

Assess the validity and reproducibility of methods and evaluate the...

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Learning intention

- assess the validity and reproducibility of methods and evaluate the validity of conclusions and claims, including by identifying assumptions, conflicting evidence...

Teach and model

- evaluating the strength of a conclusion that can be inferred from a particular data set
- distinguishing between random and systematic errors and how these can affect investigation results
- judging the validity of science-related media reports and how these reports might be interpreted by the public

Check understanding

- Explain the main idea in assess the validity and reproducibility of methods and evaluate the... 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.