materials	The substance that something is made
mutertuis	out of, e.g. wood, plastic, metal.
solids	One of the three states of matter Solid particles are very close together meaning solids, such as wood and glass hold their shape.
liquids	This state of matter can flow and take the shape of the container because the particles are more loosely packed than solids and can move around each other. Examples of liquids include water and milk.
gases	One of the three states of matter. Gas particles are further apart than solic or liquid particles and they are free to move around. A gas fills its container taking both the shape and the volume of the container. Examples of gases are oxygen and helium.
melting	The process of heating a solid until it changes into a liquid.
freezing	When a liquid cools and turns into a solid
evaporating	When a liquid turns into a gas or vapour
condensing	When a gas, such as water vapour, cools and turns into a liquid.

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Key Vocabulary		
conductor	A conductor is a material that heat or electricity can easily travel through. Most metals are both thermal conductors (they conduct heat) and electrical conductors (they conduct electricity).	
insulator	An insulator is a material that does not let heat or electricity travel through them. Wood and plastic are both thermal and electrical insulators.	
transparency	A transparent object lets light through so the object can be looked through, for example glass or some plastics.	

Dissolving

A solution is made when solid particles are mixed particles. with liquid Materials that will dissolve known soluble. are as 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

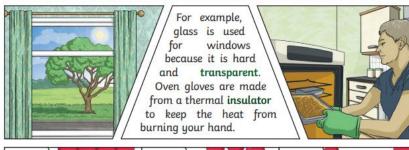
material.

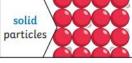


insoluble

Key Knowledge

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









Changes of State



The solid melts. The liquid freezes.



liquid

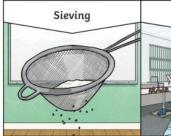
The gas condenses.



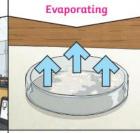
The liquid evaporates

Key Knowledge

Reversible changes, such as mixing and dissolving solids and ${\color{red}\text{liquids}}$ together, can be reversed by:







Smaller materials are able to fall through the holes in the sieve, separating them from 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.



Irreversible changes often result in a new product being made from the old materials (reactants). For example, burning wood produces ash. Mixing vinegar and milk produces casein



Key Vocabulary		
bobbies/ peelers	Police officers, named after Sir Robert Peel, who introduced the first police force in London in 1829.	
deterrent	To discourage someone from doing something.	
execution	A sentence of death.	
highwaymen	Criminals who would rob people while they were travelling. This was very common during the Stuart and Georgian periods.	
humiliation	To make someone feel ashamed and foolish.	
judge	Someone who is in charge of a trial in court.	
jury	A group of people who would listen to the facts in a trial and decide if the person is guilty or not guilty.	
ordeal	A long and painful experience.	
treason	A crime against the King, Queen or the government.	
victim	A person who has suffered.	
trial	A judge and jury listen to evidence in a court to decide whether a person is guilty of a crime.	

The Romans

The Vikings The Plantagenets The Stuarts The Victorians

3 450 793 1066 1154 1485 1603 1704 1837

The Anglo-Saxons The Normans The Tudors The Georgians

Romans' Rule

Roman laws, written around 450 BC, were called the 'Twelve Tables'. Not following these rules was a crime. Punishments were severe to deter people from not following them. People could pay to have their punishment lessened. Judges and juries were used to decide if someone was guilty or not guilty. There were lots of serious crimes such as murder, and less serious crimes, such as stealing. The worst crime, treason, was punishable by being thrown to the lions.

Anglo-Saxon Justice System

Anglo-Saxon people accused of a crime had a trial. If a decision as to whether the person was guilty or not guilty could not be made, a trial by ordeal would take place. It is thought that God would decide if they were guilty or not by the outcome of the ordeal. There were no prisons to send criminals to so punishments acted as huge deterrents and were often very brutal including stoning, whipping and hanging.





Anglo Saxon Trial of Ordeal Punishments		
cold water ordeal	A person's hands and feet were tied together and they were thrown into an ice-cold lake.	
iron bar ordeal	Criminals would have to carry a glowing hot iron bar in their hands.	
Hot water ordeal	A criminal's hand would be plunged into a pot of boiling water.	

If the person drowned, they were innocent. If they floated, they were guilty.

The person would have their hand bandaged for three days. After three days, if their hand healed without infection, they were innocent. If their hand was infected, they were guilty.

Tudor Torture

To deter people from committing crimes, the Tudors came up with even more terrifying punishments, including public executions. Public humiliations were common. The scold's bridle was worn for gossiping; the rack used to stretch out the victim's body for treason; and the dunking stool to find out if someone was a witch.

Victorians Villains

The Victorians looked for alternative ways to hanging people for committing crimes. Many prisons were built in order to prevent people committing further crimes. Life in prison was very tough. Prisoners had to do very physically demanding tasks. These included:

- the treadwheel using the steps on a huge wooden and iron wheel to move it
- · shot drill lifting a heavy iron cannonball
- the crank machinery that victims turned
 10,000 times a day



scold's bridle







treadwheel



