

Investigate the observable properties of solids and liquids and how...

investigate the observable properties of solids and liquids and how adding or removing heat energy leads to a change of state

Learning intention

- investigate the observable properties of solids and liquids and how adding or removing heat energy leads to a change of state

Teach and model

- observing the properties of substances and classifying them as solids (that hold their shape) or liquids (that fill the bottom of containers)
- investigating ice melting or water freezing in a sealed bag and explaining their observations
- using ice cubes, butter or chocolate to explore how changes of state involve the removal of heat or the addition of heat

Check understanding

- Explain the main idea in investigate the observable properties of solids and liquids and how... 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.