

# Year 4 Spring 2 Knowledge Organiser – Science

## States of Matter



Science study

INTRODUCE  
STATES OF MATTER



Year 4

Spring  
Term 2

### **matter**

something that takes up space, despite its size or composition

ice  
water  
air

### **state**

one of the distinct ways **matter** exists

solid  
liquid  
gas

How we measure temperature



### **Celsius**

unit of measurement for temperature °C



100°C = water boils



0°C = water freezes

### **The science of PARTICLES**

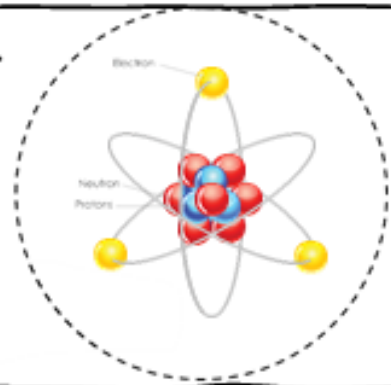
ALL **matter** is made from

**atoms**

smallest known part of any material

**particle**

**atoms**  
are made of  
protons (+)  
neutrons  
electrons (-)



### **solid**



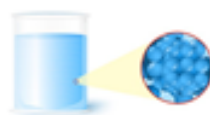
has its own shape

- it can't flow
- has a fixed volume
- particles **very close** and have a fixed position

tricky ones

a football is a solid  
sand is a solid  
fabric is a solid

### **liquid**



takes the shape of the container

- can flow
- has a fixed volume
- particles **very close** but **not fixed**

water is a liquid  
blood is a liquid

### **gas**



will escape from a container

- can flow
- no fixed volume
- particles **moving apart** quickly

water vapour is a gas  
air is a mixture of gases  
carbon dioxide is a gas

rises up as **water vapour**

turns into a gas

water **evaporates**

**evaporation**  
example

water heated by the sun



**condensation**  
example

**water vapour**

cools and **condenses**

gas returns to a liquid

water droplets form



