

Develop investigable questions, reasoned predictions and hypotheses to explore scientific...

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Learning intention

- develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships

Teach and model

- discussing what is meant by a causal relationship and examining how causation is different from correlation
- developing investigable questions to test causal relationships, such as: 'How does the concentration of a salt solution affect plant cells? How does the amount of sunlight...'
- developing investigable questions to explore scientific models, such as: 'How do the shapes of the continents support the theory of plate tectonics?'

Check understanding

- Explain the main idea in develop investigable questions, reasoned predictions and hypotheses to explore scientific... 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.