Lesson 90

Bar charts — choosing a scale

MODULE 7 · DATA, CHANCE AND THE CO-ORDINATE PLANE DATA & CHANCE

A **bar chart** shows frequencies as bars. Every bar must have the **same width** with **equal gaps** between them. The vertical scale shows how many — choose a sensible step (e.g. 1, 2, 5, 10) so the tallest bar fits.

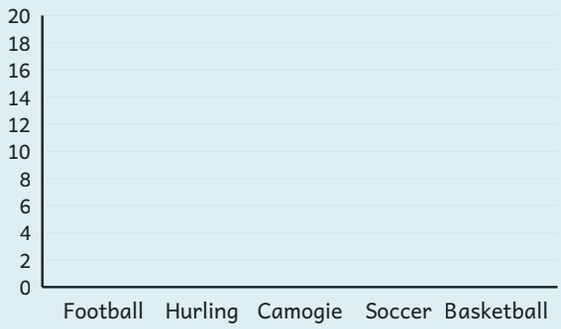
→ If the highest frequency is 18, a scale going up in **2s** to 20 fits cleanly.
→ If you only have one or two of each, a scale in **1s** is fine.

HOW TO ANSWER TODAY

- **Y-axis scale.** Pick a step that makes the tallest bar fit but isn't so small the chart is huge.
  Tallest = 75 → use steps of 10 (about 8 grid lines), not 1 (75 lines)
- **Read a bar chart.** Read the top of each bar. Check the y-axis scale to see what each grid line is worth.
  Each grid line = 5, bar reaches the 4th line → value is 20

TRY IT ON THE LINE

The y-axis steps in 2s so the tallest bar fits cleanly. Plot each value.



1. **Football**: 18 — draw the bar.
2. **Hurling**: 12 — draw the bar.
3. **Camogie**: 8 — draw the bar.
4. **Soccer**: 14 — draw the bar.
5. **Basketball**: 4 — draw the bar.
6. Would a step of **5** have worked for this data? Why? _____

PRACTICE

1. 5th class did a survey of favourite fruits and made a bar chart. The results were Apple: **9**, Pear: **26**, Orange: **24** and Banana: **16**. By how many votes does the Pear bar differ from the Orange bar?

   > A bar chart shows fruit preferences in a class. Apple: 9, Pear: 26, Orange: 24, Banana: 16. By how much does the Pear bar differ from the Orange bar?

2. Aoife is drawing a bar chart in her maths copy to show the reading-test scores for 5th class across the term. The highest score on any bar will be **34**. She wants the chart to have about **10** to **15** grid lines from **0** up to the top. Should she use a y-axis step of **1**, **5** or **10**?

   > You are drawing a bar chart and the largest bar will be 34. Choose a sensible y-axis step from 1, 5 or 10 so the chart shows about 10 to 15 grid lines from 0 to the top.