

Chemical Reactions Key Revision Facts

- Chemical changes make new substances whereas physical changes usually involves a change of state.
- Signs that a chemical reaction has occurred are: fizzing and flames.
- In a chemical reaction, the particles are rearranged to produce new substance
- Catalysts help speed up the rate of reaction.
- In the equation:
magnesium + oxygen \rightarrow magnesium oxide,
magnesium and oxygen are the reactants;
magnesium oxide is the product.
- A fuel is a material that releases energy in the form of heat. Examples of fuels are coal, oil and gas.
- Combustion is another word for burning.
- The equation for burning is:
fuel + oxygen \rightarrow carbon dioxide + water
- Thermal decomposition involves heating a substance until it breaks down into different parts.
- The products of the decomposition of calcium carbonate are calcium oxide and carbon dioxide.
- Gas tests:

Gas	Test	Result
Hydrogen	Place a lighted spill near the gas	Squeaky pop
Oxygen	Place a glowing spill near the gas	Relights the spill
Carbon dioxide	Bubble through limewater	Limewater turns milky

- Law for the conservation of mass:
mass of reactants = mass of products
- Exothermic reactions show an increase in temperature, for example burning fuels.
- Endothermic reactions show a decrease in temperature, for example sports ice packs.