

GCSE Integrated Science (Single Award) Qualification Outline – Consultation Version



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Introduction

This document provides a high-level overview of the WJEC GCSE Integrated Science (Single Award) qualification available for first teaching from September 2026.

It is based on Qualification Wales's Approval Criteria ([Approval Criteria GCSE Integrated Single Science Award](#)). Our qualification **must** meet these requirements.

The qualification outline will provide a guide for the development of the Specification and Sample Assessment Materials (SAMs). Aspects of the outlines may need to be revisited if issues arise during the development process.

Qualification Overview

The GCSE Integrated Science (Single Award) GCSE qualification is designed to provide learners with a broad understanding of the fundamental concepts in biology, chemistry and physics. It emphasises the interconnectedness of scientific principles, enquiry skills, and the application of science in everyday life.

The GCSE Integrated Science (Single Award) qualification will support the Curriculum for Wales by:

- supporting the statements of what matters, giving learners the opportunity to engage with the following:
 - curiosity – being curious and searching for answers is essential to understanding and predicting phenomena
 - living things – the world around us is full of living things which depend on each other for survival
 - matter – matter and the way it behaves, defines our universe and shapes our lives
 - forces – forces and energy provide a foundation for understanding our universe.
- supporting the principles of progression by:
 - developing knowledge and understanding of scientific concepts
 - using, applying and evaluating scientific enquiry skills
 - becoming more effective as a learner, to solve scientific problems with increased independence
 - making connections and exploring new contexts, considering the impacts of scientific actions.

Qualification Structure

Unit 1: Living on Earth

Written examination (tiered)

45% of qualification

Available in the first year of study

Includes pre-release material

External assessment, marked by WJEC

Unit 2: Science in a Changing World

Written examination (tiered)

45% of qualification

External assessment, marked by WJEC

Unit 3: Scientific Enquiry

Practical science assessment

10% of qualification

Completed in the final year of study

External assessment, marked by WJEC

These are the percentages for the Integrated Science assessment objectives:

AO1	Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures.	25%
AO2	Apply knowledge and understanding of scientific ideas, processes, techniques and procedures.	50%
AO3	Analyse, interpret and evaluate scientific information, processes, techniques and procedures.	25%

This will be a unitised qualification.

Unit Information

Unit 1 – Living on Earth

The purpose of this unit is to:

- provide opportunity to learners to develop their scientific knowledge, understanding and skills across biology, chemistry and physics
- interpret scientific data and evidence critically
- evaluate scientific information to make informed decisions
- apply learning to relevant and meaningful contexts.

This unit will focus on the themes:

Maintaining a healthy body	<ul style="list-style-type: none">• Diet and Exercise• Disease Prevention
Using the Earth's Resources	<ul style="list-style-type: none">• Generating, distributing and storing energy• Energy in Ecosystems• Using Materials
Transport	<ul style="list-style-type: none">• Environmental Considerations of Transport• Efficiency in Transport

The unit will be assessed via an examination available in the summer series of the first year of study. A pre-release resource booklet will be released one month before the examination. The question types will target all Assessment Objectives.

There will be no optionality in this unit.

The examination will be tiered – higher tier and foundation tier.

Unit 2 – Science in a Changing World

The purpose of this unit is to:

- provide opportunity to learners to develop their scientific knowledge, understanding and skills across biology, chemistry and physics
- interpret scientific data and evidence critically
- evaluate scientific information to make informed decisions
- apply learning to relevant and meaningful contexts.

This unit will focus on the themes:

Human Influence on the Earth	<ul style="list-style-type: none">• Managing Human and Environmental Concerns• Carbon in Our Climate
Looking for Clues	<ul style="list-style-type: none">• Physical and chemical reactions
Transport	<ul style="list-style-type: none">• Impact of space travel on humans• Challenges of living on other planets and the Moon• Communication

The unit will be assessed via an examination available in the summer series of the final year of study. The question types will target all Assessment Objectives.

There will be no optionality in this unit.

The examination will be tiered – higher tier and foundation tier.

Unit 3 – Scientific Enquiry

The purpose of this unit is to:

- undertake practical science experiments
- interpret scientific data and evidence
- enquire into and apply scientific knowledge
- plan and evaluate designs for scientific enquiry.

Scientific enquiry is an integral element of the qualification. The undertaking of practical science experiments and enquiry engages learners throughout the qualification by bringing their learning to life and encouraging curiosity. This unit assesses the skills developed throughout the qualification.

The assessment will include subject content from one of the themes of the qualification.

The assessment requires candidates to sit one from a choice of two tasks (the choice will be a task from biology, chemistry and physics) and will be assessed in January/February of the final year of study.

Consideration of manageability, engagement, validity and reliability

In developing this proposed qualification outline, we have considered manageability, engagement, reliability and validity, and how to balance these considerations in the context of the requirements of the Approval Criteria.

The qualification comprises 120-140 GLH (Guided Learning Hours), and the content for each unit is designed to be manageable within this timeframe, while also promoting the development of scientific enquiry skills, a key focus in the Curriculum for Wales. These skills will be integrated across the qualification, ensuring that learners have ample opportunities to engage with hands-on, enquiry-based learning.

To meet the Approval Criteria, Unit 1 (which carries 45% of the overall weighting) will be assessed at the end of Year 10. A pre-release resource will be made available to centres one month prior to the examination, fostering engagement by encouraging early preparation and interaction with the materials. Unit 2, also weighted at 45%, will be assessed in Year 11. Content distribution across the two units will be carefully considered to ensure an equitable balance between the three science disciplines, and teaching professionals will be involved in the co-construction process to ensure the content remains relevant and accessible.

The qualification must adhere to the unitised structure, with a terminal assessment rule of 55%. The assessment of Scientific Enquiry will take place at the start of the Spring term, giving learners time to develop practical skills through a series of scientific enquiries carried out in Year 10 and the first term of Year 11. This assessment window is deliberately scheduled outside of busy GCSE and GCE examination periods to minimise disruption. Centres will receive an equipment list ahead of time to facilitate planning, and the flexibility of two practical tasks allows for adaptability based on resources and staff availability. These tasks will be thematically aligned with the units' content, ensuring coherence and relevance. We recognise that managing practical assessments can be challenging due to equipment and scheduling constraints, but this approach reflects our commitment to developing learners' practical science skills at the most appropriate stage.

We believe that the combination of written examinations and practical scientific enquiry assessments offers a valid and robust method for evaluating the core content and aims of the qualification. The assessments will allow students to demonstrate their knowledge and skills in meaningful scientific contexts, with a mix of question types enhancing validity by targeting a range of learning outcomes. Reliability will be ensured by maintaining consistent assessment objectives, ensuring that the demand of the tasks is appropriate and stable across exam cycles. Marking criteria will be rigorously developed, and assessors will receive training to ensure consistency in the application of these standards.

Throughout the qualification development process, we will continue to monitor and refine the balance between manageability, engagement, reliability, and validity, ensuring that the final qualification meets the educational priorities of the Curriculum for Wales while providing a fair and enriching experience for all learners.

APPENDIX

Key information from Approval Criteria

The following information has come directly from Qualifications Wales's ([Approval Criteria GCSE Integrated Single Science Award](#)) – our qualification must meet these requirements.

Purpose

1. **GCSE Integrated Science (Single Award)** must:
 - 1.1. be designed primarily for Learners between the ages of 14 and 16
 - 1.2. build on the conceptual understanding Learners have developed through their learning from ages 3–14
 - 1.3. support teaching and learning by providing appropriately broad, demanding, relevant and engaging content and assessment that relates to and supports the Curriculum for Wales, including its four purposes
 - 1.4. allow Learners to develop a strong foundation of knowledge, skills and understanding which supports progression to post-16 study (excluding GCE Science qualifications) and prepares them for life, learning and work
 - 1.5. provide meaningful, fair and accurate information on Learner achievement within a subject that highlights what Learners know, understand and can do.
2. The specification for **GCSE Integrated Science (Single Award)** must clearly state that this qualification has not been designed to support direct progression to GCE Science qualifications.
3. The specification for **GCSE Integrated Science (Single Award)** must clearly state that this qualification has been designed for Learners who will benefit from studying a science GCSE that has less content than a double award.

Aims

4. **GCSE Integrated Science (Single Award)** must enable Learners to:
 - 4.1. explore a range of knowledge, skills and understanding in relation to the sciences
 - 4.2. develop their knowledge, skills and understanding within a range of themes and sub-themes
 - 4.3. be assessed in a variety of relevant and meaningful contexts.
5. **GCSE Integrated Science (Single Award)** must enable Learners to:

(For clarity, GCSE The Sciences (Double Award) has been designed to fully support progression to AS and A levels in Biology, Chemistry and Physics)

 - 5.1. demonstrate knowledge and understanding of the sciences
 - 5.2. recognise the interdisciplinary nature of the sciences
 - 5.3. understand how different areas of science relate to them personally, locally, nationally and internationally
 - 5.4. develop the skills to question scientific ideas, using critical and creative thinking to solve problems
 - 5.5. understand how to use scientific methods
 - 5.6. develop a variety of practical and research skills, enabling them to successfully refine their ways of working
 - 5.7. understand relationships between data, evidence and explanations through quantitative and qualitative analysis and research
 - 5.8. evaluate and challenge scientific methods, evidence and conclusions

- 5.9. apply mathematical, communication and digital skills and tools when developing scientific knowledge and skills
- 5.10. appreciate the role played by morals, ethics, sustainability and other aspects of decision-making in the application of science.

Assessment

Assessment objectives

19. The assessment of the knowledge, understanding and skills required in the qualification must target the following assessment objectives in line with the indicated weightings, within a tolerance of +/- 5 percentage points.

AO1	Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures.	25%
AO2	Apply knowledge and understanding of scientific ideas, processes, techniques and procedures.	50%
AO3	Analyse, interpret and evaluate scientific information, processes, techniques and procedures.	25%

Scheme of assessment

- 20. **GCSE Integrated Science (Single Award)** must be unitised.
- 21. **GCSE Integrated Science (Single Award)** must show the range in the proportion of marks allocated to each assessment objective and to each unit.
- 22. The examination assessments for **GCSE Integrated Science (Single Award)** must be tiered.
- 23. The assessments for **GCSE Integrated Science (Single Award)** must allow Learners to achieve the following grades in each tier:
 - 23.1. higher tier: A*-D
 - 23.2. foundation tier: C-G.
- 24. Assessment objective weightings must be the same for both tiers of the qualification.
- 25. **GCSE Integrated Science (Single Award)** must have a terminal rule of 55%, reflecting the requirement for the practical assessment to be completed in the final year of study.
- 26. **GCSE Integrated Science (Single Award)** must include the following assessment arrangements:
 - 26.1. One examination assessment to assess Unit 1: Living on Earth, that:
 - 26.1.1. accounts for 45% of the qualification
 - 26.1.2. must have a proportion of the examination linked to pre-release material that must be issued by the awarding body, one month before the assessment
 - 26.1.3. must be available for Learners to complete in the first year of study
 - 26.1.4. must be set and marked by the awarding body

- 26.2. One examination assessment to assess Unit 2: Science in a Changing World, that:
 - 26.2.1. accounts for 45% of the qualification
 - 26.2.2. must be set and marked by the awarding body
- 26.3. An assessment of scientific enquiry that accounts for 10% of the qualification:
 - 26.3.1. this assessment must allow Learners to demonstrate their practical skills in context
 - 26.3.2. this assessment must assess the scientific enquiry skills relating to practical work, as well as a range of the other scientific enquiry skills specified in section 9
 - 26.3.3. the awarding body must offer a choice of tasks each year. These tasks must relate to a range of the sub-themes
 - 26.3.4. the awarding body must specify how many tasks each Learner must complete
 - 26.3.5. this assessment must be set and marked by the awarding body
 - 26.3.6. the awarding body must specify the duration of the assessment of scientific enquiry and the period in which it must be taken by Learners.
27. Scientific enquiry skills must be a feature of the assessment for each unit. In the examinations, this must include opportunities for a Learner to assess the validity of a range of claims about the content of each unit.
28. Across the qualification, the assessment of content that draws on each of Biology, Chemistry and Physics must be of a broadly Comparable level of challenge.
29. The assessments for **GCSE Integrated Science (Single Award)** must provide the same level of challenge as the assessments for GCSE The Sciences (Double Award).
30. The awarding body must specify its rules in regard to resits and resubmissions for **GCSE Integrated Science (Single Award)** in accordance with the *National GCSE Conditions and Requirements*.