

GCSE Digital Technology Qualification Outline – Consultation Version



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Introduction

This document provides a high-level overview of the proposed WJEC GCSE Digital Technology Qualification.

It is based on Qualifications Wales's Approval Criteria (key sections are included in Appendix 1). The qualification **must** meet these requirements.

The qualification outline will provide a guide for the development of the Specification and Sample Assessment Materials (SAMs).

Qualification Overview

The GCSE Digital Technology qualification will support the Curriculum for Wales by:

- Supporting the statements of what matters¹ by giving learners the opportunity to:
 - develop curiosity about technology
 - process data to solve a wide range of real-world problems
 - understand computational processes have changed the way we live, work, study and interact with each other and our environment
 - provide the foundation for all software and hardware systems
 - create and use digital technologies to their full potential
 - understand how digital technologies work
 - understand that there are broad legal, social and ethical consequences to the use of technology
 - make informed decisions about the future development and application of technology.
- Supporting the principles of progression² by encouraging learners to:
 - apply an iterative approach, through trial and improvement, to design processes
 - investigate, explore, analyse, problem-solve and design creative solutions
 - consider ethical and moral dilemmas linked to the use of technology.
- Supporting the subject specific considerations³ for GCSE Digital Technology by giving learners the opportunity to:
 - explore the design, development and application of technology, software and systems
 - develop digital skills using a range of technology and software.

¹ <https://hwb.gov.wales/curriculum-for-wales/science-and-technology/statements-of-what-matters/>

² <https://hwb.gov.wales/curriculum-for-wales/science-and-technology/principles-of-progression/>

³ <https://hwb.gov.wales/curriculum-for-wales/science-and-technology/designing-your-curriculum/#specific-considerations-for-this-area>

Qualification Structure

Unit 1: The Digital World

Digital-only exam
40% of qualification

Unit 2: Digital Practices

Non-examination assessment
40% of qualification
Marked by the Centre and moderated by WJEC

Unit 3: Communicating in the Digital World

Non-examination assessment
20% of qualification
Marked by the Centre and moderated by WJEC

These are the proposed percentages for the GCSE Digital Technology assessment objectives:

AO1	Demonstrate knowledge and understanding of digital technology systems.	20%
AO2	Apply knowledge and understanding of digital technology systems in a range of contexts.	25%
AO3	Analyse, evaluate, or make judgements to identify audience needs and plan digital products and communications that meet these needs.	20%
AO4	Select, use, and apply skills and techniques digital products that meet the needs of specified audiences.	35%

This will be a unitised qualification. There is no hierarchy implied by the order in which the units are taught. Therefore, the order does not imply a prescribed teaching order.

Unit Information

Unit 1 - The Digital World

The purpose of this unit is to:

- demonstrate knowledge and understanding of the relationship between analogue and digital data, and how data is measured and stored
- explore ways in which digital technology systems are developed, function, communicate and safeguard data
- demonstrate an awareness of how digital communications methods impact people and organisations
- explore ethical and legal issues surrounding safeguarding data
- consider the evolution of digital technologies.

This unit will focus on:

- digital technology systems
- the value of digital technology
- perspectives on digital technology

Please see Section 4 of the Approval Criteria in Appendix A for detail of the content that we must include in the unit.

The unit will be assessed via a digital examination available, as prescribed in the Approval Criteria in Appendix A, in the summer series of the second year of study, and every year thereafter, with a mix of question types that will target AO1 and AO2. AO1 and AO2 will have equal weightings.

Unit 2 – Digital Practices

The purpose of this unit is to:

- use and organise data purposefully
- plan and develop data-informed digital products for a specific audience and purpose
- test and evaluate the success of digital products.

This unit will focus on:

- interrogating data in spreadsheets
- developing data informed digital products

Please see Section 4 of the Approval Criteria in Appendix A for detail of the content that we must include in the unit.

The unit will be assessed via a non-examination assessment, as prescribed in the Approval Criteria in Appendix A, first available in September of the first year of study, and every year thereafter. The non-examination assessment must be submitted digitally. The mix of tasks for this unit will target AO3 and AO4. AO4 will have a higher weighting. The unit will be internally assessed, marked by the centre, and externally moderated by WJEC.

Unit 3 – Communicating in the Digital World

The purpose of this unit is to:

- explore online digital marketing
- create digital media assets
- plan and creating a digital marketing campaign

This unit will focus on:

- social media and online marketing communications
- creating digital assets and planning digital communications

Please see Section 4 of the Approval Criteria in Appendix A for detail of the content that we must include in the unit.

The unit will be assessed via a non-examination assessment, as prescribed in the Approval Criteria in Appendix A, first available in September of the first year of study and every year thereafter. The non-examination assessment must be submitted digitally. The mix of tasks for this unit will target AO2, AO3 and AO4. AO2 and AO3 will have equal weighting, AO4 will have a higher weighting. The unit will be internally assessed, marked by the centre, and externally moderated by WJEC.

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 Approval Criteria require 60% of the qualification to be assessed by non-examination assessment. This poses some potential manageability challenges for centres and learners due to the higher proportion on non-examination assessment. We propose to minimise by spreading the workload and assessment for centres and learners by allowing centres to structure the order of units in a way that suits their context. All non-examination assessments will be made available in the first year of study for submission to WJEC in the summer series of the first year of study. Both non-examination assessment will be marked by the centre and moderated by WJEC, which has the potential to impact on manageability, but will allow centres to mark non-examinations at a time that suits them.

Due to the creative, iterative and digital nature of the subject, and the extended time spent on non-examination assessment, we are currently considering a medium level of control for the non-examination assessment in order to aid manageability. However, this will need further careful consideration during development so that we can ensure equity for learners.

We believe that our proposed qualification should provide opportunities for centres to develop an engaging programme of study for its learners, in line with the expectations of the Curriculum for Wales. The qualification is an opportunity for learners to understand current digital technologies, their applications, and their impact on society.

We believe that the non-examination assessment tasks we propose (Units 2 and 3) are a valid approach to assessing the purpose and content because they allow students to demonstrate their skills in appropriate contexts. To ensure the reliability of the non-examination assessment for Unit 2 and Unit 3, we will ensure the unit will target the same assessment objective weightings each examination series, marking criteria will be developed and teachers will be provided with a package of support to ensure consistent application of the marking criteria across centres and each series. We will moderate a sample of centre work to provide further assurance of reliability.

We believe that the purpose and content of Unit 1 can be validly assessed by examination, and a mix of question types can help us maximise validity. When we develop assessments, we will ensure that all tasks target the relevant construct, that there is an appropriate balance of content covered over time and that there is alignment between assessment items and learning outcomes. Where appropriate, we will use data available to us on how an assessment has functioned. To ensure reliability, we will make sure that the examined units target the same assessment objective weightings and have a consistent level of demand each series, marking criteria will be developed and assessors will be trained on how to apply them consistently. We are liaising with Qualifications Wales and Welsh Government about centre capacity to deliver the on-screen assessment. We will continue to consider the balance of manageability, engagement, reliability and validity, at each stage of qualification development.

APPENDIX A

Key information from Approval Criteria

The following information has come directly from Qualifications Wales's ([Approval Criteria GCSE Digital Technology](#)) - our qualification must meet these requirements.

Purpose

1. **GCSE Digital Technology** 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 support progression to post-16 study and prepare 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.

Aims

2. **GCSE Digital Technology** must:
 - 2.1. allow *Learners* to explore a range of knowledge, skills and understanding in relation to digital technology
 - 2.2. provide opportunities for *Learners* to be assessed in a variety of relevant and meaningful contexts.
3. The **GCSE Digital Technology** qualification must support *Learners* to:
 - 3.1. become independent, confident and knowledgeable users of existing, new and emerging digital technologies
 - 3.2. develop knowledge of different digital technology systems used across a range of occupational sectors
 - 3.3. understand the impact digital technologies can have on individuals and wider society and the ways in which they can bring about change
 - 3.4. develop skills in organising and analysing data to identify trends and audiences
 - 3.5. become creators of digital products, in a variety of formats and for a variety of purposes, that meet specified, authentic needs
 - 3.6. develop transferable skills in using a range of hardware and software
 - 3.7. develop their understanding of the systems development life cycle (SDLC) and of how ideas can become products.

Assessment objectives

14. 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 digital technology systems.	20%
AO2	Apply knowledge and understanding of digital technology systems in a range of contexts.	25%
AO3	Apply knowledge, skills and understanding to identify audience needs and plan digital products and communications that meet these needs.	20%
AO4	Develop, test and evaluate digital products that meet the needs of specified audiences.	35%

Scheme of assessment

15. The **GCSE Digital Technology** qualification must be unitised.

16. The **GCSE Digital Technology** qualification must show the range in the proportion of marks allocated to each assessment objective and to each unit.

17. The **GCSE Digital Technology** specification must include the following assessment arrangements:

Unit	Arrangements
Unit 1 The Digital World	Must be assessed by a digital-only exam that: <ul style="list-style-type: none">• is set and marked by the awarding body• includes item types which are enhanced by the digital testing platform• account for 40% weighting in the calculation of the final qualification grade.

<p>Unit 2 Digital Practices</p>	<ul style="list-style-type: none"> ● must be assessed through non-examination assessment ● must be set by the awarding body ● must ensure that internally assessed evidence is externally <i>Moderated</i> by the awarding body ● must require <i>Learners</i> to undertake a practical project in which tangible outcomes are produced ● the awarding body must release a substantial data set, or data sets, in spreadsheet format, to <i>Centres</i> for each assessment opportunity ● must require <i>Learners</i> to identify an audience, an audience need or a trend by analysing the awarding body-released data set(s) ● must require <i>Learners</i> to plan a digital product that meets the requirements set out in paragraph 6, for the identified audience, audience need or trend ● must require <i>Learners</i> to develop a digital product, or products, in the form they have selected, tailored to the audience, audience need, or trend identified ● must require <i>Learners</i> to test their digital products and evaluate the extent to which the product they have developed satisfies the trend, audience need, or audience identified ● must require <i>Learners</i> to submit their digital products in a format in which the technical skills that have been used can be clearly evidenced ● must account for 40% weighting in the calculation of the final qualification grade.
<p>Unit 3 Communicating in the Digital World</p>	<ul style="list-style-type: none"> ● must be assessed through non-examination assessment ● must be set by the awarding body ● must ensure that internally assessed evidence is externally <i>Moderated</i> by the awarding body ● must require the awarding body to issue annual briefs to <i>Centres</i> ● must require <i>Learners</i> to plan and create an online digital communications campaign ● must require <i>Learners</i> to create digital assets for the marketing campaign, including images and live action moving images ● must allow <i>Learners</i> to present their findings in a variety of digital formats ● must not require <i>Learners</i> to publish their campaigns online ● must account for 20% weighting in the calculation of the final qualification grade.

18. The awarding body must specify its rules in regard to resits and resubmissions for **GCSE Digital Technology** in accordance with the *National GCSE Conditions and Requirements*.