

Class survey: pose, collect, summarise, present

CURRICULUM ALIGNMENT

DAT.DAT.4a

pose questions, collect, compare, summarise and represent data selectively to answer those questions.

DAT.DAT.4b

critically analyse and evaluate findings; and communicate inferences, conclusions and implications from the findings.

INTERACTIVES

Tally Chart · display, explore

Bar Chart Builder · display, explore

WHAT THIS LESSON TEACHES

A class survey follows one full loop: pose a clear question, collect every answer, tally the counts, present them on a chart, then write one headline finding. The tally uses gate-marks so totals can be read quickly.

→ Ask how we get to school, tally each reply, then read that most pupils walk.

→ More than half the class walks is a headline; a plain list of the three counts is not.

MODEL THIS ON THE BOARD

TALLY TO HEADLINE FOR OUR CLASS

- 1 Pose the question: how do you get to school? Categories are Walk, Car, Bus.
- 2 Collect the 28 answers and tally them: Walk gets **18**, Car gets **7**, Bus gets **3**.
- 3 Draw the bar chart from those three totals and check the tallies match the bars.
- 4 Write the headline finding: most pupils in our class walk to school.

DISCUSSION STARTER

REFLECT

What was the most surprising thing your class survey showed?

LESSON ARC

Fix the question 'favourite playground game' and take three quiet predictions. On the IWB, model one tally-to-bar-chart pass, reading gate-marks aloud in fives and pointing from each tally row to its matching bar. The class then tallies its own live answers by show-of-hands, totals checked against class size. After a paired-bar comparison of two classes, pupils copy the totals into a tally frame and bar sketch, then design their own three-category question in the Class Challenge.

TEACHING MOVES

1. **Getting Started.** Give five seconds of silent think-time, then take exactly three hands-up predictions on which game will win — not open call-outs. Keep the question fixed; pupils get their own question later.
2. **Watch and Notice.** Point at the gate-marks and read one row aloud slowly — 'five, ten, eleven, twelve' — so pupils feel why we count in fives. Then trace a finger from that tally row to its bar and ask which category won on each; the answers must match.
3. **Try It Together.** Run a show-of-hands per category; a pupil taps that many marks into the row while the class agrees or corrects aloud. Before naming the winner, ask the class to read it off — and check the row totals sum to the class size as your live miscount catch.

4. **Comparing Two Classes: 6A and 6B.** Point to the colour key first, then compare one lunch's two bars before moving to the next — don't jump around. Say it plainly: same idea as our own chart, just a second class added, so pupils meet paired bars while still in demonstration mode.
5. **Set Up Your Survey in Your Copy.** Pupils copy the totals the class just counted — they gather nothing new here. Walk the room glancing for gate-marks grouped in fives and exactly one bar per category; no marking.
6. **Class Challenge.** Every pupil designs their own three-category question and prediction in their copy, then pick two or three to run as whole-class shows of hands. Watch for questions where one answer could fit two categories — tighten the wording on the spot before you tally.
7. **What Did We Notice?.** Listen for pupils sensing a small sample is shakier — one loud voice swings five answers but barely moves twenty-eight. Re-voice a strong answer: 'so the more people we ask, the more we can trust our headline.'

COMMON MISCONCEPTIONS

⚠ Pupils draw the fifth gate-mark as a fifth upright tally rather than a stroke across the four, so a group of five reads as five separate ones and totals get miscounted.

Freeze on the tally interactive and re-draw one group: four uprights, then the fifth as a bar across them. Read it as one 'five', then have the pupil re-count the whole row in fives aloud.

⚠ Pupils write a headline that just lists every count ('Chasing 8, Football 12, Skipping 5, Handball 3') instead of one overall sentence.

Point at the tallest bar and ask 'what's the one thing this tells us?' Model turning the counts into 'Football is the most popular game in our class,' and have them rewrite theirs to a single sentence.

⚠ In the What Did We Notice? talk, pupils claim any survey gives the true answer — that asking five pupils is just as good as asking twenty-eight.

Ask them to imagine the five you picked were all the football team. On the IWB, wipe the tally to just five answers and show how one group swings the winner; then restore the full class to show the result steady.

DIFFERENTIATION

EMERGING

- Give these pupils a tally frame with the four category labels already written so they only place the marks, not build the structure.
- Let them stay on the class survey totals in the Class Challenge instead of designing a fresh question — one clean tally and bar sketch is the target.

DEVELOPING

- After the copybook sketch, ask which two games are closest in count and by how many — a reading-off-the-chart comparison.
- Have them add a total row to their tally frame and check it against the class size before drawing the bars.

PROFICIENT

- Fast finishers work out the mode of their surveyed question, then narrate to the class why the mode and the tallest bar are the same thing.
- Pose: 'if 6A and 6B were merged into one big class, would the winning lunch change?' — have them reason from the paired-bar chart without re-tallying.

➤ **Cross-curricular:** Tie to Geography — run the survey as 'how do we get to school?' and link the walk/cycle counts to a local active-travel discussion.

ANSWER KEY

Scaffold: visual check on the page

Q1: Walk

Q2: 26

Q3: Most pupils walk to school

Q4: 6B

a) Always : The results describe just the pupils who answered, not every child in the school.

b) Never : A headline is one short sentence that states the main result, not the raw counts.

c) Always : Gate-marks let us count the tallies quickly in fives.

d) Never : The prediction is made before any answers are collected.

EXTENSION SHEET · STRETCH ANSWERS

S1: 34.5

S4: 136

S2: 157

S5: 35.5

S3: 9