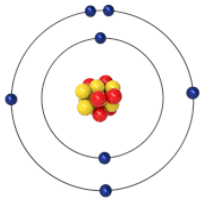
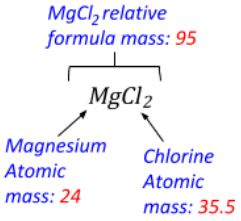
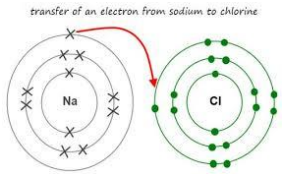
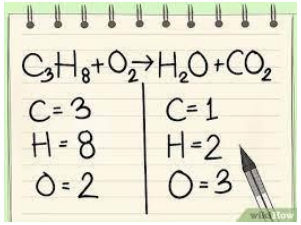
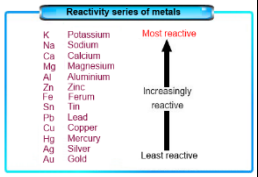
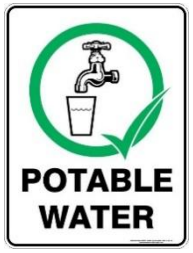
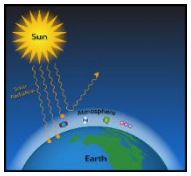
GCSE Chemistry Curriculum Map 2026-2027

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 9	Recap atoms, elements, compounds and mixtures from Year 7 <u>Atomic Structure</u> Atomic Structure and size of atoms Electronic structure Isotopes and calculating relative atomic mass  Calculating relative formula mass & percentage composition 	 <u>Bonding</u> Chemical bonds including ionic and covalent bonding <u>Chemical Equations</u> Conservation of mass Balancing equations 	<u>The Periodic Table</u> The periodic table Development of the periodic table Metals and non-metals <u>Groups in the Periodic Table</u> Group 1, group 7 and group 0 Properties of transition metals  <u>States of Matter</u> The three states of matter and state symbols	 <u>Reactivity of metals</u> Metal oxides The reactivity series Extraction of metals and reduction  <u>Corrosion</u> Corrosion and its prevention	<u>Using the Earth's resources and sustainable development</u> Potable water Waste water treatment Alternative methods of extracting metals Life cycle assessment Ways of reducing the use of resources 	<u>The composition and evolution of the Earth's atmosphere</u> The proportions of different gases in the atmosphere The Earth's early atmosphere & how oxygen increased and carbon dioxide decreased Greenhouse gases &  human activities which increase them Climate change The carbon footprint and its reduction  Atmospheric pollutants

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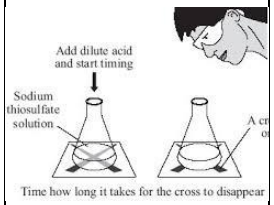
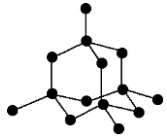
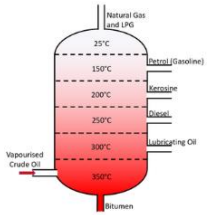
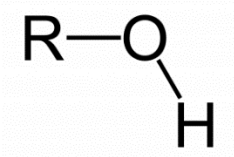
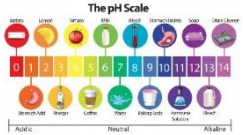
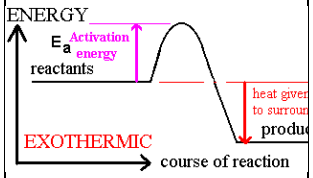
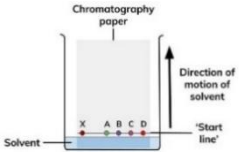
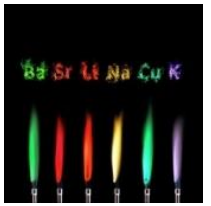
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	<u>Rates</u> Calculating rates of reactions Collision theory and activation energy Factors which affect the rates of chemical reactions Catalysts 	<u>Properties of Matter</u> Properties of ionic compounds, small molecules & metals Metallic bonding Alloys Giant covalent structures including diamond and graphite  Graphene and fullerenes <u>Nanoparticles</u> (separates only) Sizes of particles and their properties Uses of nanoparticles	<u>Organic Chemistry</u>  Crude oil, hydrocarbons and alkanes Fractional distillation and petrochemicals Properties of hydrocarbons Cracking Structure and formulae of alkenes Reactions of alkenes (separates only) Addition polymerization (separates only)	<u>Organic Chemistry continued</u> (separates only) Ceramics, polymers and composites Alcohols  Carboxylic acids and esters <u>Reactions of Acids</u>  Reactions of acids with metals Neutralisation of acids and salt production Soluble salts	<u>Reactions of Acids continued</u> The pH scale and neutralisation Strong and weak acids in terms of ionisation and a comparison with dilute and concentrated <u>Energy Changes</u>  Energy transfer during exothermic and endothermic reactions Reaction Profiles Bond enthalpy calculations	 <u>Chemical Analysis</u> Purity & formulations Chromatography Tests for hydrogen, oxygen, carbon dioxide and chlorine  Flame tests (separates only) Testing metal ions using precipitation (separates only) Tests for carbonates, halides, sulfates (separates only) Instrumental methods including flame emission spectroscopy (separates only)

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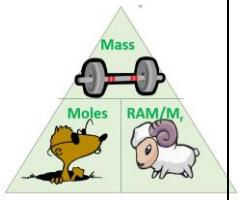
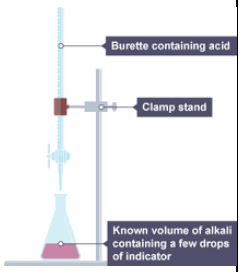
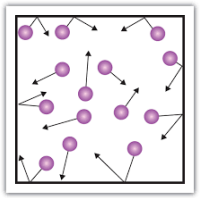
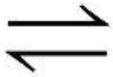
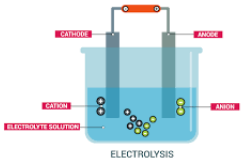
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	<u>Quantitative Chemistry</u> Uncertainty Moles  Reacting masses Using moles to balance equations Concentration Titrations (separates only) 	<u>Quantitative Chemistry Continued</u> Percentage yield (separates only) Atom economy (separates only) Volumes of gases (separates only)  <u>Equilibrium</u> The energy change of reactions Reversible reactions Equilibrium The effect of changing conditions on equilibrium 	 <u>The Haber process and NPK fertilisers (separates only)</u> The Haber process Production and uses of NPK fertilisers  <u>Electrolysis</u> Electrolysis of molten ionic compounds Using electrolysis to extract metals Electrolysis of aqueous solutions Half equations Oxidation & Reduction	<u>Chemical Cells & Fuel Cells (separates only)</u> Cells and batteries Fuel cells  <u>Polymers (separates only)</u> Condensation polymerisation Amino acids Naturally occurring polymers 		

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