Exam Board:	AQA
Subject:	Chemistry
Paper:	Chemistry Paper 1
Marks available:	**70**
Length of paper:	75 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:

- Ensure you tick the right number of boxes on multiple choice questions
- 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, larg**er**, small**er 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-aqa-h-t_1.03			
Atoms	Describe how the model of the atom has developed and changed over time	R793	https://www.youtube.com/watch?v=Q8y4x5EElm8			
Atoms	Describe Rutherford's alpha scattering experiment	R793	https://www.youtube.com/watch?v=qAlpNXO_FRE			
Atoms	Calculating atomic mass using isotope abundance	R646	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.02			
Atoms	Identify the correct equipment to separate mixtures	R550	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.06			
Atoms	Identify the numbers of protons, neutrons and electrons in an atom	R945	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.01			
Atoms	Draw and describe the electronic structure in atoms	R945	https://www.youtube.com/watch?v=kvTzdD1eGUQ&t=213s			
Atoms	Describe the reactions of the group 1 elements	R406	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.14			
Atoms	Describe the reactions of the group 7 elements and explain their trends	R580	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.15			
Atoms	Describe the process of distillation	R550	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.07			
Bonding	Describe how ions are formed	R868	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.01			

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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Bonding	Explain what happens during ionic bonding including electron transfers	R557	https://www.youtube.com/watch?v=MdU44WeiLps			
Bonding	Describe how simple covalent compounds are formed and represent them as dot and cross diagrams	R467	https://www.youtube.com/watch?v=7IkYm7ZgiAw			
Bonding	Explain the properties of alloys	R596	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.1			
Bonding	Describe the structure of fullerenes and graphene	R916	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.09			
Bonding	Describe the structure of diamond and graphite	R916	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.08			
Bonding	Describe the properties of ionic compound	R562	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.03			
Bonding	Describe the properties of covalent compounds	R876	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.07 https://www.youtube.com/watch?v=ZeJubj0KWdM			
Bonding	Describe the bonding and properties of polymers	R371	https://www.youtube.com/watch?v=EP0zfm_FVqc			
Bonding	Describe the structure and properties of giant covalent compounds	R916	https://www.youtube.com/watch?v=RVV8pncaA7A			
Bonding	Describe the properties of metallic structures	R928	https://www.youtube.com/watch?v=tRKkGRBndto			
Chemical	Identify and name state changes between	R211	https://www.youtube.com/watch?v=hkBrw2fG75U			

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Changes	solids, liquids and gases					
Chemical changes	Identify displacement reactions	R640	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_4.06			
Chemical changes	Describe how molten electrolysis works	R672	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_4.1			
Chemical changes	Explain how aqueous electrolysis works	R279	https://www.youtube.com/watch?v=6WjC_Vi4roA https://www.youtube.com/watch?v=mL7mkqyLpSo			
Chemical changes	**HT ONLY: Write half equations to show what happens during electrolysis**	R792	https://www.youtube.com/watch?v=W9ngXNxSyoo			
Chemical changes	Explain how to make a pure dry sample of salt	R412	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_11.01			
Chemical changes	Explain how to separate metals from oxides	R483	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_4.08			
Chemical changes	Explain the difference between acids and bases	R529	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_4.01			
Chemical changes	**HT ONLY: Explain the difference between strong and weak acids**	R629	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_4.03			
Chemical changes	Describe the electrolysis of aluminium oxide works	R672	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_4.11			
Chemical changes	**HT ONLY: Explain how the pH scale works and what it shows.**	R309	https://www.youtube.com/watch?v=4pIHhXfGZIE			
Quantitative	Explain the law of conservation of mass	R533	https://www.youtube.com/watch?v=YZi5DnMX0X			

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chemistry			M&pp=ygUZR0NTRSBjb25zZXJ2YXRpb24gb2YgbWFzcw%3D%3D&pbjreload=102			
Quantitative chemistry	**HT ONLY: Calculating mass and moles**	R624	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_3.03			
Quantitative chemistry	Calculate relative formula mass and percentage by mass	R195	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_3.01			
Quantitative chemistry	Calculate the concentration of solutions **HT ONLY: Calculating concentration using moles**	R807 **H: R262**	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_3.08			
Quantitative chemistry	Balance chemical equations and explain what is happening during a chemical reaction	R994	https://www.youtube.com/watch?v=qquOFYOpdl0			
Energy changes	Investigate how temperature changes in different practical situations	R466	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_11.04			
Energy changes	Describe what endothermic and exothermic reactions are	R833	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_5.01			
Energy changes	Draw and describe energy profile graphs	R675	https://www.youtube.com/watch?v=hNNvIsQLSV8			
Energy changes	**HT ONLY:** Calculate bond energies to determine if a reaction is endothermic or exothermic	R769	https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_5.02			