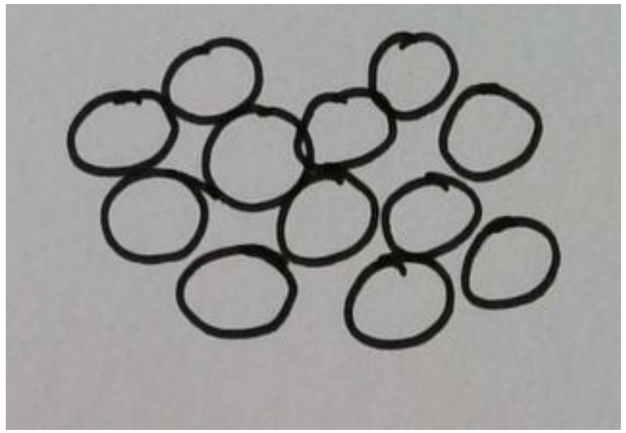
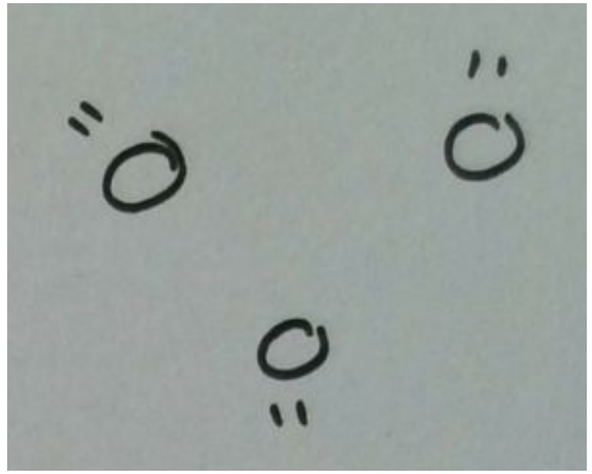
What are changes of state and why do they take place?

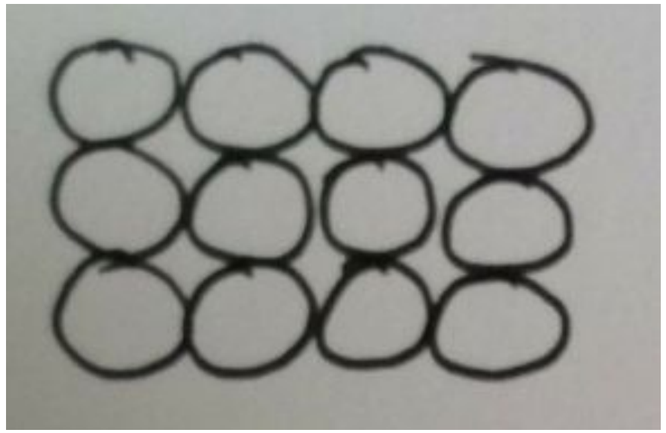
Science

Miss Couves

What do the particles look like in solids, liquids and gases?







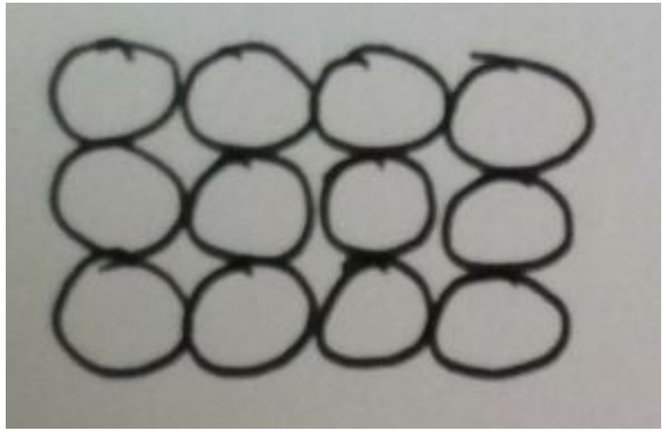
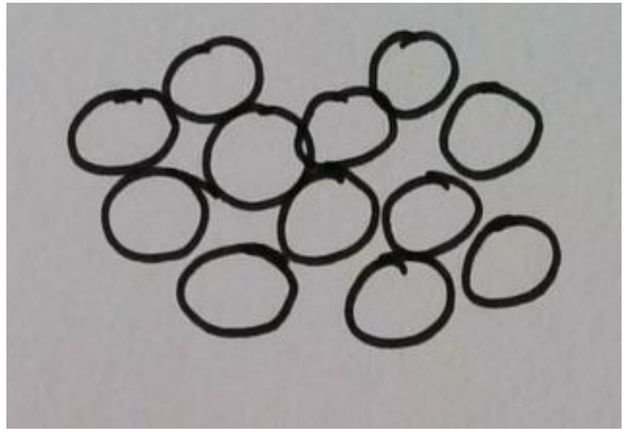
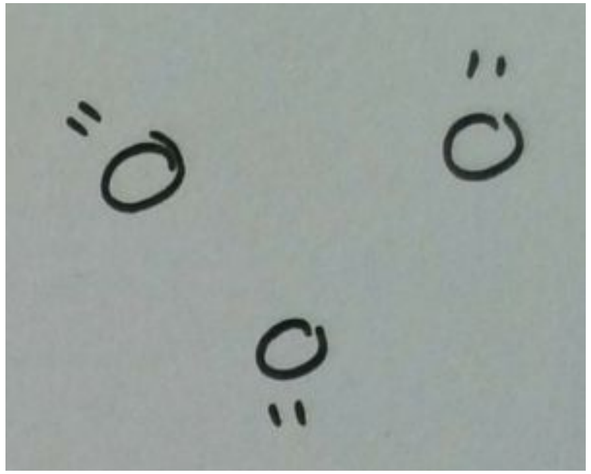
Draw lines to match the description to the correct state of matter.

Solid	Particles are touching and in ordered rows
Liquid	Particles are far apart from each other
Gas	Particles are touching in a random arrangement

Draw lines to match the description to the correct state of matter.

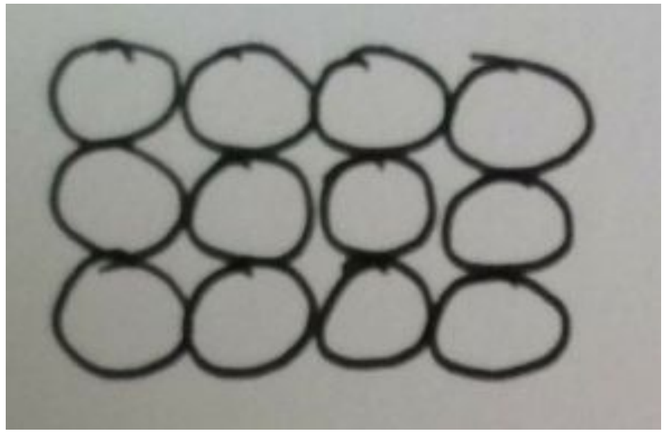
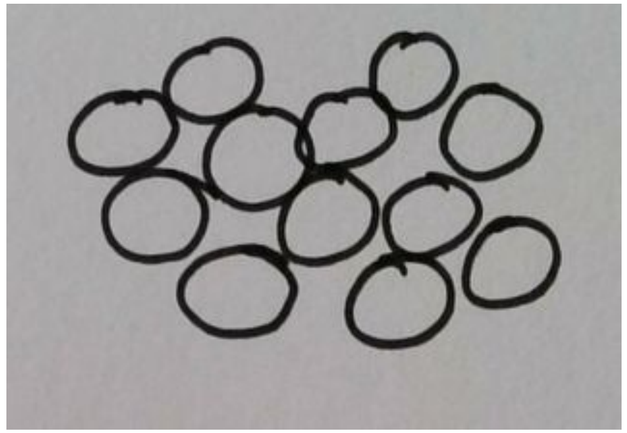
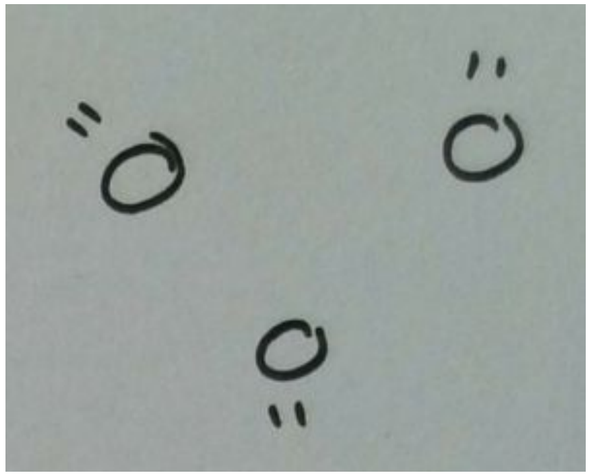
Solid	Particles can slide past each other
Liquid	Particles are moving constantly in all directions
Gas	Particles cannot move but can vibrate

What happens to the particles as they are heated?

Solid	Liquid	Gas
		

_____ temperature - particles have _____ _____ - the substance _____

What happens to the particles as they are cooled?

Solid	Liquid	Gas
		

_____ temperature - particles have _____ _____ - the substance _____

What happens during heating?

Copy and complete the sentences.

1. When solids are heated strongly. The bonds between some of the particles b_____ which means they can now s_____ o_____ each other. It has become a l_____ .

2. When liquids are heated strongly. Any bonds that are left over between particles now b_____ which means they can now move f_____ a_____ from each other. It has become a g_____.

What happens during cooling?

Copy and complete the sentences.

1. When liquids are cooled down. The particles move more s_____ and become strongly b_____ together again. They are now in a f_____ p_____ and have become a s_____.

2. When gases are cooled down the particles move more s_____, they become b_____ together again. The are stuck together but can still s_____ p_____ each other and move so they have become a l_____.

Which state changes involve particles gaining energy?

Option 1

Melting

Option 2

Boiling

Option 3

Condensation

Option 4

Freezing

Which state changes involve particles losing energy?

Option 1

Melting

Option 2

Boiling

Option 3

Condensation

Option 4

Freezing

Which state change?

Example	State change	Why?
A puddle turns to water vapour in hot weather.		
Rain turning into snow.		
An ice cream on a hot day.		
Water forming on the bathroom mirror.		

What happens to the particles in chocolate if you hold on to it for too long?