

States of Matter

Teamwork



Problem Solving



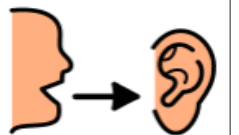
Self Management

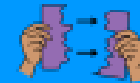
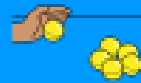


Self Belief

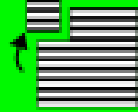


Communicate

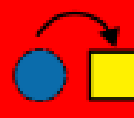




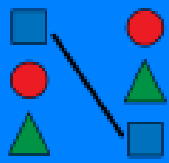
Group materials with the same features together.



Identify the features of solids, liquids and gases.



Describe how solids, liquids and gases change state.



same



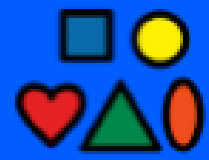
make



liquid



solid



shape



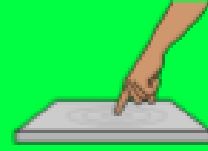
features



material



gas



surface



flow



boil



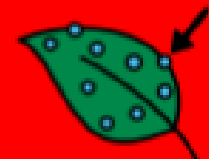
freezing



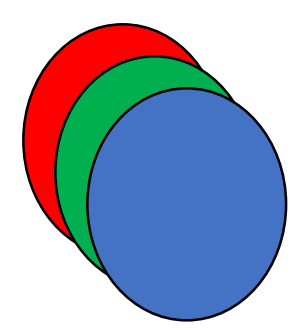
melting



evaporating



condensing

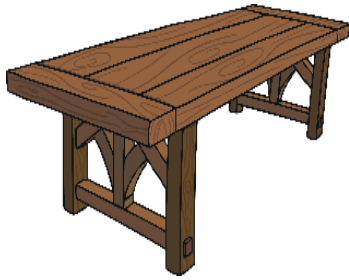


What Does Material Mean?

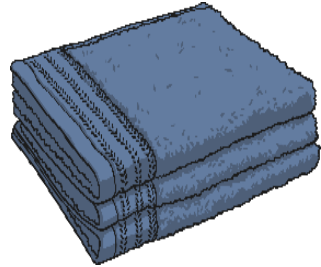


material

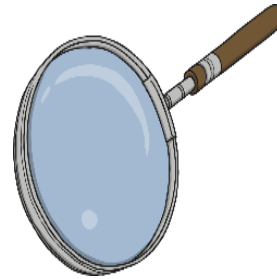
Everything around us is made from a material.



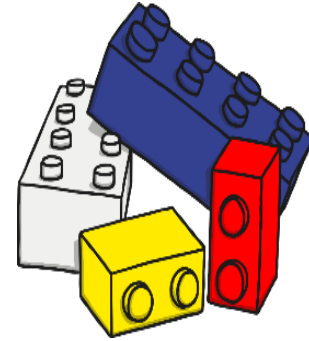
wood



fabric



glass



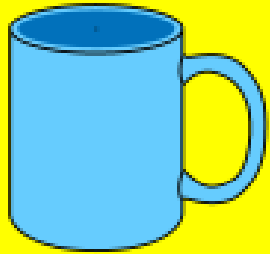
plastic



It is important that it is the right material!



material



mug

is made of...



pottery



chocolate



It is important that it is the right material!

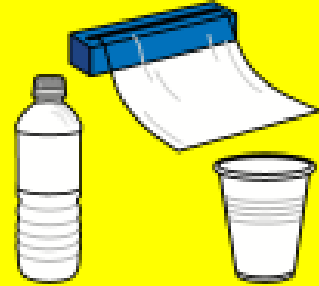


material

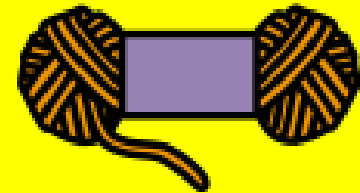


umbrella

is made of...



plastic



wool



It is important that it is the right material!

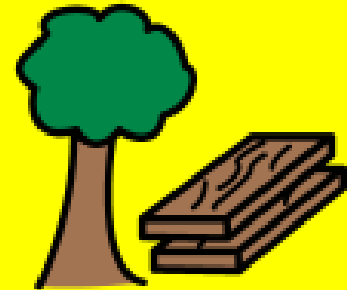


material

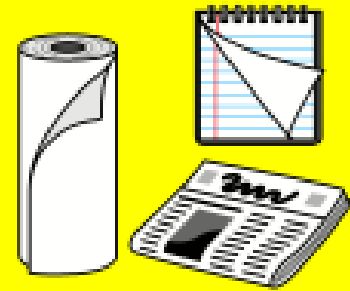


chair

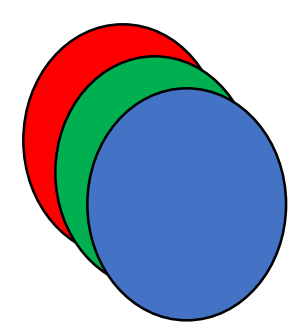
is made of...



wood

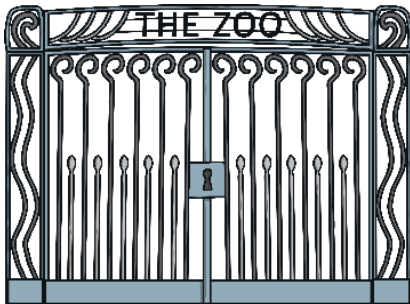
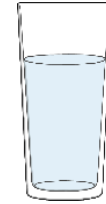


paper



Grouping Materials

Have a look at these objects...



How would you group them together?
Why would you group them that way?



In science we group things together a lot...

We group materials as...



liquid

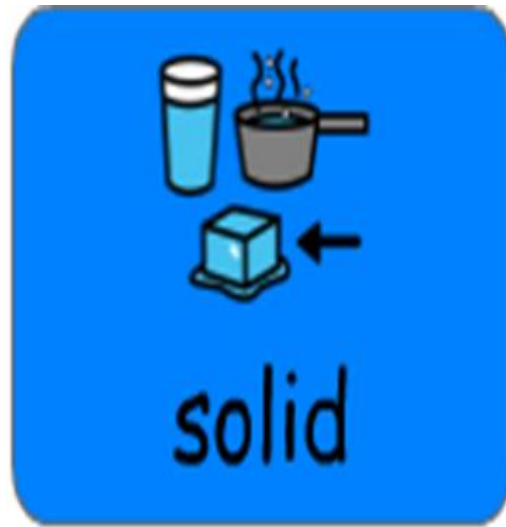
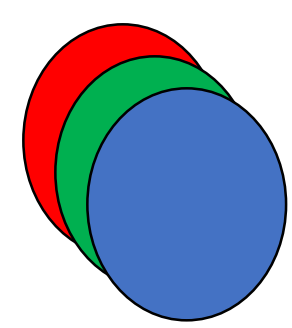


solid

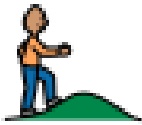


gas

These are called 'States of Matter'



It can be cut.

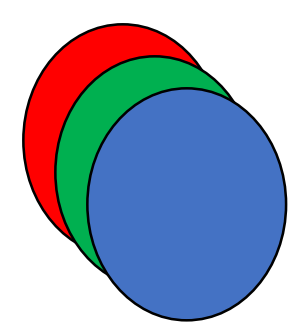


Easy to hold.

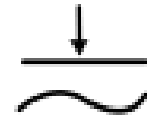
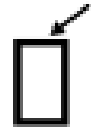


Easy to see.

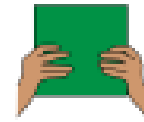
Can you find 3 objects that are solids?



It flows.

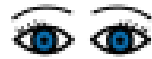
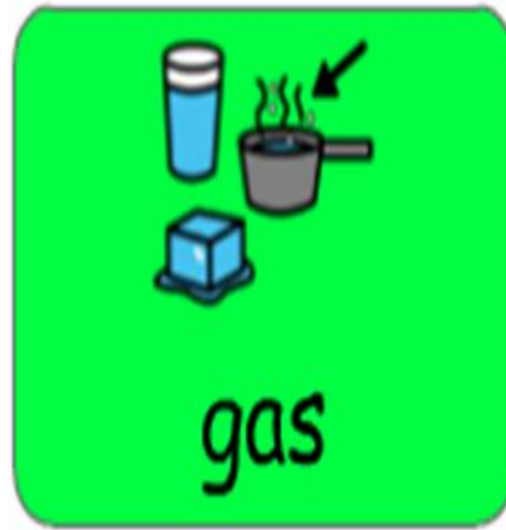
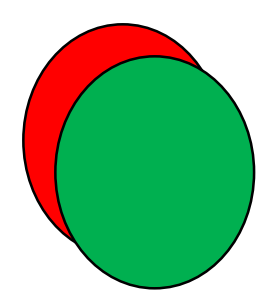


Top stays flat



Hard to hold.

Can you find 3 things that are liquids?



Hard to see.



It is all around



us .

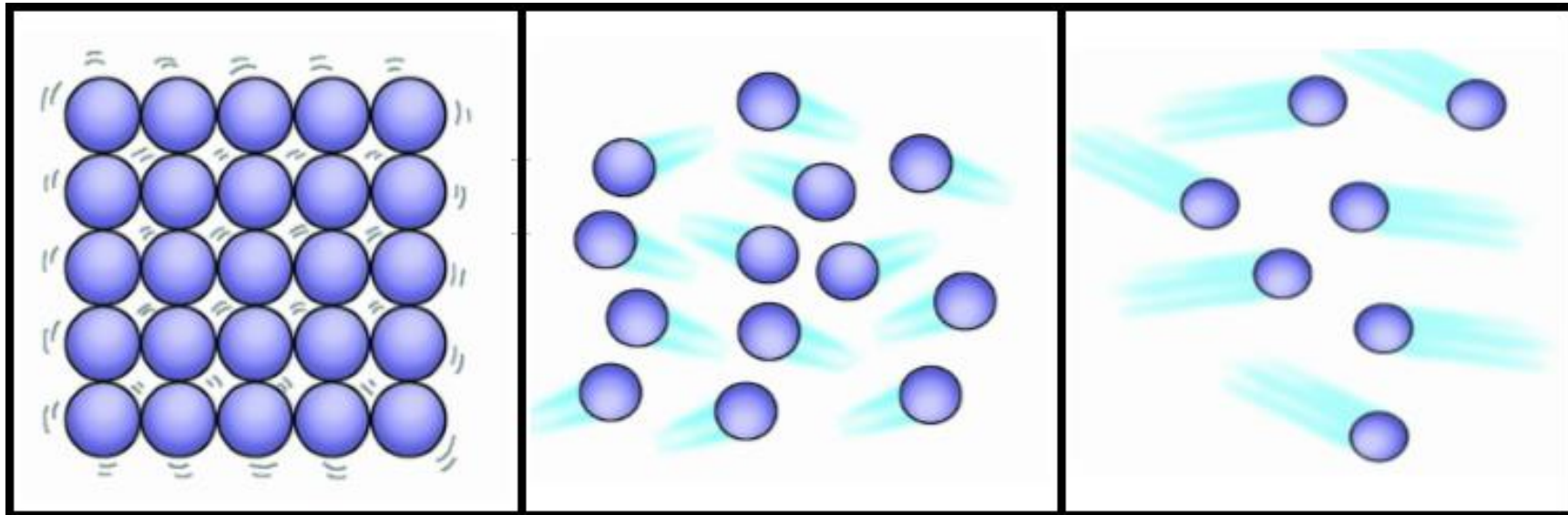
Can you think of 3 places you find gases?

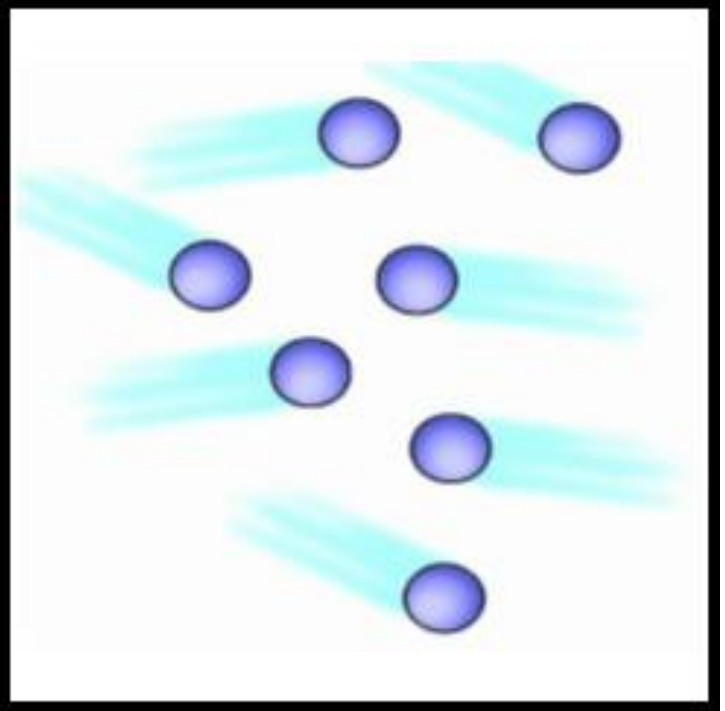
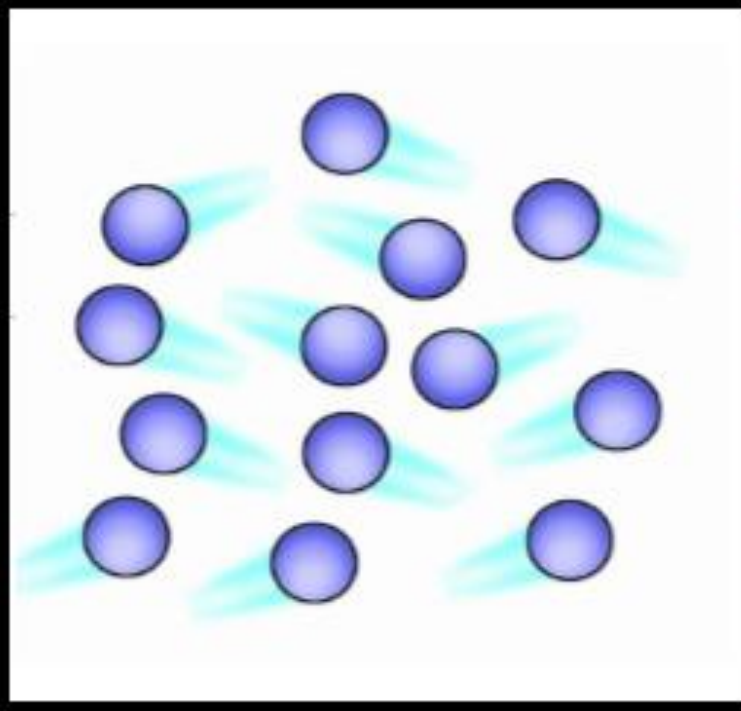
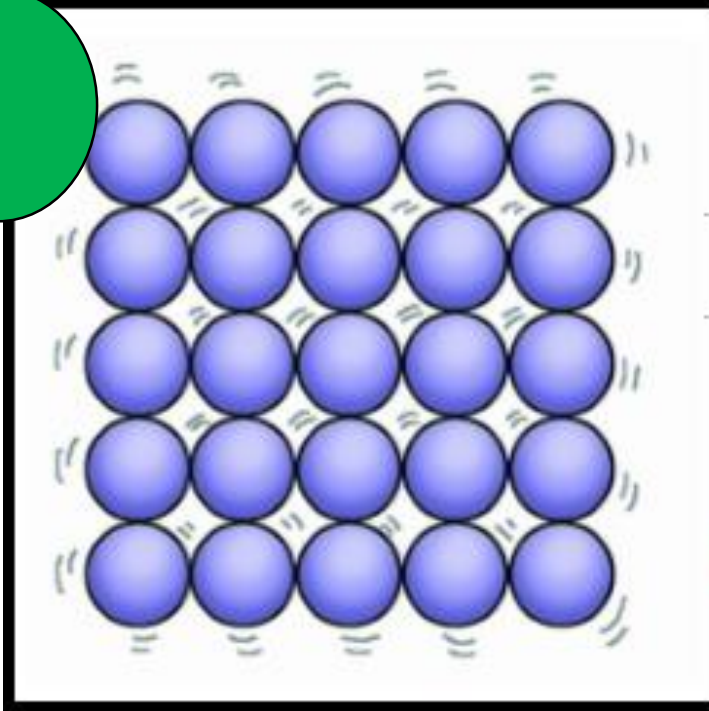
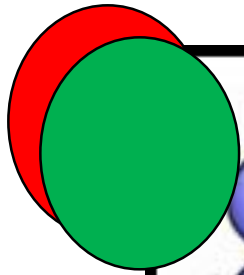


Everything in the world is made of atoms!

YES! Everything!

How they are arranged gives us solids liquids or gases.
Which do you think they are?



A blue rounded square containing icons for a glass of water, a pot of boiling water with steam, and an ice cube. A black arrow points from the boiling water towards the ice cube.

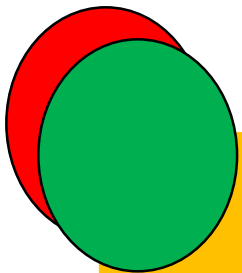
solid

A blue rounded square containing icons for a glass of water, a pot of boiling water with steam, and an ice cube. A black arrow points from the ice cube towards the glass of water.







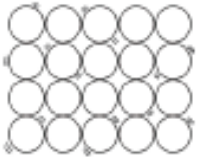






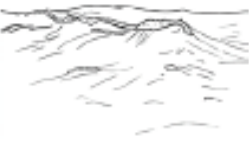

liquid

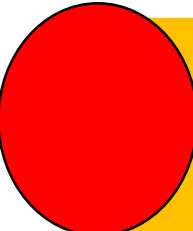
A green rounded square containing icons for a glass of water, a pot of boiling water with steam, and an ice cube. A black arrow points from the boiling water towards the pot.

gas



Were you paying attention?
Have a go at the game in your workpack.

 liquid	solid	has a definite size but no shape			water takes this form above 100°C
has a definite size and shape	gas	has no definite size or shape		can be poured	
		water takes this form below 0°C	takes the shape and size of any container		things take this form when they freeze
takes the shape of the container but not the size		water changes to this state between 0°C and 100°C	water changes to this state above 100°C		
	solids take this state when they melt				liquids take this state when they evaporate

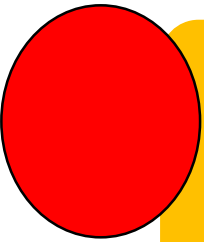


What happens when you put a piece of chocolate in your hand?

What happens when you put water in the freezer?

What happens when you put water in the kettle?

What state does it start as and what state does it change to?



What happens when you put a piece of chocolate in your hand?

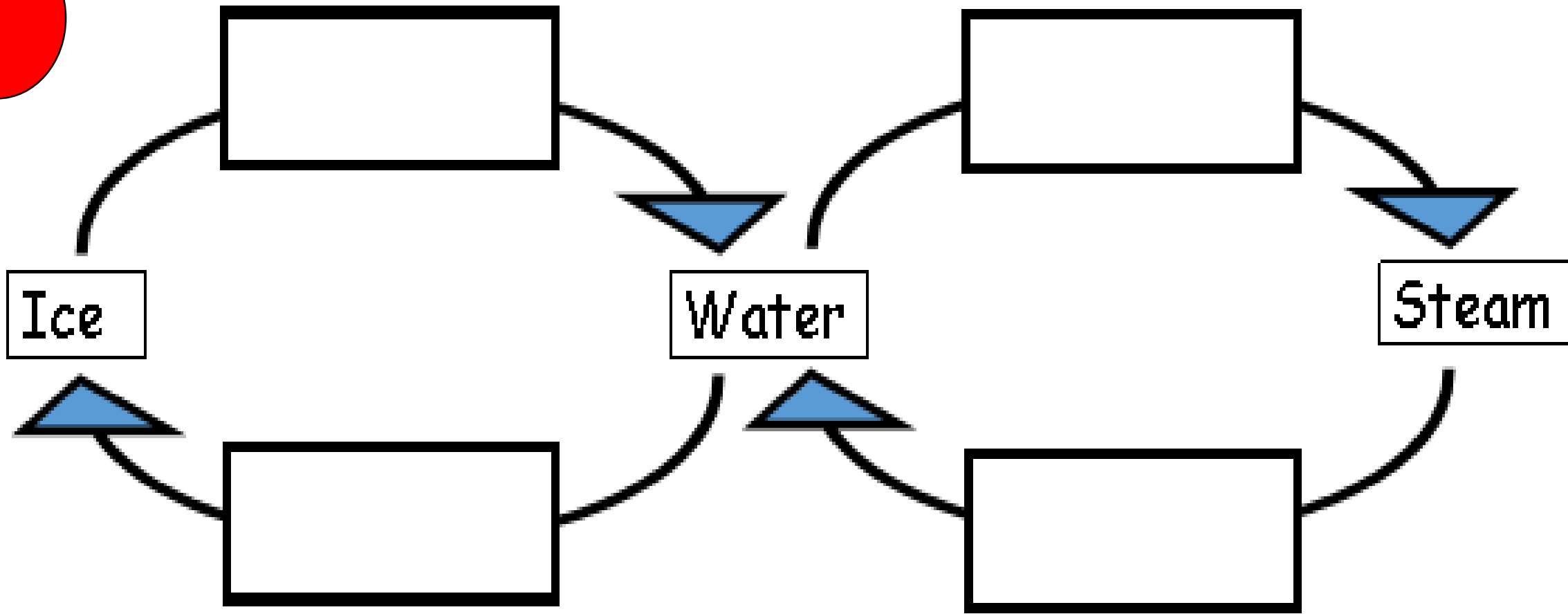
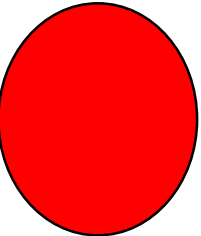


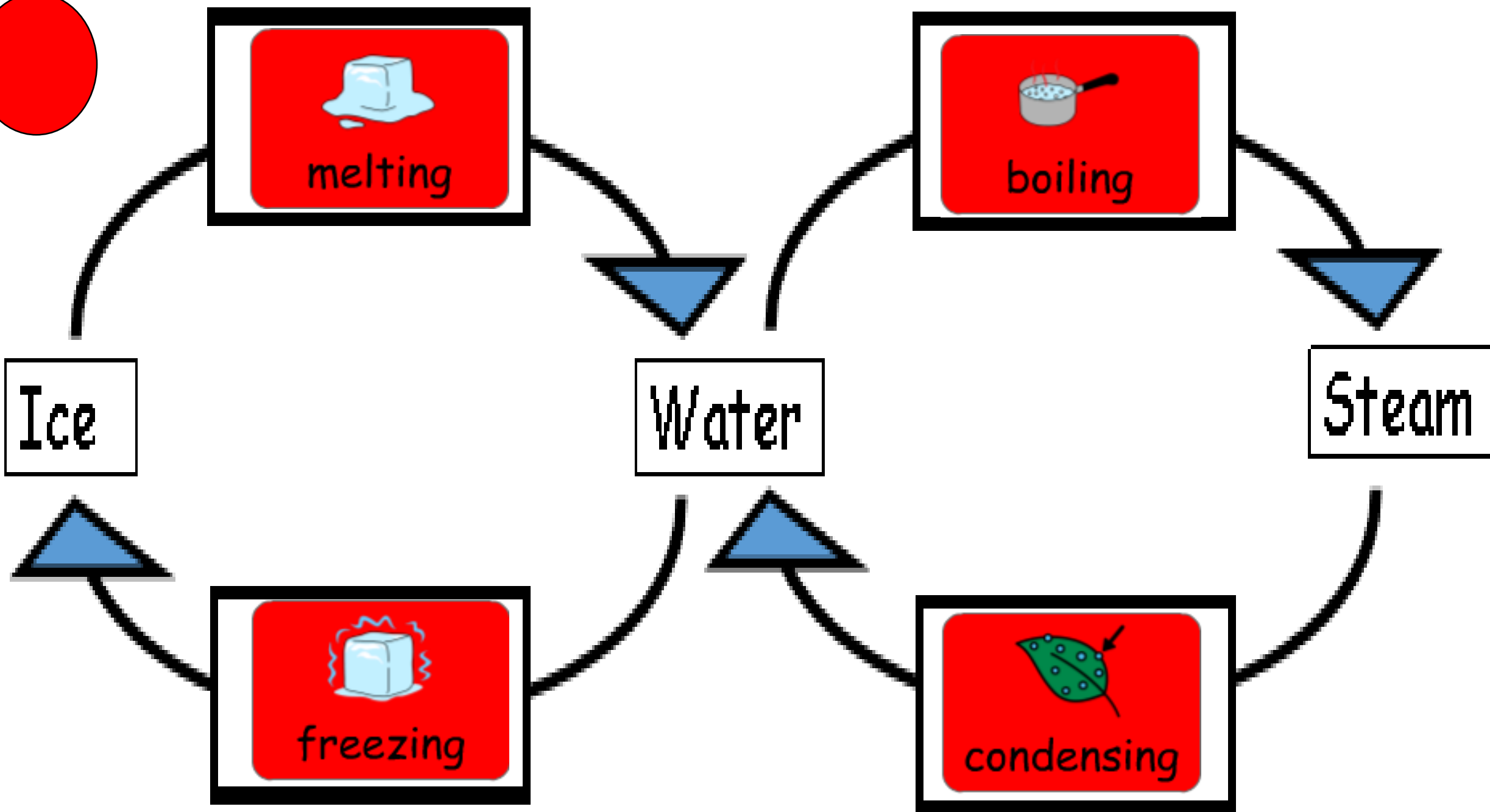
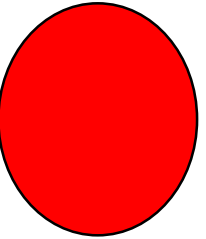
What happens when you put water in the freezer?



What happens when you put water in the kettle?

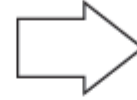






Were you
paying
attention?
Have a go at
the sheets in
your
workpack.

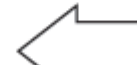
If you _____ water
to a temperature of _____, it
_____ to form
water vapour.



If you _____ water
vapour to a temperature of _____, it _____ to
form water.



If you _____ ice to a
temperature of _____, it
_____ to form water.

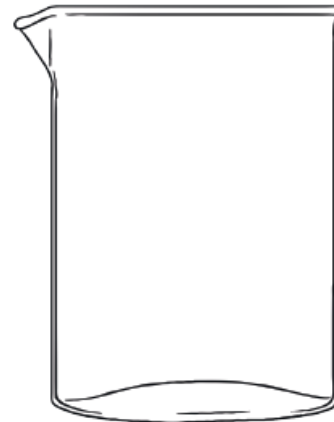


If you _____ water
to a temperature of _____,

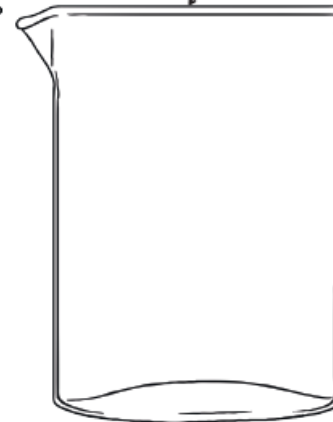
States of Matter

Cut out the atoms (circles) on the next page. Arrange them in each of the beakers according to their state of matter.

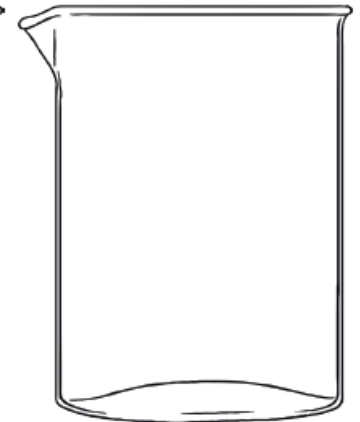
Solid



Liquid



Gas

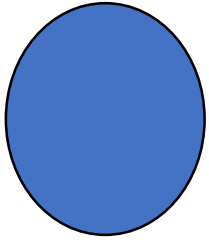


Fun Task

Try the custard experiment... some things can be liquid and solid at the same time!

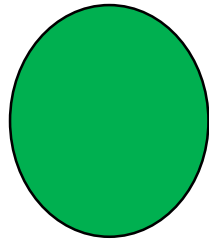
All you need is water, custard powder (not instant custard) or corn flower and a strong bowl.

Links



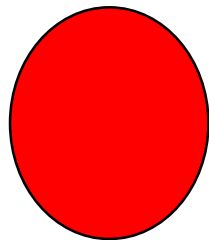
<https://www.bbc.co.uk/bitesize/topics/z4339j6/articles/zx8hhv4>

https://central.espresso.co.uk/espresso/primary_uk/subject/module/activity_index/item1128907/grade1/index.html



<https://www.bbc.co.uk/bitesize/topics/zkqg87h/articles/zsgwwxs>

https://central.espresso.co.uk/espresso/modules/s2_inv_change/index.html?source=subject-Science-Lower%20KS2-States%20of%20matter-Resource%20types



<https://www.bbc.co.uk/bitesize/topics/zkqg87h/articles/z9ck9qt>

<https://www.purplemash.com/#app/pup/solidliquidsgases>