

Scheme of Learning: Chemical Reactions

Topic Sequence:

1	2	3	4	5	6	7	8	9	10
Lab Skills	Particles and Separation Techniques	Forces	Cells and Organisation	Elements and the Periodic Table	Energy	Health and Human Body	Chemical Reactions	Electricity and Magnetism	Reproduction

Topic Overview:

The national curriculum requires that we teach the following:

- Chemical reactions as the rearrangement of atoms
- Representing chemical reactions using formulae and using equations
- Combustion, thermal decomposition,
- Oxidation and endo and exothermic reactions

Lesson Sequence:

We start with an introduction to physical and chemical changes. We build on this knowledge to look at word and chemical equations, which is then linked with the conservation of mass. Finally we learn a range of chemical reactions (endo and exothermic, combustion, oxidation, thermal decomposition).

Sequence of Lessons:

1	Physical and Chemical change
2	Word equations
3	Conservation of mass
4	Exo and Endothermic reactions
5	Combustion
6	Thermal decomposition
7	Revision
8	Assessment

Resources:

1	Zinc, Copper sulphate, Magnesium, Iron sulphate, Iron filings, Hydrochloric acid, Sodium bicarbonate, Vinegar, Sodium hydroxide
2	Iron, Copper sulphate, Zinc, Silver nitrate, Hydrochloric acid, Demo: Sulphur, Oxygen, Lithium with water
3	Magnesium, Pan-balance
4	Magnesium, Hydrochloric acid, Potassium nitrate, Sodium carbonate, Sodium hydroxide, Calcium chloride, Ammonium nitrate
5	Candles, plasticine and different size beakers and Demo: combustion apparatus
6	Demo: Copper carbonate, Zinc carbonate, Calcium carbonate, Limewater

Supportive Reading:

Comprehension activity	TBC
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Assessment:

Knowledge:	Multiple choice questions.
Application of Knowledge:	Compare the combustion reaction with the thermal decomposition reaction