

Data and chance investigation – survey and show

WHAT THIS LESSON TEACHES

To answer a question with data follow these steps: ask a good question, collect and tally the answers, show them in a chart, then read what the chart tells us.

- Ask the class their favourite season, tally the answers, build a bar chart, then read off which season won.
- If summer has the tallest bar, then summer is the mode.
- If most of the class chose summer, the next person is likely to choose summer too.

MODEL THIS ON THE BOARD

RUNNING THE FULL DATA CYCLE FOR FAVOURITE COLOURS

- 1 Ask the class their favourite colour and write the question at the top.
- 2 Tally the answers for each colour one row at a time.
- 3 Draw a bar chart with heights matching the tallies.
- 4 Read the chart to find the mode and what it shows.

DISCUSSION STARTER

REFLECT Which part did you enjoy most — asking the question, making the chart, or finding the mode?

ANSWER KEY

c) summer

Q1:

Maths /// /// /// /// ///; Art /// /// /// ///; mode = maths

Q2: Yes /// /// /// /// (15); No /// /// /// /// /// (25); bars 15 & 25, mode=no

Q3: Summer /// /// /// /// ///; Winter /// /// /// ///; mode = summer

Q4: Mode = soup (35)

a) Always — The data cycle always requires tally first then chart.

b) Always — The mode is always the one with most votes shown by the tallest bar.

c) Never — The mode is only the most popular so far and never guarantees the next choice.

d) Sometimes — Most good survey questions have few choices but sometimes open questions work too.

EXTENSION SHEET · STRETCH ANSWERS

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