

Explain observable properties of solids, liquids and gases by modelling...

explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles

Learning intention

- explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles

Teach and model

- classifying substances as solids, liquids and gases and investigating their properties
- exploring examples that demonstrate that gases have mass, such as blowing air through straws to move objects or using a balance to compare an empty balloon to one...
- using role-play to model the arrangement and motion of particles in solids, liquids and gases

Check understanding

- Explain the main idea in explain observable properties of solids, liquids and gases by modelling... 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.