

Posing statistical questions and collecting data

MODULE 9 · DATA AND CHANCE REVIEW

A good **statistical question** has answers that vary, and a clear plan for **collecting** the data fairly.

- 'How do classmates travel to school?' varies — a good question.
- Decide your categories before you start counting.

HOW TO ANSWER TODAY

- **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

- **Tally marks.** Tally marks come in gates of 5. Count gates × 5, then add the singles.

3 gates + 2 singles → $3 \times 5 + 2 = 17$

WARM-UP

- 1 Mr Ó Briain's 5th class made a bar chart of their favourite fruit in the school canteen. Apple got **5** votes, Pear got **11** votes, Orange got **28** votes and Banana got **29** votes. Which fruit was the most popular?

A bar chart shows favourite fruit in a class.

Apple: 5, Pear: 11, Orange: 28, Banana: 29.

Which fruit was most popular?

- 2 Mr Ó Briain keeps a tally chart in his PE copy of how many laps Saoirse runs in the school yard each session. By the end of the month her tally shows **3** full gate marks of **5** plus **3** extra single marks. How many laps has Saoirse run in total?

A tally chart shows 3 groups of 5 (gate marks) plus 3 extra single marks. How many items does this represent in total?

PRACTICE

- 1 Mr Ó Briain made a bar chart of favourite fruits in 5th class. The bars show Apple: **29**, Pear: **10**, Orange: **27** and Banana: **17**. By how much does the Orange bar differ from the Pear bar?

A bar chart shows fruit preferences in a class. Apple: 29, Pear: 10, Orange: 27, Banana: 17. By how much does the Orange bar differ from the Pear bar?

- 2 Mr Ó Briain runs a daily question on the noticeboard all week, and **12** pupils chose hurling as their favourite sport. Saoirse draws the tally using gate marks for groups of **5**. How many full gate marks will the tally have, and how many extra single marks?

A class survey records 12 responses for one option. How many groups of 5 (gate marks) will the tally have, and how many extra single marks?

CHALLENGE

- 1 5th class made a bar chart of points scored by each team at the Cumann na mBunscol hurling blitz. The Shamrocks scored **17**, the Harps scored **30**, the Gaels scored **18**, the Rovers scored **19** and the Celts scored **32**. How many points were scored in total across the blitz?

A bar chart shows fruit preferences in a class. Apple: 17, Pear: 30, Orange: 18, Banana: 19, Plum: 32. How many pupils took part in total?

- 2 Mr Ó Briain keeps a frequency table of reading-test scores for 5th class across the term. **19** pupils scored in the lowest band, **13** in the middle band, and **16** in the top band. How many pupil scores are recorded in the table altogether?

A frequency table for a class survey has 3 rows with these counts: 19, 13, 16. What is the total number of responses across all rows?