



St Leo's and Southmead  
Catholic Nursery and Primary  
School

Year  
Four

# Science Knowledge Organiser

Spring  
Term 1

## Amazing Activities

- Investigating how ice changes from water to ice; chocolate melts and then becomes solid as it cools; make cakes

## States of Matter

### Key Concepts

solid	liquid	gas
● rigid	● not rigid	● not rigid
● fixed shape	● no fixed shape	● no fixed shape
● fixed volume	● fixed volume	● no fixed volume
cannot be squashed	cannot be squashed	can be squashed

Put the following objects in the correct box.

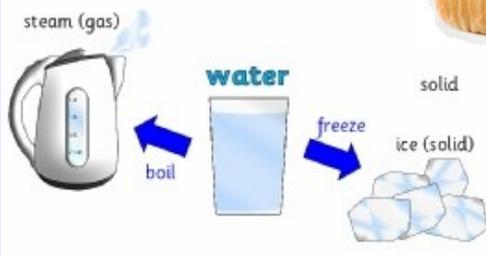
**States of Matter**

**Solids:** ocean, pencil, tornado, apple, book, soap

**Liquids:** sun, juice, evaporation

**Gases:** rain, wind

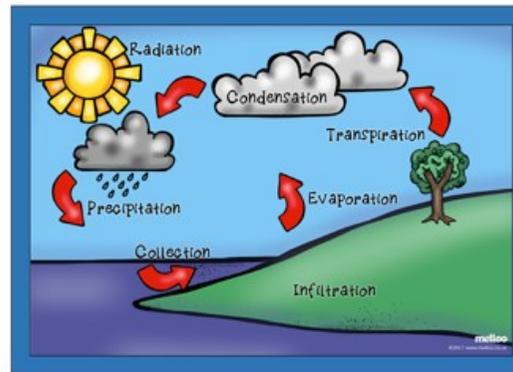
### Changing State



### Objectives

Pupils should be taught to:

- 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)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with tem-



### Curriculum Links

- Geography Link:** Children to link work on the water cycle to weather
- Maths Link:** Opportunities data handling work using the information collected during Investigations.

### Key Vocabulary

Matter	Particles within all materials determine if something is a solid, liquid or gas
Solid	A <b>solid</b> can hold its shape (for example, water in <b>solid</b> form is ice).
Liquid	A liquid like water forms a pool: it flows or runs but it can't be stretched or squeezed.
Gas	A gas can flow, expand and be squeezed; if it is in an unsealed container it escapes (water in gas form is steam).
Rigid	Not flexible and cannot change shape
Observe	To watch carefully how something happens or changes
Radiation	The energy / heat produced by the sun
Precipitation	formation of water droplets, as water vapor in the air condenses, that are large enough to start to fall
Evaporation	water then <b>evaporates</b> back into the air as it warms u
Transpiration	Water evaporates from the ground
Condensation	happens when the vapour in the air gets cold and it gets transformed back into a liquid form

Nurture, Inspire, Succeed