Chemistry - Curriculum Overview

Year 11

Half Term:	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics:	4.3.1.1 Conservation of mass and balanced chemical equations 4.3.1.2 Relative formula mass 4.3.1.3 Mass changes when a reactant or a product is a gas 4.3.1.4 Chemical measurements 4.3.2.1 Moles **(HT only)** 4.3.2.2 Amounts of substances in equations **(HT only)** 4.3.2.3 Using moles to balance equations **(HT only)** 4.3.2.4 Limiting reactants **(HT only)** 4.3.2.5 Concentration of solutions **(HT only)** 4.3.3.1 Percentage yield 4.3.3.2 Atom economy 4.3.4 Using concentrations of solutions in mol/dm^3 4.4.2.5 Titrations **RP2 - Titrations** 4.3.5 Use of amount of substance in relation to volume of gases	4.6.1.1 Calculating rates of reactions 4.6.1.2 Factors which affect the rate of chemical reactions **RP5 - Rate of reaction** 4.6.1.3 Collision theory and activation energy 4.6.1.4 Catalysts 4.6.2.1 Reversible reactions 4.6.2.2 Energy changes and reversible reactions 4.6.2.3 Equilibrium 4.6.2.4 The effect of changing conditions on equilibrium (HT only) 4.6.2.5 The effect of changing concentration (HT only) 4.6.2.6 The effect of temperature on equilibrium (HT only) 4.6.2.7 The effect of pressure changes on equilibrium (HT only) 4.10.4.1 The Haber process 4.10.4.2 Production and uses of NPK fertilisers	4.7.1.1 Crude oil, hydrocarbons and alkanes 4.7.1.2 Fractional distillation 4.7.1.3 Properties of hydrocarbons 4.7.1.4 Cracking and alkenes 4.7.2.1 Structure and formulae of alkenes 4.7.2.2 Reaction of alkenes 4.7.2.3 Alcohols 4.7.2.4 Carboxylic acids 4.7.3.1 Addition polymerisation 4.7.3.2 Condensation polymerisation (HT Only) 4.7.3.3 Amino acids (HT only) 4.7.3.4 DNA (deoxyribonucleic acid) and other naturally occurring polymers	4.9.1.1 The proportions of different gases in the atmosphere 4.9.1.2 The Earth's early atmosphere 4.9.1.3 How oxygen increased 4.9.1.4 How carbon dioxide decreased 4.9.2.1 Greenhouse gases 4.9.2.2 Human activities which contribute to an increase in greenhouse gases in the atmosphere 4.9.2.3 Global climate change 4.9.2.4 The carbon footprint and its reduction 4.9.3.1 Atmospheric pollutants from fuels 4.9.3.2 Properties and effects of atmospheric pollutants.	**Revision for final exams:** 4.1 Atomic structure and the periodic table 4. 2 Bonding, structure, and the properties of matter 4.3. Quantitative chemistry 4.4 Chemical changes 4.5 Energy changes 4.6 The rate and extent of chemical change 4.7 Organic chemistry 4.8 Chemical analysis 4.9 Chemistry of the atmosphere. 4.10 Using resources	**Revision for final exams:** 4.1 Atomic structure and the periodic table 4. 2 Bonding, structure, and the properties of matter 4.3. Quantitative chemistry 4.4 Chemical changes 4.5 Energy changes 4.6 The rate and extent of chemical change 4.7 Organic chemistry 4.8 Chemical analysis 4.9 Chemistry of the atmosphere. 4.10 Using resources
Assessment & End Points:	Quantitative Chemistry Test, Quantitative Chemistry STAR assessment, Titrations STAR Assessment.	**Mock exams** + Rate and extent of chemical reactions Test, Rates practical STAR assessment, Reversible reactions STAR Assessment.	Organic Chemistry Test, Fractional Distillation STAR assessment, Using organic compounds STAR Assessment,	Chemistry of the atmosphere Test, Carbon footprint STAR assessment,	Final exams – Paper 1	Final exam – Paper 2

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