

## Autumn Term Year 4 Science Overview

# States of Matter

### Key facts

- Solids will not change their shape on their own.
- Liquids change shape to fit the container they are in.
- Gases expand to fill the container they are in.
- Solids, liquids and gases are made up of particles which take up space.
- Liquids can be poured.
- Some objects change state when heated or cooled.

### Prior Knowledge

Children will have investigated different types of materials in previous years but will not have classified them as solids, liquids or gases. They will have observed changes of state (Such as ice melting or water evaporating) and the physical properties of solids, liquids and gases.

### Key Vocabulary

Solid  
Liquid  
Gas  
States of matter  
Particles

Condensing  
Evaporating

Solidifying  
Freezing  
Melting

### Brief summary/ overview

Children will explore how solids, liquids and gases are different states of matter. They will investigate the physical properties of different materials and use their knowledge to sort and classify into appropriate groups. They will observe changes of state, making predictions and drawing conclusions of the scientific processes observed. They will apply their knowledge to the water cycle, explaining how water evaporates and precipitates.

### Resources

Examples of solids, liquids and gases.  
Ice cube trays  
Measuring cylinders  
Thermometers  
Different shaped containers  
Vinegar and bicarbonate soda  
Non-fiction texts about the water cycle

### Cross curricular links/visits

English: Report writing, including predictions and conclusions.  
Maths: Use venn diagrams, tables, keys and line graphs to record and present information. Measuring accurately using different units of measurement.