

Plan and conduct reproducible investigations to answer questions and test...

plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on Country/Place

Learning intention

- plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate...

Teach and model

- designing reproducible investigations that specifically test variables of the causal relationship and control the remaining variables
- identifying assumptions related to testing a hypothesis using analogous models, such as using dialysis tubing to model the properties of plant cell walls or a shake table to model...
- explaining why safety procedures address identified risks

Check understanding

- Explain the main idea in plan and conduct reproducible investigations to answer questions and test... 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.