

LESSON 72

Turn Numbers into a Chart, and Read One Honestly

40 minutes

Working with Digital Tools (Optional)

Outcome 2.4

Outcome 3.4

WHAT THIS LESSON DOES

Calculate sums and averages with formulas then build an honest column chart starting at zero. Alter the axis to create a misleading twin and learn to spot unfair chart presentations online.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
2.4	Compare information on a specific topic of interest from various sources in order to evaluate its reliability, validity, accuracy and timeliness.
3.4	Discuss why misinformation and disinformation are issues for consumers of digital media content.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Calculate with a formula and build a chart that represents its figures honestly (LOs 2.4, 3.4)
- Recognise a chart that does not

BEFORE THE BELL

- Write the five demo data rows on the board before the class arrives. The lesson builds its own honest and misleading charts; you do not need external examples.
- Confirm student devices can open Excel (Microsoft 365) or Google Sheets with school sign-in working.
- Student devices with Excel (Microsoft 365) or Google Sheets; demo data ready on the board

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HOW THE LESSON RUNS

3 min	introduction	Start
5 min	content	Examine and discuss
16 min	activity	Hands-on: formulas, then an honest chart, then a misleading one
8 min	activity	Your turn
4 min	content	Make sense
2 min	content	Reflect
2 min	summary	What you covered

TEACHING MOVES

- Model SUM and AVERAGE once on the board so device time stays on the chart and the axis change.
- Project one path (Excel or Sheets) and call the other aloud only when needed.
- When the axis jumps from zero to about 35, pause and ask whether any number changed.
- Use student-created pairs to illustrate points in Make sense.

WHAT TO WATCH FOR

- Starting the vertical axis above zero without noticing the effect; direct students to verify the axis begins at zero for honest charts.
- Omitting axis labels or titles; remind students to include all required elements before finalising.
- Selecting the wrong block for the chart; recovery: click inside A1:B6 and Insert Chart again.

DIFFERENTIATION

- Support: Offer a pre-populated spreadsheet with the demo data; allow plain-number total and average if formulas stall.
- Support: Default Your turn path is duplicate the demo chart, change the axis, write the sentence.
- Extension: Challenge students to try the truncated-axis trick on a line chart, or build a fresh five-number set if time allows.
- Support: Allow paired work during Your turn for collaborative problem-solving.