

Exam Board:	AQA
Subject:	Chemistry
Paper:	Chemistry Paper 1
Marks available:	100
Length of paper:	1 hour 45 minutes
Topics:	Atomic structure, periodic table, bonding, quantitative chemistry, chemical changes, energy changes

Exam Information, guidance and hints

Command words:

- Complete - Fill in gaps/add labels
- Balance - Add large numbers only in front of chemical formula
- Give - Recall a simple fact
- Draw - Draw a symbol, diagram or graph
- Describe - Give details about an event, idea or a process
- Explain - Give reasons for an event, idea or process (use because/so)
- Define - write the meaning of a word or term
- Compare - Identify how things are similar/different
- Suggest - Use your own knowledge in an unfamiliar context
- Plan - Write a method for carrying out a practical
- Calculate - Use numbers in a formula
- Name - Recall the name of a piece of equipment or person
- Estimate - Use data and evidence to predict a value

Online Resources

- [Cognito past papers](#)

Hints/tips:

- Use a ruler for straight lines of best fit but not curved lines.
- For calculation questions, use the equations provided
- Ensure you give to answers to the stated number of significant figures or decimal places
- When asked about observations, refer to what you can see happening, not what you know is happening at a molecular level
- When comparing, use comparative language such as **whereas**, **larger**, **smaller etc**
- Ensure you refer to data in graphs and tables when asked to in order to support your explanations
- Uncertainty is calculated by dividing the range of the data by 2.
- Positive ions have lost electrons to become positive and negative ions have gained electrons to become negative
- Concentration = mass / volume
- **Higher only:** Concentration = moles / volume

Foundation Example Papers and Markschemes

Higher Example Papers and Markschemes

2018 F Paper	Annotated P1	2018 MS	2018 H paper	Annotated P1	2018 MS
2019 F Paper	Annotated P1	2019 MS	2019 H Paper	Annotated P1	2019 MS
2020 F Paper	Annotated P1	2020 MS	2020 H Paper	Annotated P1	2020 MS

PLC Chemistry Paper 1 - Mock 1

Topic	Key information related to topic	Sparx Code	Resources/Information related to topic	How well do you understand this topic? RAG		
				Red	Amber	Green
Atoms	Identify compounds, elements and mixtures	R447	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.03			
Atoms	Identify the difference between metals and nonmetals, including their properties	R444	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.12			
Atoms	Describe metallic bonding and describe the properties of alloys.	R928	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_2.1			
Atoms	Identify the correct equipment to separate mixtures	R550	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.06			
Atoms	Identify the numbers of protons, neutrons and electrons in an atom including completing the electronic structure	R945	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.01			
Atoms	Describe the reactions of the group 1 elements	R406	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.14			
Atoms	Describe the reactions of the group 7 elements	R580	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.15			
Atoms	Describe the models of the atom and how models of the atom have changed over time	R793	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.08			
Atoms	Describe how elements have isotopes and why isotopes are different to atoms	R365 R330	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_1.02			
Atoms	Describe the differences in the states of matter, solid, liquid and gas	R252	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_2.12			
Bonding	Explain the properties of alloys	R596	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_2.1			

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Bonding	Describe how ions are formed	R199	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_2.01			
Bonding	Describe what nanoparticles are and explain their uses.	R530	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_2.15			
Bonding	Describe the structure of fullerenes and graphene	R916	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_2.09			
Bonding	Describe the structure of diamond and graphite	R916	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_2.08			
Chemical changes	Plan a method to make a soluble salt	R885 R412	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_11.01			
Chemical changes	Higher tier only: explain how to carry out a titration	R539	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.02			
Chemical changes	Higher tier only: explaining neutralisation reactions and calculate the concentration of an acid after a titration	R892 R297	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.04			
Chemical changes	Identify displacement reactions	R640	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.06			
Chemical changes	Describe how molten electrolysis works	R672	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.1			
Chemical changes	Describe how aqueous electrolysis works	R279	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.12			
Chemical changes	Explain how to separate metals from oxides	R483	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.08			
Chemical	Higher tier only: describe and explain	R245	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.08			

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changes	redox reactions including half equations		a-h-t 4.09			
Chemical changes	Explain how cells and batteries work	R120	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_5.03			
Chemical changes	Acids and alkalis	R529	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.01			
Chemical changes	Higher Tier only: Explain the difference between strong and weak acids	R629	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_4.03			
Quantitative chemistry	Calculate relative formula mass and percentage by mass	R195	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_3.01			
Quantitative chemistry	Calculate the concentration of solutions	R807 R262	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_3.08			
Quantitative chemistry	Higher tier only: calculate atom economy (percentage atom economy)	R474	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_3.09			
Quantitative chemistry	Calculate the percentage yield of a product	R463	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_3.1			
Quantitative chemistry	Calculate volumes of gases	R332	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_3.07			
Energy changes	Investigate how temperature changes in different practical situations	R466	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_11.04			
Energy changes	Describe what endothermic and exothermic reactions are	R833	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_5.01			
Energy changes	Higher: Calculate bond energies to determine if a reaction is endothermic or exothermic	R769	https://cognitoedu.org/coursesubtopic/c2-gcse-aq-a-h-t_5.02			

Topic	Key information related to topic	Sparx Code	Resources/Information related to topic	How well do you understand this topic? RAG		
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Periodic table	Development and structure of periodic table	R684 R842	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.1			
Periodic table	Balancing chemical (symbol) equations	R994	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.04			