

Reading and interpreting bar charts

CURRICULUM ALIGNMENT

DAT.DAT.3

pose questions of interest and collect, display and critically analyse data in a range of ways for a range of purposes and communicate the findings.

INTERACTIVES [Bar Chart Builder · challenge, display, explore](#)

WHAT THIS LESSON TEACHES

The height of each bar shows how many are in that group. Always trace from the top of the bar across to the scale to read the exact number.

→ A bar reaching the 8 line shows that 8 pupils chose that answer.

→ The tallest bar for football looks big – trace it across and read exactly 12.

MODEL THIS ON THE BOARD

READING THE AFTER-SCHOOL CLUBS CHART

- 1 Trace the football bar across to the scale. It reaches exactly **12**.
- 2 The art bar reaches **8**, coding reaches **5** and choir reaches **4**.
- 3 Football is the tallest bar at 12 and choir is the shortest at 4.
- 4 12 is 8 more than 4, so 8 more pupils chose football than choir.

DISCUSSION STARTER

REFLECT Which was trickier — finding how many more, or finding the total of all the bars?

LESSON ARC

Open by asking which after-school activity won and exactly how many chose it — pupils notice they cannot pin a number without a chart and scale. On the IWB bar chart, model four readings with a ruler as a guide line: tallest, shortest, how many more, then the total of every bar. Pupils take turns on the school-dinners chart, write three readings in copybook from the same chart, then work the Class Challenge bank at the board. Student Activity Book is the independent practice hand-off.

TEACHING MOVES

1. **Getting Started.** Take three hands-up guesses for the winning activity, then hold out for the exact number. Let the class feel the gap: without a chart and a scale they cannot be sure. Bridge straight into the board chart for the next step.
2. **Watch and Notice.** Work each reading live. Lay a ruler from the top of Football straight across to the scale and read 12; same move on Choir for 4. Model how many more as take-the-smaller-from-the-larger ($12 - 4 = 8$). Before adding the total, ask whether the class predicts nearer 20 or nearer 30, then add bar by bar.
3. **Try It Together.** Pupils take turns at the board on the school-dinners chart. For every reading, the pupil at the board must trace to the scale and say the number before the class confirms. Keep the four moves brisk so you still have time for the total prediction and the full add.
4. **Answer Three in Your Copy.** Leave the school-dinners chart up. Walk the room watching for pupils who write a number a line or two out — point them back to the scale rather than correcting the digit yourself. This is whole-class copybook practice, not marking.

5. **Class Challenge.** Brisk board turns: class predicts, pupil at the board traces and answers, class confirms, move on. Charts grow from three bars to four to a full total. Do not re-teach each item — insist only on the trace-to-scale move before any number is accepted.
6. **What Did We Notice?.** Ask how reading an exact value differs from just spotting the tallest bar. Re-voice a strong answer: tallest names the winner; how many more and the exact count both need the scale.

COMMON MISCONCEPTIONS

⚠ Pupils judge bar height by eye and write a number one or two marks off the true scale reading. Stop and lay a ruler from the bar top straight across to the scale so the whole class sees the guide line. Have the pupil re-read the mark the ruler hits, not the height they guessed.

⚠ Asked 'how many more', pupils add the two bar values instead of subtracting the smaller from the larger.

Point at both bars and ask which group is bigger first. Then rephrase: 'how many extra does the taller one have?' Model taking the smaller from the larger on the scale marks.

⚠ When finding the total, pupils count the number of bars (e.g. 'four activities') instead of adding the values on the scale.

Have them read each bar's value aloud in turn and write the four numbers in a column before adding. The total is the sum of the heights, not the count of categories.

DIFFERENTIATION

EMERGING

- On the IWB, cover all but two bars so the pupil only reads one value and one simple how-many-more before the full chart returns.
- During copybook, accept just the tallest and shortest readings; the how-many-more can wait until you stand beside them and point at both scale marks.

DEVELOPING

- After the three copybook answers, ask: if one more pupil had chosen the shortest activity, what would how-many-more become?
- On a Class Challenge chart, add a follow-up out loud: which two bars together match the tallest, and how do you know?

PROFICIENT

- Once a Class Challenge total is confirmed, ask: invent one new question this chart could answer that we have not asked yet — the class checks whether it is solvable from the bars.
- Fast finishers move ahead into the Student Activity Book page while the class finishes the board bank.

✚ **Cross-curricular:** Link to SPHE or PE — class after-school club choices become the next real bar chart pupils read for exact counts and totals.

ANSWER KEY

Scaffold: visual check on the page

Q1: 7

Q2: 6

Q3: 12

Q4: 29

Q5: 8

Q6: 13

a) **Always** : That is the correct way to read any bar height instead of guessing by eye.

b) **Always** : The tallest bar reaches highest on the scale.

c) **Never** : Different heights always mean different values on the scale.

d) **Sometimes** : It depends on whether the scale is evenly marked and starts at zero.