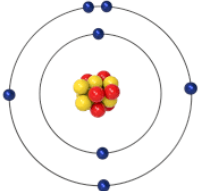
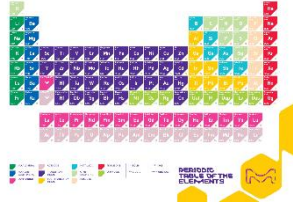
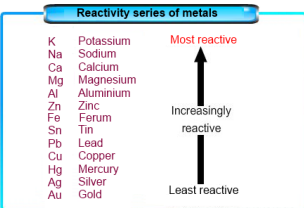



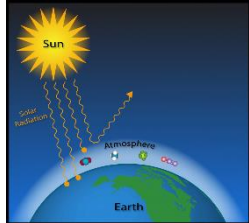
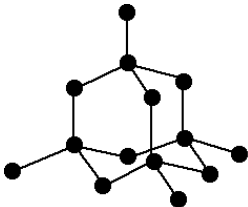
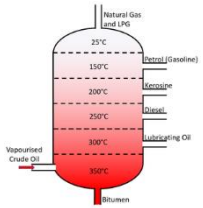
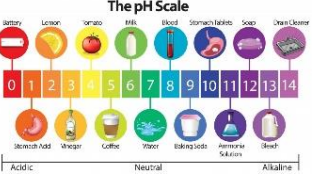
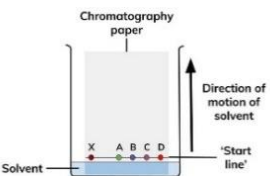

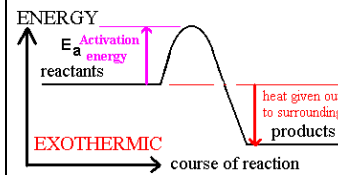
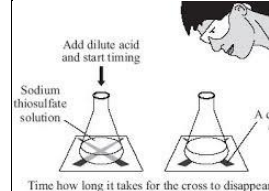




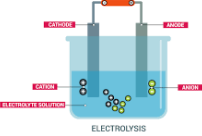

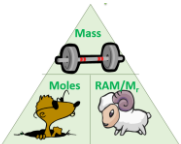
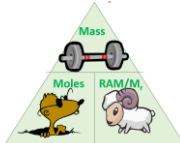


GCSE Chemistry Curriculum Map 2020-2021

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

GCSE Chemistry Curriculum Map 2020-2021

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	 <p>Properties of Matter</p> <p>Properties of ionic compounds</p> <p>Properties of small molecules</p> <p>Properties of metals and metallic bonding including alloys</p> <p>Giant covalent structures including diamond and graphite</p> <p>Graphene and fullerenes</p>	<p><u>Nanoparticles</u></p> <p>Sizes of particles and their properties</p> <p>Uses of nanoparticles</p>  <p><u>Organic Chemistry</u></p> <p>Crude oil, hydrocarbons and alkanes</p> <p>Fractional distillation and petrochemicals</p> <p>Properties of hydrocarbons</p> <p>Cracking and alkenes</p> <p>Structure and formulae of alkenes</p> <p>Reactions of alkenes</p>	$\text{R}-\text{O}-\text{H}$ <p><u>Organic Chemistry</u></p> <p>continued</p> <p>Addition polymerization</p> <p>Ceramics, polymers and composites</p> <p>Alcohols</p> <p>Carboxylic acids and esters</p>  <p><u>Reactions of acids</u></p> <p>Reactions of acids with metals</p> <p>Neutralisation of acids and salt production</p> <p>Soluble salts</p>	<p>The pH scale and neutralisation</p> <p>Strong and weak acids in terms of ionisation and a comparison with dilute and concentrated</p>  <p><u>Pure substances</u></p> <p>Pure substances</p> <p>Formulations</p> <p>Chromatography</p> <p><u>Identification of common gases</u></p> <p>Tests for hydrogen, oxygen, carbon dioxide and chlorine</p>	 <p><u>Chemical Tests</u></p> <p>Flame tests</p> <p>Testing metal ions using precipitation</p> <p>Tests for carbonates, halides, sulfates</p> <p>Instrumental methods including flame emission spectroscopy</p>  <p><u>Energetics</u></p> <p>Energy transfer during exothermic and endothermic reactions</p> <p>Reaction Profiles</p>	 <p><u>Rates</u></p> <p>Calculating rates of reactions</p> <p>Collision theory and activation energy</p> <p>Factors which affect the rates of chemical reactions</p> <p>Catalysts</p>

GCSE Chemistry Curriculum Map 2020-2021

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	<p style="text-align: center;">\rightleftharpoons</p> <p><u>Equilibrium</u> The energy change of reactions</p> <p>Reversible reactions</p> <p>Equilibrium</p> <p>The effect of changing conditions on equilibrium</p>  <p><u>The Haber process and NPK fertilisers (separates only)</u></p> <p>The Haber process</p> <p>Production and uses of NPK fertilisers</p>  <p><u>Polymers (separates only)</u></p> <p>Addition polymerisation</p> <p>Condensation polymerisation</p>	<p><u>Polymers continued (separates only)</u></p> <p>Amino acids</p> <p>Naturally occurring polymers</p>  <p><u>Electrolysis</u> Electrolysis of molten ionic compounds</p> <p>Using electrolysis to extract metals</p> <p>Electrolysis of aqueous solutions</p> <p>Half equations</p> <p>Oxidation & Reduction</p>	<p><u>Chemical Cells & Fuel Cells (separates only)</u> Cells and batteries</p> <p>Fuel cells</p>  <p><u>Quantitative Chemistry</u></p> <p>Conservation of mass and balanced chemical equations</p> <p>Relative formula mass & % composition</p> <p>Uncertainty</p> <p>Moles</p> 	<p><u>Quantitative Chemistry</u></p>  <p>Reacting masses</p> <p>Using moles to balance equations</p> <p>Concentration</p> <p>Titrations (separates only)</p>		

GCSE Chemistry Curriculum Map 2020-2021