimate, count, name the gap, class confirms, move on. Match the landmark prompt to the bulk you can see — nearer zero or ten on the smallest; nearer ten or twenty once past ten; on the last set listen for ‘almost two full tens’. Allow slow one-by-one counting; do not re-teach each item.
5. **In Your Copy.** Every pupil rules three columns: My estimate, Count, Gap. Revoice one board total if a count is forgotten. Circulate only for slow recounts where a written gap looks impossible — this is the quieter paper pace, not a new teaching beat.

6. What Did We Notice?. Ask what makes a guess a good estimate instead of a wild one. Revoice ideas about bulk, nearer ten, or nearer twenty: ‘a good estimate is a careful look first; close counts.’ Then open the Getting Started jar, count slowly together, and name the gap from those first whispered guesses.

COMMON MISCONCEPTIONS

⚠ Pupils shout any number that pops into their head — ‘seventeen!’ — without looking at the bulk, treating estimate as a lucky stab.

Freeze the hands. Cover the set again and ask only: nearer ten or nearer twenty? Rebuild one careful estimate from the bulk before any free number is accepted.

⚠ Pupils start pointing and counting one by one during estimate time, so the ‘estimate’ is really a full count.

Stop the count mid-finger. ‘Estimates look at the whole pile first — no touching yet.’ Show the bulk again for two silent seconds, take the estimate, then allow the slow count.

⚠ After estimate 12 and count 15, pupils say ‘the gap is 15’ (naming the count) or ‘I was wrong’ (treating any miss as failure).

Write both numbers on the board and count the steps between them: ‘12... 13, 14, 15 — the gap is 3. Three away is close; close means a good estimate.’

DIFFERENTIATION

EMERGING

- Stay with sets clearly under ten and the prompt nearer zero or nearer ten only; teacher writes the class estimate while the pupil names the gap after the count.
- Pre-rule the three copybook columns and scribe the count for the pupil so they only fill estimate and gap.

DEVELOPING

- After a reveal, ask: why was nearer ten better than nearer twenty for this bulk? One-sentence justification before the next set.
- On a gap of 2 or 3, ask whether a different landmark would have made the estimate closer — still within 20.

PROFICIENT

- On the last Class Challenge set, ask before the count: ‘Is this almost two full tens? What careful estimate fits that bulk?’ Then name the gap.
- In the copybook, add a fourth note under one row: one reason your estimate was close (or not) — bulk, landmark, or size — still no new materials.

✚ **Cross-curricular:** Tie to PE — scatter beanbags for a relay and estimate the pile before the class counts them out.

ANSWER KEY

Your turn · Ring your guess. Count. Write how many. A) guess about 10, count 6 B) guess about 10, count 13 C) guess about 20, count 17

Is it right? · That is 11. tick · That is 10. cross

Star challenge · Ring your guess. Count. Write how many. guess about 20, count 19

EXTENSION SHEET · STRETCH ANSWERS

S1: 13

S3: 8

S2: 9

S4: 8