

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

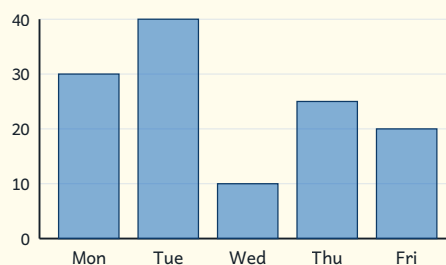
To read a bar chart, run your eye or finger from the very top of a bar straight across to the number scale. Where it lands is the exact value. If the top sits between two scale lines, count up from the lower line.

- A library-books bar whose top lines up with 8 means 8 books were borrowed.
- On a reading-minutes chart, the tallest bar is the day with the most reading.

MODEL THIS ON THE BOARD

READING A BAR BETWEEN TWO LINES

- 1 The chart shows minutes of reading. The scale is marked every 10: 0, 10, 20, 30, 40.
- 2 Thursday's bar sits between the 20 and 30 lines.
- 3 Count up from 20 to the top of the bar: Thursday had 25 minutes.



LESSON ARC

Open with no chart on screen — pupils predict which library day gives the tallest and shortest bar from memory alone. Move to four IWB charts, modelling the finger-across-to-the-scale read, including a Fish bar that lands between the 12 and 14 marks. Pupils read a shared reading-minutes chart together, then write each bar's value one under the other in their copybook. Class Challenge builds from tallest bar up to a full total.

TEACHING MOVES

1. **Getting Started.** Take three hands-up answers, not open call-outs, and keep the screen blank — this is a prediction beat. Sketch a rough five-bar frame on the board only if pupils need something to point at. Do not read any exact values yet; hold 'how many exactly' for the next step.
2. **Watch and Notice.** Run a finger from the very top of each bar straight across to the scale — say the number aloud only after pupils commit. On the Pets chart, stop at the Fish bar: it sits between 12 and 14, so start at the 12 line and count the small steps up to 13 with the class doing the counting. On the Fruit chart, ask which two bars you compare before anyone gives the difference.
3. **Try It Together.** Pupils take turns at the board reading the reading-minutes chart; the class agrees or corrects out loud. When you reach Thursday, ask 'which two marks does the top sit between?' before anyone commits to 7 — the top sits between 6 and 8, so count one small step up from 6. Finish by reading Wednesday (12) and Monday (4) and subtracting to 8.

4. **Write the Values in Your Copy.** Walk the room while pupils list each bar's value one under the other. Watch specifically for anyone snapping Thursday's between-the-lines bar to the nearest mark instead of counting up to 7. This is copybook practice, not marking — glance and nudge, don't collect.
5. **Class Challenge.** Keep it brisk — pupils take turns at the board, check each answer, class confirms, move on. On the 'goals scored' chart, ask the class to predict the tallest bar before it's confirmed, and for the final total, have every bar read off the scale first, then added.
6. **What Did We Notice?.** Listen for pupils naming tallest/shortest at a glance as the chart's real strength. Revoice a strong answer: 'so the chart shows who is most and least straight away, but we still read the scale for the exact number.' Head off the belief that a taller bar always means 'a lot more'.

COMMON MISCONCEPTIONS

⚠ A pupil reads the middle of the bar across to the scale instead of the top, so a bar reaching 8 gets read as 4.

Stop and put a finger on the very top edge of the bar on the IWB, then track straight across. 'We read where the bar ends, not where it's coloured.' Have the pupil place their own finger on the top before reading.

⚠ When a bar's top lands between two marks, a pupil just calls out the nearest line — 'the Fish bar is 12' or 'Thursday is 6' — rather than counting the small steps up.

Ask 'which two marks is the top between?' first. Then start at the lower line and count the small steps up aloud together — 12, then one step to 13. Make the counting-up habit explicit so it transfers to the Class Challenge.

⚠ On a 'how many more' question, a pupil reads only the taller bar and gives that value as the answer, forgetting to subtract the smaller one.

Point to both bars in turn and say the two values out loud before any arithmetic — 8 and 3. 'How many more is a subtraction: the big one take away the small one.' Write $8 - 3 = 5$ under the two bars.

DIFFERENTIATION

EMERGING

- Give these pupils only the on-the-line bars to read first (Monday, Wednesday) so they master the top-across-to-scale track before tackling a between-the-lines bar.
- Let them physically lay a ruler flat across from the top of the bar to the scale on the bar chart on their Activity Book page, so the eye-tracking is done for them.

DEVELOPING

- After the copybook list, ask them to write a second sentence: 'how many more minutes on the busiest day than the quietest?' and show the subtraction.
- Give a bar between the lines and ask them to explain, in one written line, how they knew it was 7 and not 6 or 8.

PROFICIENT

- While the class finishes the Class Challenge, pose: 'if I told you the total of all bars was 40 but hid one bar, how could you work out its height?' Let them reason it back from the total.
- Ask them to invent a 'how many more' question about the goals-scored chart that has an answer of exactly 6, and check it works.

➤ **Cross-curricular:** Tie to the school library or class novel — pupils tally books borrowed or minutes read over a real week and read the busiest day off their own bar chart.

ANSWER KEY

Scaffold: visual check on the page

Q1: 40 minutes

Q2: 30 minutes

Q3: Monday

Q4: 5 minutes

Q5: 25

EXTENSION SHEET · STRETCH ANSWERS

S1: Orange (37)

S2: Apple (37)

S3: Apple (38)

S4: Pear (31)

S5: Apple (22)

Investigation: Sunny day, wet day — open-ended; scan pupils' working for valid solution paths rather than a single answer.