

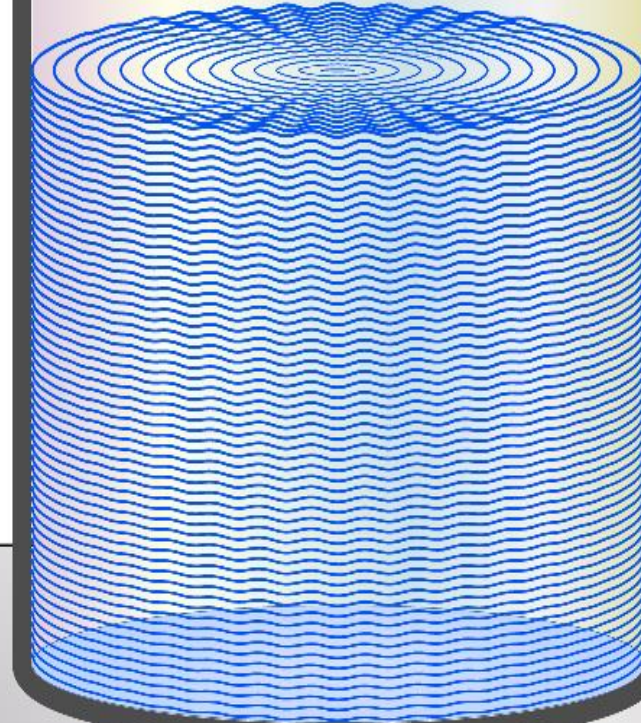
Phases of Matter

YEAR FOUR

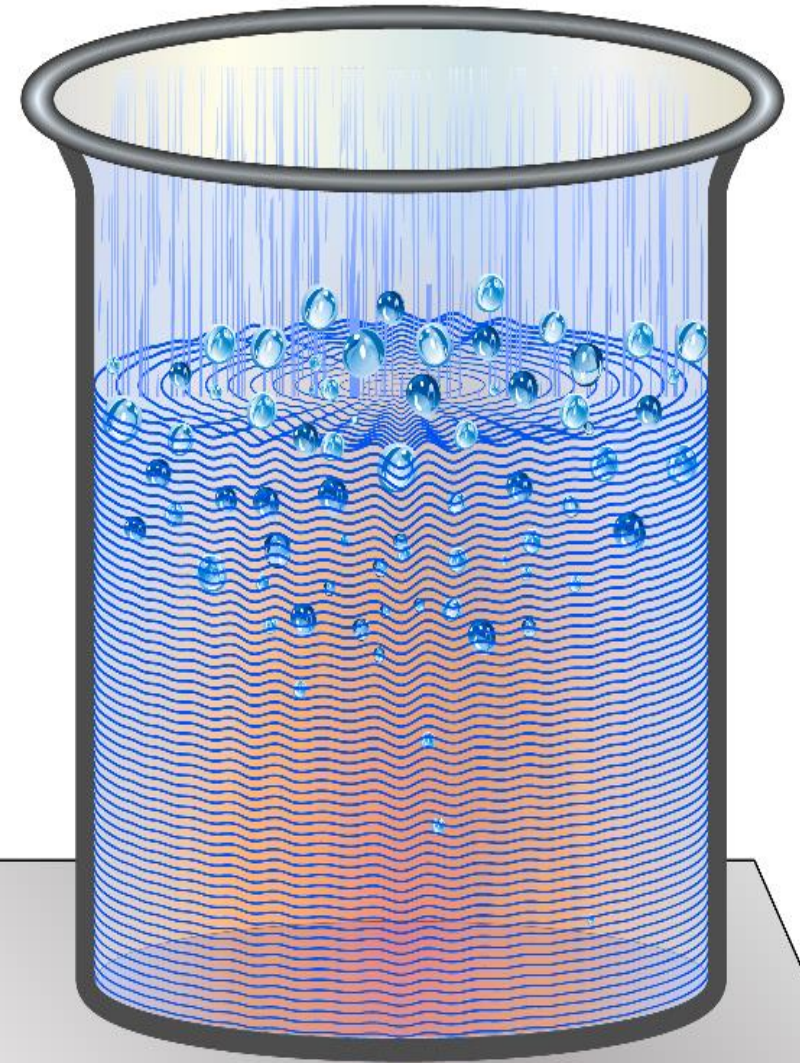
SPRING 1



Ice



Water



Water vapour

LESSON ONE

*What are the
properties of solids,
liquids and gases?*



Do Now – Retrieval practice (from last year)

1. What is an ecosystem?

A community of a _____, p_____ and m_____ together with their h_____ is called an ecosystem.

2. Match the key word to the correct definition:

Material

- made from a raw material that has been changed

Raw material

- any substance that has a name

Synthetic material

- a material that is found in nature and has not been changed by humans

3. Draw a line to match the part of a plant to its function:

Part of a plant

Leaves

Stem

Roots

Flowers

Function

Produces seeds which form new plants

Make food for the plant

Hold the plant upright and move water and minerals to other parts of the plant

Hold the plant in place and absorb water and minerals from the soil



Read the following passage about solids, liquids and gases

All matter can come in three states: solids, liquids and gases. We call these three states the three states of matter.



What are the three states of matter?

- a) _____
- b) _____
- c) _____

Each of these three states of matter have particular properties. These properties can help us tell which state of matter a particular material is in. Examples of these properties are the following:

Volume – this word means 'how much space something takes up'

- **Compressibility** – whether a substance can be squashed into a smaller volume or whether it has a set volume.
- **Ability to flow** – can the substance smoothly slide from one container into another?
- **Fixed or changing shape** – substances may have a fixed shape, change their shape to fit the bottom of a container or always fill up the whole container.

Fill in the gaps below to complete the definitions of each property:

volume | smoothly | set | bottom | shape | container | squashed | container

-Compressibility – whether a substance can be _____ into a smaller _____ or whether it has a _____ volume.

-Ability to flow – can the substance _____ slide from one _____ into another?

-Fixed or changing shape – substances may have a fixed _____, may _____ their shape to fit in the bottom of a _____ or always fill up the _____ container .



Watch the demonstration of the properties of solids, liquids and gases completed by your teacher.

Fill in the table below:

State of Matter	Is it compressible?	Can it flow?	What happens to its shape in a container?
Solid			
Liquid			
Gas			



Write down whether the teacher is thinking of a solid, liquid or a gas:

I am not compressible but I
can flow. What am I?

I am compressible and I can
flow. What am I?




I am not compressible and I
have a fixed shape. What
am I? _____

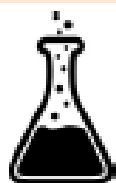
I take the shape of the
bottom of the container I
am in. What am I?

I completely fill whatever
container I am in. What am
I? _____



Write down if each of the following examples is a solid, liquid or gas and say why:

Example	Solid, liquid or gas?	Why?
 <p data-bbox="698 548 825 591">Water</p>		
 <p data-bbox="621 839 810 931">Air into a balloon</p>		
 <p data-bbox="397 1259 744 1302">A piece of wood</p>		

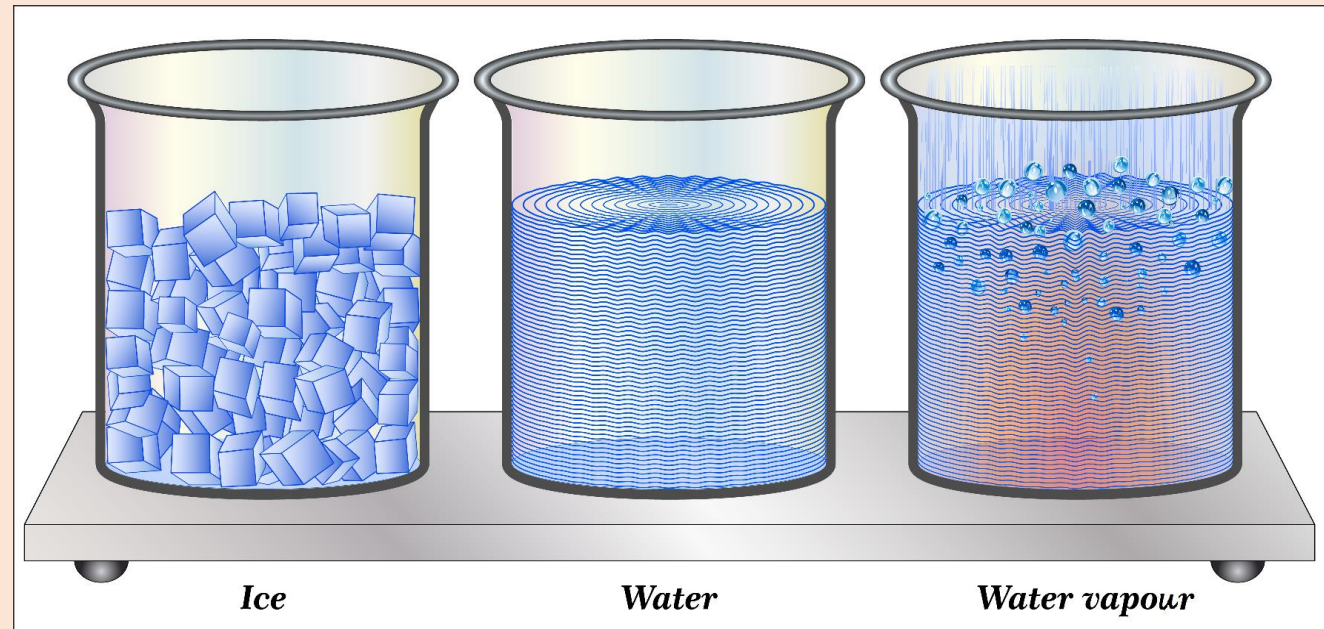


Observe the range of substances in the classroom. Say whether each substance is a solid, liquid or gas and say why:

Substance	Solid, liquid or gas?	Why?



How can we tell if ice has turned to water and then when water has turned to water vapour?



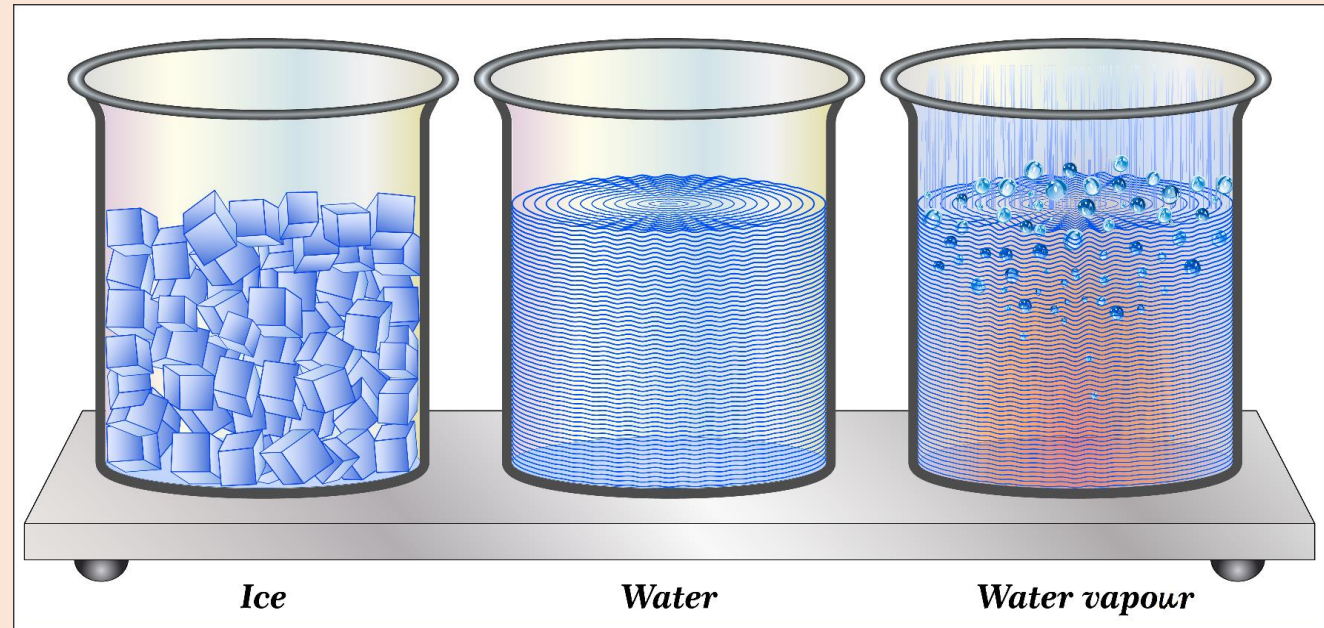


How can we tell if ice has turned to water and then when water has turned to water vapour?

ICE – is a **solid** so will *not* be able to **flow**

Water – is a **liquid** so will be able to **flow** and will **take the shape** of the **bottom of the container** that is in

Water Vapour (steam) – is a **gas** so will **spread out** to **fill** its container and **escape** if it is not kept in a container with a **lid**





What are the properties of a solid, liquid and a gas?

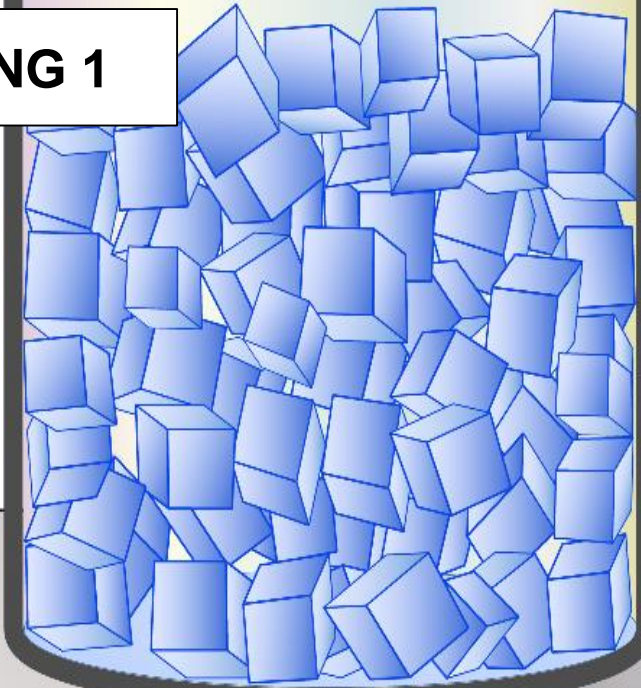


Return to page 3 to complete the learning review.

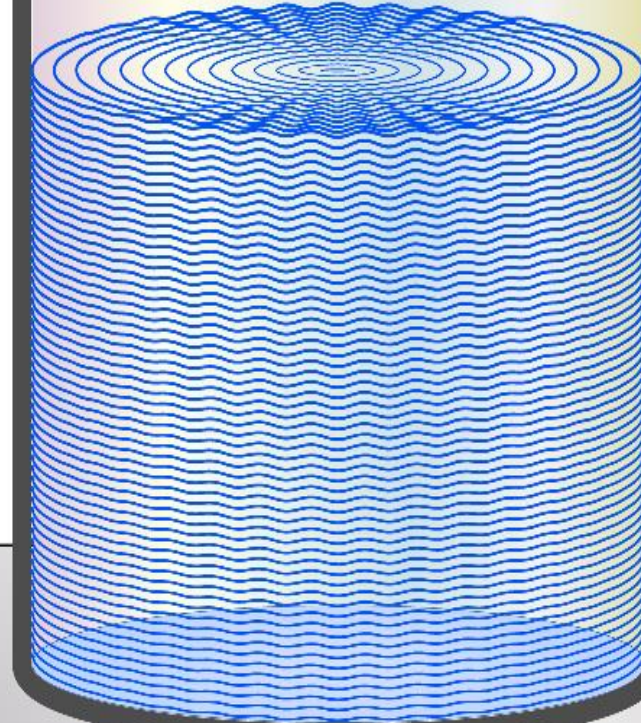
Phases of Matter

YEAR FOUR

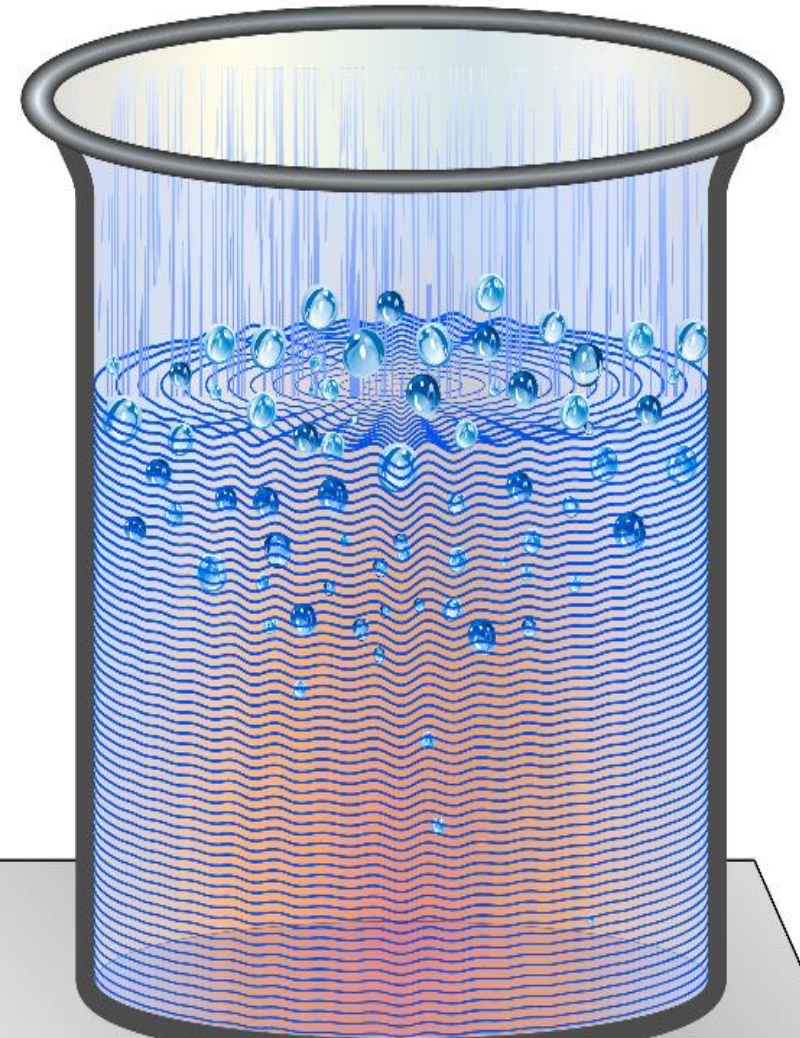
SPRING 1



Ice



Water



Water vapour