NHSG Key stage 3: Unit Overview for P1.2 Change of State

Scheme of Learning	P1.2 Change of State
Learning outcomes	**Subject Content** Knowledge and Understanding: - How and why materials change state (like from solid to liquid to gas). - Different types of state changes (like melting, freezing, and boiling). - How to calculate the energy involved in state changes. Skills: - Identifying different types of state changes. - Explaining how these changes affect everyday life. - Doing simple calculations with state changes.
Key questions	"How do materials change from one state to another? By the end of this unit, students should be able to explain this clearly to someone else.
Knowledge	**Key Ideas and Skills:** - Different types of state changes - Properties of materials (solid, liquid, gas) - Uses of state changes in everyday life **Important Words to Learn:** - State changes, Melting, Freezing, Boiling, Energy
Ongoing Assessment	During Lessons (Ongoing Checks): • Quick starter tasks to review past lessons • Whiteboard activities to check understanding • Teachers asking questions to everyone (not just hands up) • Common mistakes addressed, like: • Thinking particles grow when heated (they don't – they just move apart) • Confusing atoms, molecules, and subatomic particles • Struggling with unit conversions or imagining how particles are arranged

Key Assessment	• A short multiple-choice quiz in the middle of the topic. • 6 mark questions which are teacher assessed to look for greater depth of understanding. • Topic tests which aim to provide specific targets for improvement.
Content	• Builds on earlier science lessons • Helps prepare for future topics in physics • Vocabulary is taught clearly and used often
Careers	Connects to careers in science and technology
Diversity and Inclusion	Shows how different cultures have contributed to our understanding of state changes
Support	Revision guides, online resources, and booklets
Challenge	How do materials change from one state to another? How are state changes used in technology? How do scientists measure state changes?