Science Overview – States of Matter

Year Four

Summer Term

Key Question: What impact did the Roman invasion have on Britain?

National Curriculum

• Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
• compare and group materials together, according to whether they are solids, liquids or gases.
• observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).

SUBSTANTIVE KNOWLEDGE

1) Describe the three states of matter (including the nature of the particles in each).
2) Know the properties of each state of matter.
3) Group and classify materials based on their state of matter.
4) Know that states of matter can change when they reach a certain temperature.
5) Know that these temperatures are called the boiling, melting and freezing points.
6) Describe the water cycle and that condensation and evaporation occur within the water cycle.

Key Vocabulary	states of matter, particles, solids, liquids, gases, water vapour, melt, freeze, evaporate, condense, precipitation
Previous year groups key vocabulary:	(Vocabulary from Y3 Rocks) igneous rock, sedimentary rock, metamorphic rock, magma, lava, sediment, permeable, impermeable, fossilisation, palaeontology, erosion, soil,
Disciplinary Concepts	• gathering, recording, classifying and presenting data in a variety of different ways to help in answering questions.
Enquiry type to cover and enquiry suggestion	**Identifying, grouping and classifying (enquiry type)** Grouping and classifying materials as solids, liquids and gases. **Observation over time (enquiry type)** Record and measure the evaporation of a beaker of water over a two week period.
Learning Milestones /Assessment	I can… • Sort materials into solids, liquids and gases. • Describe the properties of solids, liquids and gases. • Identify whether heating or cooling is required to change the state of matter. • Label the key parts of the water cycle.