

Swanmore Science

Chemistry: Trilogy Revision List



Topic	Area	Spec point	Content	Know it?
PAPER 1				
Atomic Structure and the Periodic Table	Atomic Structure	4.1.1.1	Atoms, elements and compounds	
		4.1.1.2	Mixtures	
		4.1.1.3	The development of the model of the atom	
		4.1.1.4	Relative electrical charges of subatomic particles	
		4.1.1.5	Size and mass of atoms	
		4.1.1.6	Relative atomic mass	
		4.1.1.7	Electronic structure	
	The Periodic Table	4.1.2.1	The Periodic Table	
		4.1.2.2	Development of the Periodic Table	
		4.1.2.3	Metals and non-metals	
		4.1.2.4	Group 0	
		4.1.2.5	Group 1	
		4.1.2.6	Group 7	
Bonding, Structure and the Properties of Matter	Chemical Bonds: Ionic, Covalent and Metallic	4.2.1.1	Chemical bonds	
		4.2.1.2	Ionic bonding	
		4.2.1.3	Ionic compounds	
		4.2.1.4	Covalent bonding	
		4.2.1.5	Metallic bonding	
	How Bonding and Structure are Related to the Properties of Substances	4.2.2.1	The three states of matter	
		4.2.2.2	State symbols	
		4.2.2.3	Properties of ionic compounds	
		4.2.2.4	Properties of small molecules	
		4.2.2.5	Polymers	
		4.2.2.6	Giant covalent structures	
		4.2.2.7	Properties of metals and alloys	
		4.2.2.8	Metals as conductors	
	Structure and Bonding of Carbon	4.2.3.1	Diamond	
		4.2.3.2	Graphite	
4.2.3.3		Graphene and fullerenes		
Quantitative Chemistry	Conservation of Mass and Chemical Equations	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 product is a gas	
		4.3.1.4	Chemical measurements	

	Amount of Substance	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	
Chemical Changes	Reactivity of Metals	4.4.1.1	Metal oxides	
		4.4.1.2	The reactivity series	
		4.4.1.3	Extraction of metals and reduction	
		4.4.1.4	Oxidation and reduction in terms of electrons (HT only)	
	Reactions of Acids	4.4.2.1	Reactions of acids with metals	
		4.4.2.2	Neutralisation of acids and salt production	
		4.4.2.3	Soluble salts	
		4.4.2.4	The pH scale and neutralisation	
		4.4.2.6	Strong and weak acids (HT only)	
	Electrolysis	4.4.3.1	The process of electrolysis	
		4.4.3.2	Electrolysis of molten ionic compounds	
		4.4.3.3	Using electrolysis to extract metals	
		4.4.3.4	Electrolysis of aqueous solutions	
4.4.3.5		Representation of reactions at electrodes as half equations (HT only)		
Energy Changes	Exothermic and Endothermic Reactions	4.5.1.1	Energy transfer during exothermic and endothermic reactions	
		4.5.1.2	Reaction profiles	
		4.5.1.3	The energy change of reactions (HT only)	
REQUIRED PRACTICALS				
Chemical Changes		4.4.2.3	RP 1 - Making Salts	
Chemical Changes		4.4.3.4	RP 3 – Electrolysis	
Energy Changes		4.5.1.1	RP 4 - Temperature Changes	

The chapter headings given above refer to our recommended revision guides. These can be purchased through the Finance Office. More information can be found on our website: <https://swanmore-school.co.uk/equipment/>