GCSE (9–1)

GATEWAY SCIENCE CHEMISTRY A

OCR
Oxford Cambridge and RSA

Clarification summary

Following the ongoing review of our qualifications and feedback from teachers about the depth and breadth of some of the specification statements in GCSE Chemistry A, we have added the following clarifications to particular specification statements, as detailed in this resource. Please use this resource in conjunction with the specification.

Key: text = a change either in wording or formatting
~~text~~ = this text has either been removed or moved from this position
text = higher content only

Clarification to the 'To include' section:

Specification reference	To include	Reasoning
C2.1g	using aqueous and non-aqueous solvents and locating agents	Clarification of the expectations for assessment
C3.3k	the use of universal indicator and pH meters	Clarification on the requirements of the learning outcome
C3.4d	the equations and **half equations** of the reactions at the electrodes	Clarification of the expectations for assessment
C4.2g	the features of a mass spectroscopy chart	Clarification of the expectations for assessment
C6.1a	the principles of using carbon to extract iron and other metals from their ores	Clarification on the requirements of the learning outcome
C6.1k	the use of resources and impact on the environment of all stages of a life cycle assessment: • making materials for a product from raw materials through to the process used to make the product • the use of the product • transport of the product • the method used for its disposal at the end of its life	Clarification on the requirements of the learning outcome

Clarification to the 'Underlying knowledge and understanding' section:

Specification reference	Underlying knowledge and understanding	Reasoning
C1.1	Learners should be familiar with the different states of matter and their properties. Learners should be aware of the energy changes when a change of state occurs. They should also be familiar with changes of state in terms of the particle model.	To reinforce expected knowledge from Key Stage 3
C2.1	Learners should be familiar with the concept of pure substances. They should have met simple separation techniques of mixtures: filtration, evaporation and distillation. The identification of pure substances in terms of melting point, boiling point and chromatography will also have been met before.	To reinforce expected knowledge from Key Stage 3
C2.2	Learners should be familiar with the simple (Dalton) atomic model. They should be familiar with the principles underlying the Mendeleev Periodic Table and the modern Periodic Table including periods and groups, and metals and non-metals. Learners should have some knowledge of the properties of metals and non-metals including the chemical properties of metal and non-metal oxides with respect to acidity.	To reinforce expected knowledge from Key Stage 3
C3.1	Learners should be familiar with chemical symbols and formulae for elements and compounds. They should also be familiar with representing chemical reactions using formulae and equations. Learners will have knowledge of conservation of mass, changes of state and chemical reactions.	To reinforce expected knowledge from Key Stage 3
C3.3	Learners should be familiar with combustion, thermal decomposition, oxidation and displacement reactions. They will be familiar with defining acids and alkalis in terms of neutralisation reactions. Learners will have met reactions of acids with alkalis to produce a salt and water and reactions of acids with metals to produce a salt and hydrogen. They should have met the pH scale for measuring acidity and alkalinity, and some indicators.	To reinforce expected knowledge from Key Stage 3
C5.1	Learners should be familiar with the mole from Topic C3 and know that it measures the amount of ~~something~~ substance. They should be familiar with representing chemical reactions using formulae and using equations.	To reinforce expected knowledge from Key Stage 3
C6.1	Learners should be familiar with the properties of ceramics, polymers and composites. They should have knowledge of the order of metals and carbon in the reactivity series. ~~They also~~ Learners ~~will~~ should have met the method of using carbon to obtain metals from metal oxides. They should also be aware that the earth has limited resources and the benefits of recycling materials.	To reinforce expected knowledge from Key Stage 3

Clarification to the 'Common Misconceptions' section:

Specification reference	Common Misconceptions	Reasoning
C5.3	Learners often do not recognise that when a dynamic equilibrium is set up in a reaction the concentration of the reactants and products remain constant. ~~They think that they are equal.~~ They think that the concentrations of all substances are equal. Learners also sometimes perceive a dynamic equilibrium as two reactions.	To add clarity to the common misconception

Clarification to the 'Practical suggestions' section:

Specification reference	Practical suggestions	Reasoning
C2.1g	~~Thin~~ Paper or thin layer chromatography. (PAG C3)	Practical suggestion to help teachers know where the PAGs fit into the content.