



# KS4 Chemistry Homework

## AQA Higher Tier Separate Science



Create a set of revision notes for the topic that is stated.  
Your teacher will provide you with an exam question on that topic during lesson when the homework is complete.

Date set	Topic	CGP Revision guide page number	Evidence
<b>C1 – Atomic structure and the periodic table</b>			
	Atoms, elements and compounds	12-14	
	Chemical equations	15	
	Mixtures and chromatography	16	
	More separation techniques	17	
	Distillation	18	
	The history of the atom	19	
	Electronic structure	20	
	Development of the periodic table	21-22	
	Metals and non-metals	23	
	Group 1	24	
	Group 7	25	
	Group 0	26	
<b>C2 – Bonding, structure and properties of matter</b>			
	Formation of ions	28	
	Ionic bonding	29	
	Ionic compounds	30	
	Covalent bonding	31	
	Simple molecular substances	32	
	Polymers and giant covalent structures	33	
	Allotropes of carbon	34	
	Metallic bonding	35	
	States of matter and changing state	36-37	

	Nanoparticles	38	
	Uses of nanoparticles	39	
<b>C3 – Quantitative chemistry</b>			
	Relative formula mass	41	
	The mole	42	
	Conservation of mass	43	
	The mole and equations	44	
	Limiting reactants	45	
	Gases and solutions	46	
	Concentration calculations	47	
	Atom economy	48	
	Percentage yield	49	
<b>C4 – Chemical changes</b>			
	Acids and bases	51	
	Titrations	52	
	Strong & weak acids	53	
	Reactions of acids	54	
	The reactivity series	55	
	Separating metals from metal oxides	56	
	Redox reactions	57	
	Electrolysis	58	
	Electrolysis of aqueous solutions	59	
<b>C5 – Energy changes</b>			
	Exothermic & endothermic reactions	61-62	
	Bond energies	63	
	Cells and batteries	64	
	Fuel cells	65	
<b>C6 – The rate and extent of chemical change</b>			
	Rates of reaction & factors affecting rates of reaction	67-68	
	Measuring rates of reaction	69	
	Rates experiments	70	
	Finding reaction rates from graphs	71	
	Reversible reactions	72	
	Le Chatelier's principle	73	

<b>C7 – Organic chemistry</b>			
	Hydrocarbons	75	
	Fractional distillation	76	
	Uses and cracking of crude oil	77	
	Alkenes	78	
	Reactions of alkenes	79	
	Addition polymers	80	
	Alcohols	81	
	Carboxylic acids	82	
	Condensation polymers	83	
	Naturally occurring polymers	84	
<b>C8 – Chemical analysis</b>			
	Purity & Formulations	86	
	Paper chromatography	87	
	Test for gases and anions	88	
	Test for cations	89	
	Flame emission spectroscopy	90	
<b>C9 – Chemistry of the atmosphere</b>			
	The evolution of the atmosphere	91	
	Greenhouse gases & climate changes	92	
	Carbon footprint & air pollution	93-94	
<b>C10 – Using resources</b>			
	Ceramics, composites and polymers	96	
	Properties of materials	97	
	Corrosion	98	
	Finite & renewable resources	99	
	Reuse & recycling	100	
	Life cycle assessments	101	
	Potable water	102	
	Waste water treatment	103	
	The Haber process	104	
	NPK fertilisers	105	

If you do not have the CPG book then you can find similar material on Kerboodle and Bitesize.