




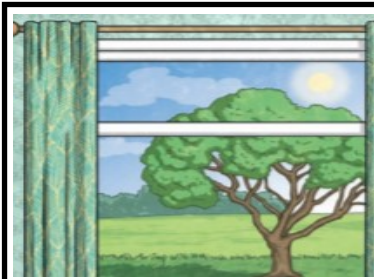


Properties and Changes of Materials

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

Sieving	Filtering	Evaporating
		
Smaller materials are able to fall through the holes in the sieve, separating them larger particles.	The solid particles will get caught in the filter paper but the liquid will be able to get through.	The liquid changes into a gas , leaving the solid particles behind.

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**.



Different materials are used for particular jobs based on their properties. For example, glass is used for windows as it is hard and **transparent**. Oven gloves are made as a thermal **insulator** to stop hands from burning.



Famous Scientist



Stephanie Kwolek
Stephanie Kwolek was an organic chemist, best known for inventing a new material called Kevlar in 1965. Kevlar is an immensely strong plastic. It was first used as a replacement for steel reinforcing strips in racing car tyres. It is now used in a great number of objects where high strength is required along with minimal weight.



Key Vocabulary

soluble:	able to be dissolved, especially in water
insoluble:	impossible to dissolve, especially in water
dissolve:	when something solid mixes with a liquid
solution:	substances that are combined to form a solution—they do not change into new substances
thermal:	relating to heat
insulator:	a material (such as rubber or glass) that is a poor conductor of electricity, heat or sound
conductor:	a material capable of transmitting light, electricity, heat or sound
transparent:	allows light to pass through so that objects behind can be seen clearly
translucent:	not transparent but clear enough to allow rays of light to pass through
opaque:	not able to be seen through
flexible:	capable of bending easily without breaking
magnetic:	capable of being magnetised or attracted to a magnet
irreversible:	not able to be undone or altered
reversible:	capable of being corrected or changed back