

The Effect of Temperature on Matter

Brainpop: Change of State

All matter is made of many small particles

Solids:

Particles are arranged Close, in a very tight, fixed pattern. Together

Liquids:

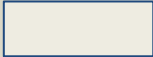
Particles are close, but loose fitting. They are able to Move past each other.

Gases:

Particles are spread Far Apart, in no particular pattern

All particles are moving-simulation

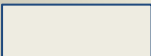
Although the table doesn't look like it's moving, the particles inside it are.

Solids: 

The particles are stuck together and can't move independently, so they stay in one place & vibrate

Liquids: 

The particles are held together, but not very strongly.
The particles tend to move around together.

Gases: 

The particles are not held together at all, and move freely in all directions.

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How does the temperature affect the particles of matter?

As the temperature increases, the particles begin to move Faster.

As the temperature decreases, the particles will move Slower.

How do these particles affect the matter?

The movement of the particles affects the State of the matter.

As the particles vibrate/move Faster, the bonds are not strong enough to hold them together.

As the particles move Slower, it is easier for the bonds to hold them together.

How does matter change state.

When solid particles Move too fast, they break loose and begin to move around. This is called Melting and changes the solid to a Liquid.

When liquid particles begin to move Faster, they break free from the others and fly away. This is called Evaporation and is when a liquid becomes a Gas.

Video Clip