

Select and construct appropriate representations, including tables, graphs, models and...

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Learning intention

- select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information

Teach and model

- using simple formulas in spreadsheets to organise and process collected data
- using visual displays of large data sets, such as maps showing the location of volcanoes and earthquakes, charts showing the structure of body systems and graphs...
- constructing graphs using correct conventions such as naming the graph and labelling the axes, using the horizontal axis for the independent variable and the vertical...

Check understanding

- Explain the main idea in select and construct appropriate representations, including tables, graphs, models and... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.