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

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

Learning intention

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

Teach and model

- discussing the features of investigable and non-investigable questions, including consideration of school and web-based resources available, and examining their...
- developing investigable questions to explore scientific models, such as: ‘How does particle theory explain the properties of substances?’
- developing investigable questions to test relationships, such as: ‘How does the volume of a balloon change as it is heated and cooled? What happens to the height of the...

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.