



Guiseley School Revision Support

Subject: A-level Chemistry

The 'Subject Area' on the table below refers to the areas that AQA will examine. How well do you know it? Tick the face for each then focus your revision on the areas with a 😐 or 😞.

Good Luck and ask your teacher if you are stuck!

	Topic	Subject Area	Exercise book/notes	😊	😐	😞
All	Working Scientifically	The Scientific Method				
		Communication and Issues Created by Science				
		Risk and Risk Management				
		Designing Investigations				
		Collecting Data				
		Processing and Presenting Data				
		Units and Equations				
		Drawing Conclusions				
		Uncertainties and Evaluations				
Measurement Methods						

Unit 1

	Topic	Subject Area	Exercise book/notes	😊	😐	😞
Unit 1	Section 1 – Atomic Structure	The Atom				
		Models of Atomic Structure				
		Relative Mass and Mass Spectrometry				
		Electronic Structure				
		Ionisation Energy				
Unit 1	Section 2 – Amount of Substance	Trends in Ionisation energy				
		The Mole				
		Reacting masses				
		Titration				
		Gas Volumes				
		Ideal Gas Law				
Unit 1	Section 3 – Bonding	Empirical formula				
		Percentage yield and Atom Economy				
		Ionic Bonding				
		Covalent Bonding				
		Shapes of molecules				
Unit 1	Section 4 – Energetics	Polarisation and Intermolecular Forces				
		Metallic Bonding				
		Properties of Substances				
Unit 1	Section 4 – Energetics	Enthalpy changes				
		Bond Enthalpies				
		Calorimetry				



		Hess's Law – Enthalpy of Formation				
		Hess's Law – Enthalpy of Combustion				
Unit 1	Section 5 – Kinetics, Equilibria and Redox Reactions	Reaction rates				
		Maxwell-Boltzmann Distributions				
		Reversible Reactions and LeChatelier's Principle				
		The Equilibrium Constant				
		Redox Reactions				
Unit 1	Section 6 – Thermodynamics	Enthalpy Definitions				
		Lattice Enthalpy and Born-Haber Cycles				
		Enthalpies of Solution				
		Entropy				
		Free Energy Change				
Unit 1	Section 7 – Rate Equations and K_p	Rate Equations				
		Rate Experiments				
		The Rate Determining Step				
		The Arrhenius Equation				
		Gas Equilibria and K_p				
Unit 1	Section 8 – Electrode Potentials and Cells	Electrode Potentials				
		The Electrochemical Series				
		Batteries and Fuel Cells				
Unit 1	Section 9 – Acids, Bases and pH	Acids, Bases and K_w				
		pH Calculations				
		pH Curves and Indicators				
		Titration Calculations				
		Buffer Solutions				

Unit 2

	Topic	Subject Area	Exercise book/notes	😊	😐	😞
Unit 2	Section 1 – Periodicity	Periodicity				
Unit 2	Section 2 – Group 2 and Group 7 Elements	Group 2 – The Alkali Earth Metals				
		Uses of Group 2 Elements				
		Group 7 – The Halogens				
		Halide Ions				
		Tests for Ions				
Unit 2	Section 3 – Period 3 Elements	Period 3 Elements and Oxides				
Unit 2	Section 4 – Transition Metals	Transitions Metals				
		Complex ions				
		Formation of Coloured Ions				
		Substitution Reactions				
		Variable Oxidation States				
		Titrations with Transition Metals				
		Catalysts				
Metal-Aqua Ions						



Unit 3



	Topic	Subject Area	Exercise book/notes	😊	😐	😞
Unit 3	Section 1 – Introduction to Organic Chemistry	Structural, Displayed and Skeletal Formulae				
		Homologous Series				
		Structural Isomerism				
		Stereoisomerism				
		Ionisation Energy				
		Trends in Ionisation energy				
Unit 3	Section 2 – Alkanes and Halogenoalkanes	Alkanes and Petroleum				
		Alkanes as Fuels				
		Chloroalkanes and CFCs				
		Halogenoalkanes				
		Percentage yield and Atom Economy				
Unit 3	Section 3 – Alkenes and Alcohols	Alkenes				
		Addition Polymers				
		Alcohols				
		Ethanol Production				
		Oxidation of Alcohols				
Unit 3	Section 4 – Organic Analysis	Tests for Functional Groups				
		Analytical techniques				
Unit 3	Section 5 – Isomerism and Carbonyl Compounds	Optical Isomerism				
		Aldehydes and Ketones				
		Carboxylic Acids and Esters				
		Acyl Chlorides				
		Purifying Organic Compounds				
Unit 3	Section 6 – Aromatic Compounds and Amines	Aromatic Compounds				
		Amines				
		Amides				
Unit 3	Section 7 – Polymers	Condensation Polymers				
		Disposing of Polymers				
Unit 3	Section 8 – Amino Acids, Proteins and DNA	Amino Acids				
		Proteins				
		DNA				
Unit 3	Section 9 – Further Synthesis and Analysis	Organic Synthesis				
		^1H NMR Spectroscopy				
		^{13}C HMR Spectroscopy				
		Chromatography				