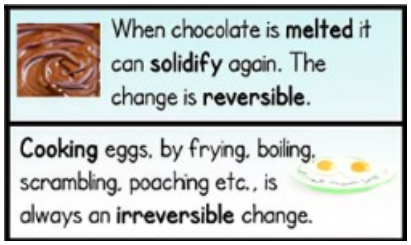
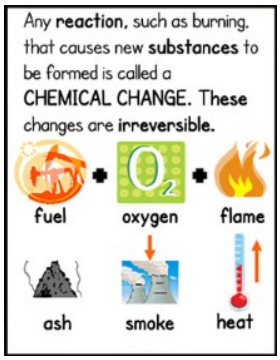
Science	Year 5
Focus: Properties and changes of materials	
Age related scientific vocabulary	

transparency	A transparent object lets light through so the object can be looked through, for example glass or some plastics.	**dissolve**	Some substances dissolve when you mix them with water. When a substance dissolves, it might look like it has disappeared, but in fact it has just mixed with water to make a transparent liquid called a solution.
conductivity	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).	**(ir) reversible**	A **reversible** change is a change that can be undone or reversed such as mixing and dissolving solids and liquids together. If you can get back the substance s you started with, it's a reversible reaction. An **irreversible** change is that cannot be changed back again such as heating, burning. Irreversible changes are also called chemical reactions. In an irreversible change, new materials are always formed. Sometimes these new materials are useful.





Key Knowledge

- Materials can be grouped on the basis of their properties, including their **hardness, solubility, transparency, conductivity** (electrical and thermal), and **response to magnets**.
- Some materials, mainly **metals**, allow heat to pass through them easily. These are **thermal conductors**.
- Materials that do not allow heat to transfer through them are called **thermal insulators**.
- By using our knowledge of solids, liquids and gases we can decide how mixtures might be separated, including: **filtering, sieving** and **evaporating**.
- Some materials, such as salt, sugar, coffee, dissolve in water to form a solution. These materials can be recovered from the solution. This is an example of a **reversible reaction**.
- Some reactions result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. These are examples of an **irreversible reaction**.