





Sixth form

12. Using our resources

Rusting, useful alloys, the properties of polymers, glass, ceramics and composites, making ammonia, the economics of the Haber process, making fertilisers in the lab, making fertilisers in industry

11. The Earth's resources

Finite and renewable resources, water safe to drink, treating waste water, extracting metals from ores, Life cycle assessments, reduce reuse recycle.

10. The Earth's atmosphere

The History of our atmosphere, our evolving atmosphere, greenhouse gases, global climate change, atmospheric pollutants

9. Chemical analysis

Pure substances and mixtures, chromatogram analysis, testing gases, testing positive ions, testing negative ions, instrumental analysis

8. Polymers

Addition polymerization, condensation polymerization, natural polymers, DNA

Year 11

5. Rates of equilibrium

Collision theory and rate of reaction, the effect of temperature, catalysts, concentration and pressure, reversible reactions, dynamic equilibrium, La Chatelier's principle

6. Crude oil and fuels

Hydrocarbons, fractional distillation of oil, burning hydrocarbon fuels, cracking

7. Organic reactions

Reactions of the alkenes, structure of alcohol, carboxylic acid and the esters, reactions and uses of alcohols,

4. Energy changes

Endothermic and exothermic reactions, using the energy from reactions, reaction profiles, bond energy calculations, chemical cells, batteries and fuel cells

2. Chemical calculations

Relative masses and moles. Balancing equations, the yield of a chemical reaction, atom economy, titrations, volume of gases and the law of the conservation of mass.

Year 10

3. Electrolysis

Electrolysis and the changes at the electrode, the extraction of aluminium, electrolysis of aqueous solutions

1. Periodic table.

The development of the periodic table and what you can learn about an element just by its position on the periodic table. The Alkali metals, halogens and transition metals

