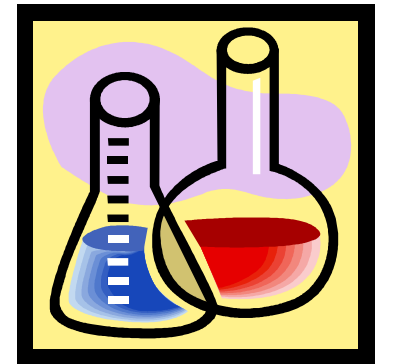


Chemistry



Solids, Liquids and Gases

LO: TO COMPARE AND GROUP MATERIALS, ACCORDING TO WHETHER THEY ARE SOLIDS, LIQUIDS OR GASES

By the end of this lesson you will know:

what a 'material' is

what we mean by 'property or properties of'

the properties of solids, liquids and gases.

Materials

Everything is made from some sort of 'material'

Materials are made up of lots and lots of tiny pieces

These tiny pieces are known as **particles**

Solids, liquids and gases are made of lots of particles.

TASK 1 - Now it's your turn. Make a list of as many solids, liquids and gases. You have only **180 seconds!**

Solids	Liquids	Gases

EXT: Choose an object from your list. Explain to your partner why you have placed it in this group?

Properties

The property of a materials tells us something about what it is like.

Materials may be **hard, soft, shiny, rough ...**

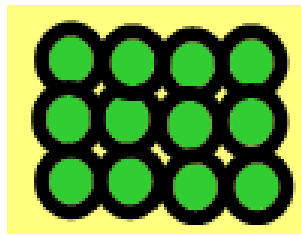
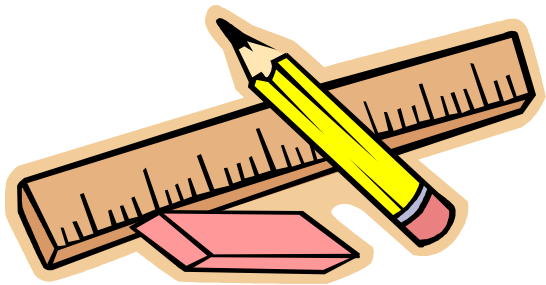
Can you think of any more?

Solids

A solid is something that we can hold on to.

A solid keeps its shape, unless we cut it or shape it ourselves.

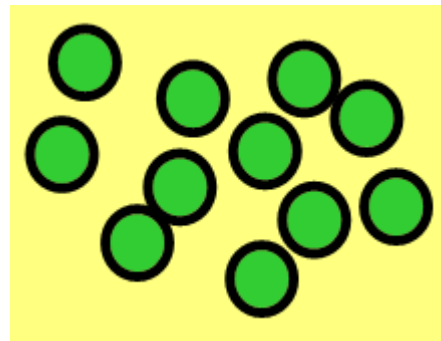
In a solid, all of the particles are packed together very tightly.



Liquids

Liquids are runny. They can be poured. The particles are less tightly packed, so they can move about.

If poured from one container to another, they will take the shape of the new container.

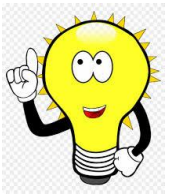
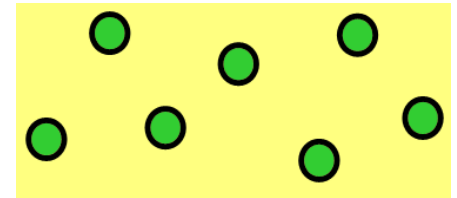


Gases

The particles in gases have lots of room to move around.
Gases are all around us!



They spread into all of the empty places they can.
Most gases are invisible.



Can you see the oxygen and carbon dioxide in the air around you?

Example - water

Water can be a solid, a liquid or a gas



When it is **cold** it is solid - ICE



When it is at room temperature it is a liquid - WATER

When it is **hot** it is a gas - STEAM



Complete the text below by filling in the missing words.

Word bank:

tightly move solid seen shape gas flow particles
liquid structure molecular

All materials are either a, or

Solids are made of which are packed together very and are fixed in place.

The molecular of a solid shape might look like this:



..... are made of particles that are not packed as tightly as those in solids. This is so that a liquid can and take up a different.....

The structure of a liquid might look like this:



Gases cannot usually be

Their particles are very joined together so that they can out and fill the space available.

The molecular structure of a would look like this:



Task 2

Ext:

1. What happens to chocolate when it is heated?
2. What happens to melted chocolate when it is cooled?
3. What happens to a candle when it is lit?
4. What happens to the melted candle wax when it is cooled?

