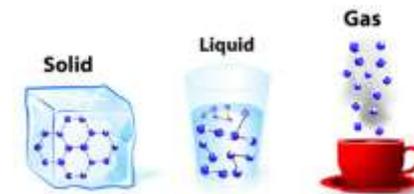


Roby Park Primary School Year 4 Chemistry States of Matter



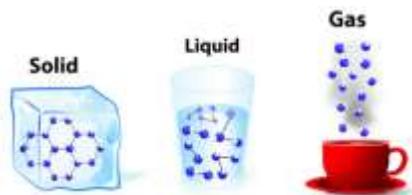
What we already know

- ✓ Why some materials are used for certain purposes because of their properties
- ✓ Distinguish between an object and the material from which it is made.
- ✓ Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- ✓ Describe the simple physical properties of a variety of everyday materials.
- ✓ Compare and group together a variety of everyday materials on the basis of their simple physical properties.

We are learning 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 ($^{\circ}\text{C}$)
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

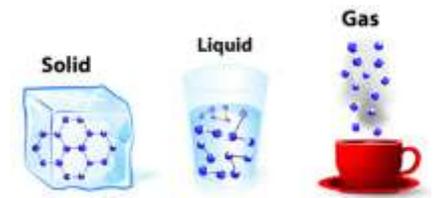




Roby Park Primary School Year 4

Chemistry

States of Matter



What we already know:

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Key Vocabulary

Solids - have a fixed shape and volume and are rigid.

Liquids - have no fixed shape but have a fixed volume. Liquids are not rigid.

Gases - have no fixed shape or volume and are not rigid.

Evaporation - If water (liquid) is heated, it changes to water vapour (gas). This change is called evaporation.

Condensation - If water vapour (gas) is cooled down, it changes into water (liquid). This change is called condensation.

The Water Cycle - The water cycle follows the journey of water from oceans to clouds to rain to streams to rivers and back into the ocean.

The Power of Five

The Water Cycle

Water evaporates from the surface of the earth when heated by the sun. The water vapour rises into the atmosphere, cools and condenses into rain or snow in clouds, and falls again to the surface as precipitation (rain or snow). The water falling on land collects in rivers and lakes, soil, and porous layers of rock, and much of it flows back into the oceans, where it will once more evaporate.



Solids hold their shape. (Salt, sand and sugar are tiny solids so they pour like a liquid but they pile up and are not wet.)

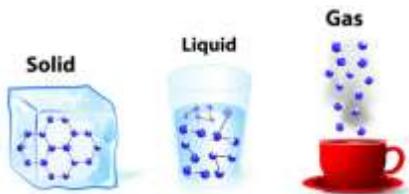
Liquids form a pool not a pile!

Gases escape from an unsealed container and fill the entire volume of space.

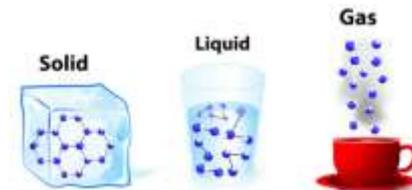
Investigate!

Make a list of the ways solids and liquids differ from each other. Think about 'melting' and 'freezing' and relate to different food. Discuss the best methods for melting. Compare identification keys. Observe frozen substances and watch how they behave as they return to room. observe the vapour leaving the surface of hot water. make up actions for evaporation and condensation and the different parts of the cycle.





Roby Park Primary School Year 4 Chemistry States of Matter



4Ws

Why do solids turn to liquids?

What is the name of the process that turns a solid to a liquid?

Which state makes particles move the most?

What is the name of the process that turns water into vapour?

3 2 1

Name 3 states of matter

.....

List 2 ways to change the state of matter.

.....

Recall 1 fact about the water cycle

.....



Give 5 examples of liquids.



VOCABULARY UNSCRAMBLE

e e r f i z n g

How a liquid turns to a solid.

r e p i p c i t a i t n o

Falls from the sky

l o d s i s

Particles in these are close together and cannot move

Speedy Pencil. Write as much as you can remember in 5 minutes



.....

