

Making a bar chart with a chosen scale

WHAT THIS LESSON TEACHES

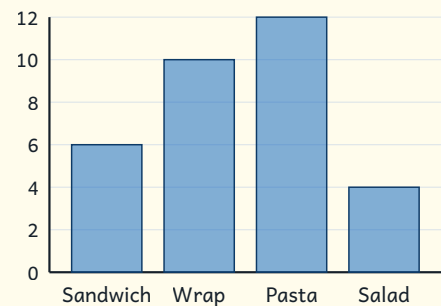
To make a bar chart, first choose a scale up the side that lets the biggest value still fit on the page. Mark the scale in equal steps, then draw each bar to the right height.

- The biggest value is 12, so a scale marked in 2s (0, 2, 4, 6, 8, 10, 12) fits it in six steps.
- A bar reaching the line marked 8 shows a frequency of 8.

MODEL THIS ON THE BOARD

CHOOSING A SCALE FOR LUNCH CHOICES

- 1 The lunch counts are **6, 10, 12** and **4**. The biggest value is **12**.
- 2 A scale in **2s** fits neatly: 0, 2, 4, 6, 8, 10, **12**.
- 3 Mark the side axis in 2s and draw each bar to its height; the bar for 10 reaches the line marked **10**.



DISCUSSION STARTER

REFLECT How did you choose a scale that fitted your biggest value without wasting space?

ANSWER KEY

Scaffold: visual check on the page

Q1: sandwich 3, pasta 5, wrap 6, salad 2

- a) **Always** — Bars of the same width show more when they are taller.
- b) **Always** — 0, 2, 4, 6, 8, 10, 12 is six steps up to 12.

- c) **Sometimes** — It suits small values, but a value like 120 needs a bigger step such as 20.
- d) **Always** — A scale must go up in equal steps to read fairly.

EXTENSION SHEET · STRETCH ANSWERS

S1: Apple (37)

S2: 116

S3: 7

S4: step of 10

S5: 26

Investigation: Chart a class favourite — open-ended; scan pupils' working for valid solution paths rather than a single answer.