

Chemistry combined science and separate chemistry (*bold is chemistry only)**Year: 10**

In year 10 pupils have 5 lessons of chemistry every two weeks. They follow this sequence of lessons:

Half term 1 & 2 Atomic structure and the periodic table	Half term 2 Structure, bonding and the properties of matter	Half term 3 & 4 Chemical changes	Half term 4 Chemical quantities and calculations	Half term 5 Energy changes
Elements and compounds Formulae and equations Mixtures History of the atom Structure of the atom Ions, atoms and isotopes Electronic structure Development of the periodic table Metals and non metals Exploring group 0 Exploring group 1 Exploring group 7 Reaction trends and predicting reactions Transition metals	States of matter Ionic Bonding Properties of Ionic compounds Covalent bonding Properties of small molecules Polymer structures Giant covalent structures Graphene and fullerenes Metallic bonding Properties of metals and alloys Nanoparticles and applications	Metal oxides Reactivity series Displacement Extraction of metals and reduction Acids and metals Neutralisation Soluble salts Required practical making a salt pH and neutralisation Titration Strong and weak acids The process of electrolysis Electrolysis of molten ionic compounds Using electrolysis to extract metals Electrolysis of aqueous solutions Required practical electrolysis Electron transfer	Balancing equations Conservation of mass Relative formula mass Moles (HT) Amounts of substances (HT) Moles to balance equations (HT) Concentrations of solutions Limiting reactants (HT) Percentage yield Atom economy Volumes of gases	Exothermic and endothermic reactions Required practical temperature changes Energy level diagrams Energy change diagrams Cells and batteries Fuel cells

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