| GCSE Chemistry (Triple Science = students that chose to take science as an option) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Term 1 | | Term 2 | | Term 3 | |
| | | | Term 1.1 | Term 1.2 | Term 2.1 | Term 2.2 | Term 3.1 | Term 3.2 |
| 10 | Triple Science | Theme | **Chemical Changes** | | **Energy Changes** | **Rate and Extent of Chemical Change** | | **Quantitative Chemistry** |
| | | Concept | Behaviour of Acids | Extracting Metals | | Rate of Chemical Change | Extent of Chemical Change | |
| | | Skills Knowledge | Reactions of acids with metals and metal compounds<br><br>Making pure, dry crystals of soluble salts<br><br>Strong and weak acids<br><br>pH Scale | Displacement reactions<br><br>Electrolysis of molten substances<br><br>Electrolysis of aqueous solutions | Temperature changes during reactions<br><br>Energy profile diagrams<br><br>Energy change calculations<br><br>Fuel cells | Collision theory<br><br>Calculating the rate of reaction<br><br>Factors affecting the rate of reaction:<br><br>• Temperature<br>• Concentration<br>• Surface Area<br>• Pressure<br>• Catalyst | Dynamic equilibrium<br><br>Le Chatelier's principle | Conservation of mass<br><br>Relative formula mass<br><br>The mole<br><br>Reacting masses<br><br>% Yield<br><br>Concentration<br><br>Acid-Base titration<br><br>Volume of Gas |
| | | Wider Curriculum | | | | | | |
| 11 | Triple Science | Theme | **Earth's Resources** | **Chemical Analysis** | **Earth's Atmosphere** | **Organic Chemistry** | | |
| | | Concept | | | | | | |
| | | Skills Knowledge | Potable water<br><br>Rusting<br><br>Haber Process<br><br>Fertilisers | Separating mixtures:<br><br>• Filtration<br>• Distillation<br>• Chromatography<br><br>Testing for ions<br><br>Testing for gases | Development of the Earth's atmosphere<br><br>Composition of the atmosphere<br><br>Greenhouse effect<br><br>Atmospheric pollutants and their impact:<br><br>• Carbon particulates<br>• Carbon monoxide<br>• Carbon dioxide<br>• Nitrogen oxides<br>• Sulfur dioxide | Crude oil and fractional distillation<br><br>Structure and properties of alkanes<br><br>Cracking<br><br>Structure and properties of alkenes<br><br>Addition polymerisation | Structure and properties of alcohols<br><br>Structure and properties of carboxylic acids<br><br>Formation of esters<br><br>Condensation polymerisation | |
| | | Wider Curriculum | | | | | | |