

Select and use equipment to generate and record data with...

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Learning intention

- select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate

Teach and model

- using an electronic balance that measures within the parameters of the required mass, and recording data to the correct number of significant figures using correct units
- using data loggers and choosing correct scale and appropriate output representation
- examining the degree of accuracy that different instruments provide, such as a measuring cylinder compared with a pipette, and recording data values to the correct...

Check understanding

- Explain the main idea in select and use equipment to generate and record data with... 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.