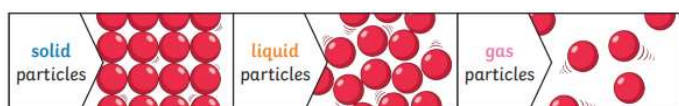


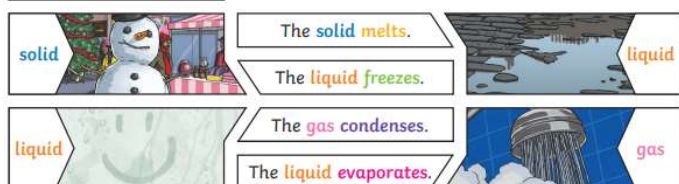
# Properties and changes of Materials

Unit Vocabulary – Join them up with the correct definition once you have learned it,

evaporate	Materials that will dissolve
condense	Process whereby a gas changes to a liquid.
dissolve	A change that can be reversed.
soluble	A material that heat or electricity can easily travel through.
insoluble	A change that results in a new product being made from the old materials
conductor	A material that does not let heat or electricity travel through them
insulator	Materials that won't dissolve
reversible	A solution is made when solid particles are mixed with liquid particles.
irreversible	Process whereby a liquid changes to a gas.

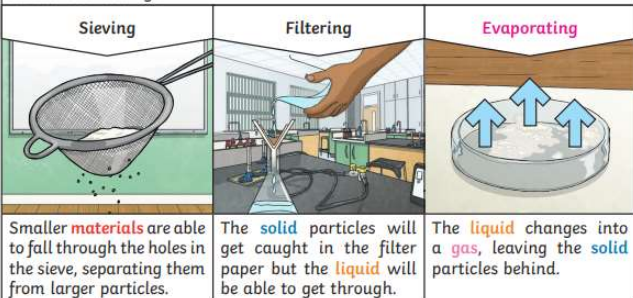


## Changes of State



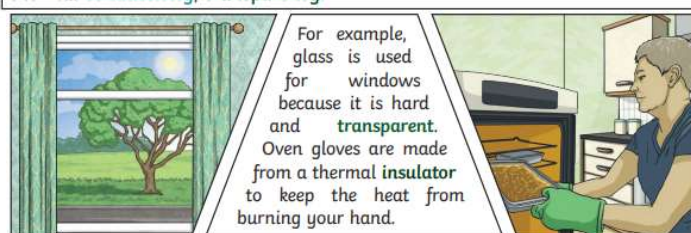
## Key Knowledge

Reversible changes, such as mixing and dissolving **solids** and **liquids** together, can be reversed by:



## Key Knowledge

Different **materials** are used for particular jobs based on their properties: electrical **conductivity**, flexibility, hardness, **insulators**, magnetism, solubility, thermal **conductivity**, **transparency**.



## Dissolving

A solution is made when **solid** particles are mixed with **liquid** particles. **Materials** that will dissolve are known as soluble. **Materials** that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

Sugar is a soluble **material**.



Sand is an insoluble **material**.



**Patricia Billings** b. 1926 Missouri, USA

Creator of Geobond.



Patricia Billings received a patent in 1997 for a fire resistant building material called Geobond. Billings' work as a sculpture artist put her on a journey to find or develop a durable additive to prevent her painstaking plaster works from accidentally falling and shattering. After nearly two decades of basement experiments, the result of her efforts was a solution which when added to a mixture of gypsum and concrete, creates an amazingly fire resistant, indestructible plaster. Not only can Geobond add longevity to artistic works of plastic, but also it is steadily being embraced by the construction industry as an almost universal building material. Geobond is made with non-toxic ingredients which makes it the ideal replacement for asbestos.

Currently Geobond is being sold in more than 20 markets worldwide, and Patricia Billings, great grandmother, artist, and inventor remains at the helm of her carefully constructed Kansas City-based empire.