WJEC Entry Level / Level 1 Foundation Design and Technology

Draft Specification

For teaching from September 2027
First Award 2029

This is a DRAFT specification. Centres should therefore expect some changes in the final version published in September 2026.

This specification meets the requirements of the following regulatory documents published by Qualifications Wales:

- General Foundation Qualifications Approval Criteria which set out requirements for any new qualification Approved for first teaching from September 2027 and beyond.
- Standard Conditions of Recognition which contains the rules that all awarding bodies and their qualifications must meet when offering qualifications to learners in Wales.

Contents

Empowering learners, supporting teachers

As Wales' largest awarding body, we have over 75 years of experience in delivering trusted, high-quality qualifications that support learners, educators, and employers across Wales.

We provide a wide range of bilingual qualifications that are accessible, engaging, and designed to meet the needs of today's learners.

Our qualifications are backed by expert subject teams, high quality resources, and responsive, specialist support. Our work is guided and shaped through close collaboration with schools, colleges, regional consortia, sector experts and Qualifications Wales.

As the only awarding body offering qualifications in every suite of the 14-16 National Qualifications offer, we are proud to play a key role in supporting the Welsh Government's ambition to make education in Wales a source of national pride, and we remain committed to helping every learner achieve their potential and progress with confidence.

A strong foundation for future success

Our General Foundation Qualifications are designed to inspire and support learners, offering a two-year programme that is accessible and engaging. These qualifications help learners build confidence, develop essential knowledge, understanding skills, and enjoy meaningful success.

A key feature of our General Foundation Qualifications is their unitised structure, allowing learners to complete some assessments in Year 10 and others in Year 11. This flexible approach supports steady progression, reduces assessment pressure, and gives learners the opportunity to demonstrate achievement throughout the course.

The compensatory nature of our General Foundation Qualifications recognises learners' strengths across different units. Rather than requiring uniform performance in every area, this approach allows high achievement in one unit to offset lower performance in another, promoting an inclusive and supportive assessment experience.

Our General Foundation Qualifications build on the conceptual understanding learners have developed through their Curriculum for Wales learning from ages 3-14, and relate to and support the four purposes and the principles of progression. Although very distinct from GCSEs, we have designed them to provide a broad basis for progression onto our related GCSEs by focussing on similar skills and understanding.

Whether learners continue in the subject or not, they will gain valuable knowledge, understanding and skills, and a sense of accomplishment that prepares them for life, learning, and work.

WJEC Entry Level / Level 1 Design and Technology

SUMMARY OF ASSESSMENT

Unit 1: Design and Technology in the 21st Century
Topic tests: 3 x 20 minutes
30% of qualification
Set and marked by WJEC
40 marks

The unit will be assessed via three topic tests. One of the topic tests will be a Core Knowledge and Understanding topic test based on health and safety, which will be taken by all learners.

The other two topic tests will be based on:

- Materials and Components
- Tools, Techniques and Processes

For both of these topic tests, learners must select one of the following pathways:

- Engineering Design
- Fashion and Textiles
- Product Design

All three tests will include questions requiring objective responses and short answers assessing learners' knowledge and understanding of these topics.
Centres can select from digital and paper formats within a four-week assessment window.

Unit 2: Design Project
Design and Make Task: (approximately 40 hours)
70% of qualification
Set by WJEC, marked by the centre and moderated by WJEC.
60 marks

This unit will be assessed through a sustained design and make task, based on a contextual challenge set by the centre. It will assess learners' ability to:

- identify, investigate, analyse and outline design possibilities
- design and make prototypes and evaluate their fitness for purpose

This is a unitised qualification.

The qualification is not tiered.

Unit 1 will be available from 2028. Unit 2 will be available from 2029.

The first award of the qualification will be 2029.

Qualification Approval Number: Click here to enter accreditation number.

WJEC Entry Level / Level 1 Foundation Design and Technology

1 INTRODUCTION

1.1 Aims

The qualification supports learners to:

- understand the modern technologies, materials and practices used to create products
- consider existing products to inform the design and production of the learner's own product(s)
- develop the underlying skills and knowledge needed to design and create products
- appreciate the iterative nature of the design process
- appreciate how the needs and wants of user's impact on the design of products
- identify ways in which products can have environmental and societal impacts
- use knowledge, skills and understanding when making and evaluating a product or prototype.

These aims are set out in Qualifications Wales' Approval Criteria.

1.2 Curriculum for Wales

This WJEC Entry Level / Level 1 Foundation Design and Technology qualification is underpinned by the Curriculum for Wales framework and has been designed to ensure that learners can continue to make progress towards the four purposes whilst studying for this qualification. Central to this design are the principles of progression, along with the statements of what matters and those specific skills and concepts outlined in the Designing your Curriculum section of the Science and Technology Area of Learning and Experiences.

In developing this qualification, we have considered where there are opportunities to embed the cross-curricular themes and where there are opportunities for integral skills and cross-curricular skills to be developed. Appendix A provides a simple mapping, and information to support teachers will be provided in the Guidance for Teaching.

We have also considered where the qualification can generate opportunities for integrating the learning experiences noted on page 21; the Guidance for Teaching will include further information on integrating these learning experiences into delivery.

The WJEC Entry Level / Level 1 Foundation Design and Technology qualification supports the Curriculum for Wales by:

- Supporting the statements of what matters by giving learners the opportunity to:
  - be curious and search for answers to understand and predict phenomena
  - make informed decisions that affect our environment and well-being
  - consider the impact of their actions and of technological developments
  - apply their experiences, skills and knowledge to design and shape innovative engineered solutions
  - understand and control the interactions between material, structures, components and users
  - become enterprising problem solvers
  - make informed decisions about the future development and application of technology.

- Supporting the principles of progression by encouraging learners to:
  - increase their breadth and depth of knowledge by exploring and experiencing increasingly complex ideas and concepts
  - deepen their understanding of ideas, disciplines and experience
  - develop their ability to investigate, explore, problem-solve and design both in the physical and digital environments
  - make connections and transfer their learning into new contexts.

1.3 Prior learning and progression

Although there is no specific requirement for prior learning, the qualification is designed primarily for learners between the ages of 14 and 16 and builds on the conceptual understanding learners have developed through their learning from ages 3 – 14.

The qualification allows learners to develop a strong foundation of knowledge, skills and understanding which supports progression to post-16 study and prepares learners for life, learning and work. The qualification provides a broad basis for progression onto GCSE Design and Technology and other related qualifications. In addition, the specification provides a coherent, satisfying and worthwhile course of study for learners who do not progress to further study in this subject.

1.4 Guided Learning Hours and Total Qualification Time

WJEC Entry Level / Level 1 Foundation Design and Technology has been designed to be delivered within 120 guided learning hours (GLH). The qualification has been primarily designed as a 2-year programme for learners in years 10 and 11. Centres have flexibility in how they structure and deliver their courses within the total GLH for the qualification. The amount of content within each unit and its weighting within the qualification provides an indication of the anticipated percentage of GLH required for each unit.

Total qualification time (TQT) is the total amount of time, in hours, expected to be spent by a learner to achieve a qualification. It includes both the GLH and additional time spent in preparation, study and some formative assessment activities. As General Foundation Qualifications are primarily designed for pre-16 entry-level learners, all learning and assessment within the qualification is intended to be guided. Accordingly, the total qualification time has been set at 120 hours.

1.5 Use of language

As our understanding of diversity, equity, and inclusion evolves, so must our language. Updated terminology better reflects individual identities and fosters respect and accuracy. Language used should be specific as possible. Staying informed and adaptable is crucial, as inclusive language promotes dignity and equity. Recognising that language will continue to evolve, we will remain open to further amendments to ensure it accurately represents and supports all individuals. WJEC will inform centres of any amendments and the most up to date version of the specification will always be on the website.

1.6 Equality and fair access

This specification is designed to be accessible to all learners, regardless of gender, ethnicity, religion, culture, or any other protected characteristic as defined by the Equality Act 2010. These characteristics include age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, and sexual orientation. Inclusive design principles have been applied throughout the qualification, including the use of clear and unbiased language and diverse examples. Every effort has been made to avoid, where possible, features that could unjustifiably create barriers to access or achievement.

Access arrangements and reasonable adjustments are available for eligible learners to ensure they can participate fully in assessments and demonstrate their knowledge and skills. These adjustments do not alter the intended demand of the assessment but support fair access. Guidance on access arrangements and reasonable adjustments is provided in the Joint Council for Qualifications (JCQ) document *Access Arrangements, Reasonable Adjustments: General and Vocational Qualifications*, available at www.jcq.org.uk.

This qualification adheres to the principles outlined in the JCQ guidance. As a result of inclusive design and provision for reasonable adjustments, very few learners should encounter a complete barrier to any part of the assessment process.

2 SUBJECT CONTENT

The WJEC Entry Level / Level 1 Foundation Design and Technology qualification is available in the following pathways:

- Engineering Design
- Fashion and Textiles
- Product Design

Learners are required to study one of these three pathways.

Unit 1: Design and Technology in the 21st Century consists of:
- core knowledge and understanding based on Health and Safety that **all** learners are required to study
- in-depth content that is specific to learners' chosen pathway.

Unit 2: Design Project consists of:
- core knowledge and understanding that can be applied to all three pathways.

How to read the amplification

The amplification provided in the right-hand column, titled 'Further Information' uses the following five stems:
- 'Learners should be aware of' is used when learners do not need to understand all aspects of the specified content in detail. Teachers should refer to Guidance for Teaching documents for further guidance on the depth and breadth to which this content should be taught.
- 'Learners should know' is used when learners are required to demonstrate basic knowledge and understanding.
- 'Learners should understand' is used when learners are required to demonstrate greater depth of knowledge and understanding, application of knowledge to familiar or unfamiliar contexts and analysis and evaluation of information for a given purpose.
- 'Learners should be able to' is used when learners need to apply their knowledge and understanding to a practical situation or demonstrate application of practical skills and techniques.
- 'Learners are required to' is used to show the requirements of individual units.

The use of the word 'including' indicates that the specified content must be taught and could be subject to assessment.

The use of the words 'for example' or 'such as' indicates that the specified content is for guidance only, and alternative examples could be chosen.

Unit 1

Design and Technology in the 21st Century

Topic Tests – 1 hour (3 x 20 mins)
30% of qualification
40 marks
Set by WJEC, marked by WJEC

Overview of unit

The purpose of this unit is to:

- develop learners' awareness of safe working practices within a Design and Technology environment
- allow learners to demonstrate a wide range of knowledge, understanding and skills based on Design and Technology
- develop learners' understanding of the design, development, production and use of a range of product.

This unit will focus on:

- developing an awareness and understanding of health and safety issues
- developing an awareness and an understanding of a range of material and components used within Design and Technology
- developing an awareness and an understanding of a range of tools, techniques and processes used in Design and Technology.

Centres can select to administer the topic tests either in digital or paper format within a four-week assessment window.

Areas of content

1.1 Design and Technology in the 21st Century (Core Knowledge and Understanding)	
This area of study is relevant to **all** learners. In this section, learners will gain knowledge and understanding of: 1.1.1 Health and Safety	
Content	Further information / Amplification

1.1.1
Health and Safety
	Learners should know about general workshop safety, including:
	• the importance of wearing appropriate personal protective equipment (PPE), for example:
	  • ear protection
	  • gloves
	  • goggles
	  • clothing
	  • footwear
	• the following safety signage and hazard symbols:
	  • prohibition (red signs)
	  • warning (yellow signs)
	  • mandatory (blue signs)
	  • safe condition (green signs)
	• the following manual handling and ergonomics:
	  • safe lifting techniques
	  • workstation setup
	• the following electrical safety:
	  • awareness of the dangers of electricity
	  • safe use of extension leads, plug sockets and electrical tools
	  • importance of PAT (Portable Appliance Testing) stickers and not using damaged cables.
	
	Learners should be able to identify and describe risk assessment procedures, including the following risk assessment principles:
	• identifying and describing hazards
	• identifying and describing safe working practices.

1.1(a) Design and Technology in the 21st Century (Engineering Design)

This area of study is relevant to learners that have chosen **Engineering Design** as their pathway.

In this area of study, learners will gain knowledge and understanding of:
1.1.2 Materials and components
1.1.3 Tools, techniques and processes

Content	Amplification

1.1.2
Materials and components
	Learners should know:
	• the classifications for ferrous metals and non-ferrous metals, including:
	• ferrous metals:
	  • mild steel
	  • stainless steel
	• non-ferrous metals:
	  • copper
	  • aluminium
	• the physical characteristics of thermoforming and thermosetting plastics, including:
	  • acrylic
	  • polylactic acid (PLA)
	  • urea formaldehyde
	  • epoxy resins
	• about the use of modern and smart materials, including:
	  • thermochromic
	  • photochromic
	  • carbon fibre.
	
	Learners should be able to:
	• describe the suitability of the above named ferrous and non-ferrous metals for a product, including:
	  • physical properties
	  • mechanical properties
	• describe the suitability of the above named thermoforming and thermosetting plastics for a product, including:
	  • physical properties
	  • mechanical properties.

1.1.3
Tools, techniques and processes
	Learners should know:
	• the following commonly used industrial manufacturing processes for metals:
	  • cutting metals
	  • pillar drill to drill holes to various diameters
	  • thread cutting (tap and die)
	• the 'systems' approach – input, process, output
	• the following measurements within the electronical circuits:
	  • voltage – volts
	  • current – amps
	  • resistance – ohms (Ω)
	• the following principles of a control system that use input data from digital and analogue components:
	  • push to make switch
	  • push to break switch
	  • light dependent resistor (LDR)
	• the following output signal receivers:
	  • buzzer
	  • bulbs
	  • light emitting diode (LED)
	  • motors
	• other commonly uses electrical components in circuits including:
	  • resistors
	  • capacitors
	• the following types of movement:
	  • linear
	  • rotary
	• about mechanical systems that can:
	  • increase or decrease speed of movement
	  • change movement/rotation
	• the function of mechanical products that have:
	  • pulley and belt systems
	  • simple gear changes
	  • levers and linkages
	• about the use of bought-in components, including:
	  • fasteners – nuts and bolts, screws, rivets and washers
	• the following methods of manufacture and when each is appropriately used:
	  • one-off production
	  • batch production
	  • mass production
	• common methods, components and interfaces for prototype modelling and testing/simulating, including:
	  • CAD software
	  • breadboard circuits
	  • strip/vero board circuits
	  • printed circuit boards (PCBs)
	  • soldering components.

	Learners should be able to:
	• identify and use concepts, including:
	  • block diagrams
	  • flowcharts
	• describe the advantages and disadvantages of CAD/CAM in the production of a product and/or component.

1.1(b) Design and Technology in the 21st Century (Fashion and Textiles)

This area of study is relevant to learners that have chosen **Fashion and Textiles** as their pathway.

In this area of study, learners will gain knowledge and understanding of:
1.1.4 Materials and components
1.1.5 Tools, techniques and processes

Content	Amplification

1.1.4
Materials and components
	Learners should know:
	• that fibres are the raw materials of textiles and are classified according to their source, including:
	  • natural fibres, including:
	  • animal fibres – including, wool/fleece
	  • plant (cellulosic) fibres – including, cotton, linen
	  • synthetic fibres, including:
	  • polyester
	  • elastane ((Lycra®)
	  • regenerated fibres, including:
	  • viscose
	  • acetate
	• that all fibres have inherent properties, including:
	  • strength
	  • insulation
	  • flammability
	• that fibres can be blended or mixed, including:
	  • blends – polyester and cotton
	  • mixture – cotton and wool, elastane and wool
	• about the use of modern and smart materials, including:
	  • photochromic
	  • thermochromic
	  • Gore-Tex.
	
	Learners should be able to:
	• describe the suitability of the above-named fibres for a product, including:
	  • physical properties
	  • aesthetic properties
	• identify different types of stock forms for textile components and explain their suitability/use in products, including:
	  • fastenings – zips, buttons, Velcro
	  • threads – embroidery, sewing, overlocker
	  • trims – lace, ribbon
	  • finishes – beads, sequins.

1.1.5
Tools, techniques and processes.
	Learners should know:
	• why finishing processes are applied to textile materials, including:
	  • to enhance aesthetic quality, including:
	  • colouring
	  • surface decoration
	  • stain resistance, including Scotchguard, Teflon
	  • to improve functionality, including:
	  • shower proofing
	  • crease resistance
	  • waterproofing
	• different methods of manufacture and when each is appropriately used, including:
	  • one-off production
	  • batch production
	  • mass production
	• the appropriate choice of construction technique for fabric type and end use, including:
	  • joining: seams – plain, overlocked
	  • shaping: darts.
	
	Learners should be able to:
	• identify style details particularly those that reflect current trends including:
	  • sleeves: raglan, set-in, gathered, short/long
	  • necklines: square, round, V, halter
	  • pockets: patch, shaped, in-side seam
	  • fastenings: zips, buttons, buckles, Velcro, eyelets, ties, poppers
	  • leg lengths: shorts, cropped, long
	• identify the correct specialist tools and equipment for a range of processes, including:
	  • different types of scissors
	  • different types of domestic sewing machines including computerised embroidery machines
	  • overlocker
	• identify and describe a range of decorative techniques to embellishments textile materials, including:
	  • dyeing – piece, dip, random, tie and dye, batik
	  • beadwork
	  • quilting
	• describe the advantages and disadvantages of CAD/CAM in the production of a product and/or component.

1.1(c) Design and Technology in the 21st Century (Product Design)

This area of study is relevant to learners that have chosen **Product Design** as their pathway.

In this area of study, learners will gain knowledge and understanding of:
1.1.6 Materials and components
1.1.7 Tools, techniques and processes

Content	Amplification

1.1.6
Materials and components
	Learners should know:
	• the difference between a hardwood and softwood
	• the difference between natural wood and man-made boards
	• the physical characteristics of hardwoods and softwoods, including:
	  • beech
	  • scots pine
	• the physical characteristics of manufactured boards, including:
	  • plywood
	  • medium density fibreboard (MDF)
	• the physical characteristics of ferrous metals, including
	  • mild steel
	  • stainless steel
	• the physical characteristics of non-ferrous metals, including:
	  • aluminium
	  • copper
	• the physical characteristics of thermoforming and thermosetting polymers, including:
	  • acrylic
	  • epoxy resins
	  • ABS
	  • Styrofoam
	• about the use of modern and smart materials, including:
	  • thermochromic
	  • photochromic
	  • carbon fibre.
	
	Learners should be able to:
	• describe the suitability of the above-named hardwoods, softwoods and manufactured boards for a product, including:
	  • physical properties
	  • mechanical properties
	• describe the suitability of the above named ferrous and non-ferrous metals for a product, including:
	  • physical properties
	  • mechanical properties.

	• describe the suitability of the above named thermoforming and thermosetting plastics for a product, including:
	  • physical properties
	  • mechanical properties.

1.1.7
Tools, techniques and processes
	Learners show know:
	• about wastage/addition, including:
	  • tools and equipment to mark out, hold, cut, shape, drill and form materials
	• about producing wooden products, including:
	  • joints – frame: mitre, dowel
	  • box/carcass: butt lap
	• about joining materials in a permanent or temporary way, including:
	  • soldering
	  • gluing
	  • nuts, bolts and washers
	  • screws
	• about commonly used industrial manufacturing processes for metals, including pillar drill to drill holes to various diameters
	• the following commonly used industrial manufacturing processes for woods:
	  • sawing woods
	  • pillar drill to drill holes to various diameters
	  • jointing
	  • turning – wood lathe
	• the following commonly used industrial manufacturing processes for plastics:
	  • vacuum forming
	  • laser cutter
	  • 3D printing
	• the following metal surface treatments and finishing processes:
	  • paint
	  • primer
	• how natural timber and manufactured timbers and boards can be protected, including:
	  • varnish
	  • wax
	  • paint
	• different methods of manufacture and when each is appropriately used, including:
	  • one-off production
	  • batch production
	  • mass production.
	
	Learners should be able to:
	• describe the advantages and disadvantages of CAD/CAM in the production of a product and/or component.

Unit 2

Design Project

Design and Make Task (approximately 40 hours)
70% of qualification
60 marks
Set by WJEC, marked by the centre and moderated by WJEC

Overview of unit

The purpose of this unit is to:

- offer learners the opportunity to identify and solve 'real life' problems by designing and making products or systems that respond to the target markets' needs, wants and values
- offer learners the opportunity to apply the iterative design process while developing solutions, including the analysis, evaluation and refinement of ideas as they develop
- develop learners' ability to manufacture high quality, fully functioning prototypes, fit for purpose and fulfilling the needs, wants and values of the users.

This unit will focus on:

- the identification of a range of possible design opportunities
- the production of a clear design brief(s) and detailed specifications that allow design ideas to be generated, tested, developed and refined into quality proposals
- applying the iterative design process to provide creative and innovative solutions
- the production of quality final prototypes that solve identified problems, using appropriate tools, equipment and processes safely and effectively
- analysing and evaluating design solutions considering the end users' needs, wants and values.

Areas of content

2.1 Design Project (Core Knowledge and Understanding)	
This area of study is relevant to **all** learners. This area of study is presented in five distinct topics. In this section, learners will gain knowledge and understanding of: 2.1.1 Identification of possible design opportunities 2.1.2 The production of a design brief and specification 2.1.3 Developing solutions 2.1.4 Producing a final prototype 2.1.5 Evaluating design solutions considering the end users' needs and wants	
Content	Amplification
2.1.1 Identification of possible design opportunities	Learners should understand: • that research and planning are an important part of the design and manufacturing process • that most products are designed to solve a problem or fulfil a need. Learners should be able to explore and investigate existing products and/or the work of other design professionals. Learners are required to: • use centre created contexts to identify problems and opportunities for design, and the development of a design brief • identify potential user groups • identify the needs, wants and values of the intended user(s) • analyse and evaluate an existing product that is relevant to their own design work.

2.1.2
The production of a design brief and specification
	Learners should be able to:
	• write a design brief to explain the function of a product and the needs, wants and values of the intended user(s)
	• write specifications that are derived from their own research, including:
	  • the function of the product
	  • the needs, want and values of the intended user(s)
	  • sizes of key product features and/or components.

2.1.3
Developing solutions
	Learners should be able to:
	• apply creative thinking to generate solutions that fulfil their final design brief.
	
	Learners should be aware of:
	• how the world around us can influence and inspire design and design thinking, including:
	  • the natural world
	  • the work of other design professionals
	• the importance of the wider implications of their designing and making, including:
	  • environmental issues
	  • sustainability
	  • moral.
	
	Learners are required to:
	• design a creative solution to fulfil their final design brief
	• explore and develop their ideas using an iterative approach
	• communicate and record their ideas using appropriate techniques, for example:
	  • formal and informal 2d and/or 3d drawing
	  • annotate sketches
	  • modelling with the use of suitable materials
	  • computer aided design (CAD)
	  • computer aided manufacturing (CAM) processes
	  • audio and visual recordings
	  • computer-based tools, for example, AI.
	• present their final design idea with details that support manufacturing.

2.1.4
Producing a final prototype
	Learners should be able to:
	• plan and manage each step of the manufacturing process
	• select appropriate materials and components to manufacture their final prototype
	• use appropriate specialist equipment and machinery to safely manufacture their final design.
	
	Learners are required to:
	• design, develop and manufacture a prototype, which:
	  • responds to the needs and wants of the intended user(s)
	  • is fit for purpose
	  • exhibits appropriate manufacturing processes
	  • demonstrates functionality.
	
	NOTE: In the context of this unit, ‘prototype’ is used to describe all working solutions including products, models and systems.

2.1.5 Evaluating design solutions considering the end users' needs and wants	Learners are required to: • make evaluations of their initial design solutions, • produce an evaluation of their final prototype.

Opportunities for integration of learning experiences

The WJEC Entry Level / Level 1 Foundation Design and Technology generates opportunities for the following learning experiences to be developed (experiences will not be directly assessed):

- engage with the work of designers to develop an appreciation of how design thinking is applied and of the diverse range of careers and occupations that use it
- engage with local developments, projects and initiatives that demonstrate how design thinking is applied and of the diverse range of careers and occupations that use it
- collaborate with others to understand the role that feedback can play in strengthening and testing design thinking, and of how teams can work together to solve complex problems
- experiment with materials in safe and controlled environments to understand their properties and possibilities
- gain awareness and appreciation of some of the different careers and work-related areas that draw upon design and technology.

Further amplification of the opportunities to develop cross-cutting themes, cross-curricular skills and integral skills can be found in Appendix A. The Guidance for Teaching will include further information on the opportunities provided by the qualification for teachers/centres to integrate these learning experiences into delivery.

3 ASSESSMENT

The Assessment Pack will include all detailed information relating to assessment.

3.1 Assessment Objectives and Weightings

Below are the assessment objectives for this specification. Learners must:

AO1
Demonstrate knowledge and understanding of the principles, materials, tools and techniques used in design and technology.

AO2
Apply knowledge and understanding of the principles, materials, tools and techniques used in design and technology.

AO3
Develop designs and tangible products.

AO4
Analyse and evaluate products and solutions.

The table below shows the weighting of each assessment objective for each unit and for the qualification as a whole.

	AO1	AO2	AO3	AO4	Total
Unit 1	15%	15%	-	-	30%
Unit 2	-	15%	35%	20%	70%
Overall weighting	**15%**	**30%**	**35%**	**20%**	**100%**

3.2 Assessment Overview

Unit 1: Design and Technology in the 21st Century

For this assessment candidates are required to take three topic tests within the same assessment window.

One of the topic tests will be a Core Knowledge and Understanding topic test based on health and safety, which will be taken by all learners.

The other two topic tests will be based on:
- Materials and Components
- Tools, Techniques and Processes

For both of these topic tests, learners must select one of the following pathways:
- Engineering Design
- Fashion and Textiles
- Product Design

The topic tests will consist of a variety of question types including multiple choice questions (MCQ), objective test questions (OTQ) and short answer questions and will be available in both digital and paper formats. The Core Knowledge and Understanding topic test will be worth 16 marks and both the Pathway topic tests will be worth 12 marks each, totalling 40 marks.

The topic tests will be available for completion within a four week-long window with the first assessment in Summer 2028.

The topic tests contribute to 30% of the overall qualification grade. Each topic test takes 20 mins to complete. A candidate does not have to complete all tests in the same session, but must complete each individual test within a session. The test must be sat under invigilated examination conditions. This could be done in a classroom. Please see JCQ requirements: http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations for details.

The tests will be set and marked by WJEC.

Unit 2: Design Project

Learners are required to choose the same design pathway as they selected for Unit 1: Design and Technology in the 21st Century. The three available pathways are:
- Engineering Design
- Fashion and Textiles
- Product Design

Learners are required to complete a sustained design and make task, based on a contextual challenge set by the centre, assessing learners' ability to:
- identify, investigate, analyse and outline design possibilities
- design and make prototypes and evaluate their fitness for purpose

The assessment contributes to 70% of the overall qualification and has a recommended assessment duration of 40 hours which should incorporate all aspects of the design process. The unit will be marked out of a total of 60 marks.

This unit will be assessed by the centre and externally moderated by WJEC. The first assessment will be in Summer 2029.

3.3 Managing the assessment

Both units of this qualification are assessed through non-examination assessment. Non-examination assessment is structured across three key stages: task setting, task taking and task marking.

All non-examined assessment (NEA) must adhere to the instructions included in *JCQ's Instructions for Conducting Non-Examination Assessments (Vocational and Technical Qualifications)*. Please note that the JCQ guidance for *GCE and GCSE Specifications* is **not** applicable to this qualification.

Task Setting

Assessment packs are provided for each unit in line with the arrangements set out in 3.2.

Task Taking

The completion of non-examined assessment is guided by controls in five areas: time, resources, supervision, authentication and collaboration.

- Time: Each assessment pack specifies the total time available or will state that there is no time restriction; a suggested time per task is provided although candidates may allocate this time across tasks as appropriate.
- Resources: Any specific resource requirements will be outlined in the assessment pack.
- Supervision and authentication: Learners should normally be supervised by a teacher while completing assessment tasks. Teachers may clarify task requirements but must not provide feedback on the evidence being produced.
- Collaboration: Group work is permitted only where specified. Individual contributions must be clearly identifiable and assessed independently to ensure fairness. Learners must provide individual responses, and evidence must be attributable to each learner. Authentication sheets must be signed by both the teacher and the learner.

Task Marking for internally assessed non-examination assessment (Unit 2)

All marking must be carried out by a designated teacher with appropriate subject expertise, using the marking criteria provided in the assessment pack. Evidence must align with the expectations set out in the assessment pack.

Written evidence must be annotated to show how it meets the marking criteria.

Where required, performance evidence (e.g. presentations) must be documented using observation records that include descriptive and summative comments.

Teachers are responsible for ensuring that:

- both learners and teachers sign declarations confirming the authenticity of submitted work

- assessment is conducted in line with the expectations of the assessment pack and JCQ guidance
- judgements are made solely against the performance band statements
- evidence is authentic, clearly annotated, and accurately recorded
- when used, observation records contain sufficient detail to support assessment decisions.

3.4 Resubmission of internally assessed non-examination assessments

In Unit 2 where the work is assessed by the centre, teachers may allow a learner one opportunity to improve their evidence and resubmit it for marking before the final marks are submitted for moderation. This process is referred to as resubmission.

Internal assessment must be scheduled to allow sufficient time for this resubmission window, where needed, prior to external moderation. Learners must complete the full assessment before their work is initially marked, and any resubmission is authorised.

Any feedback provided to learners must:

- be factual, based on what has been observed in their work
- avoid directing learners on how to improve their mark
- be documented and made available for external moderation if requested.

Teachers must not:

- permit multiple resubmissions based on minor changes following feedback
- allow learners to add, amend, or remove any work after a resubmission has been marked.

Learners are not required to produce an entirely new set of evidence for a resubmission. They should focus only on the areas where they did not achieve the desired mark. As a result, they may not need the full time indicated in the assessment pack, although they can use up to the full allocation if necessary. The assessment pack indicates the approximate amount of time that learners should spend completing each task. Where learners are focusing on specific tasks for resubmission, the time allowed should not exceed the total suggested time allocated to those tasks.

There is no need to create a separate candidate mark submission sheet for resubmission; the original sheet can be updated with revised marks and additional comments. Centres should maintain internal records of resubmissions to provide a clear audit trail, which will be helpful if queries arise. Only the final marks and evidence need to be submitted for external moderation.

Once marks have been submitted for moderation, no further resubmission of the same assessment is permitted. Learners have one opportunity to resit the assessment in a future assessment series. When resitting an assessment, centres must ensure that learners are using the assessment brief released for that series. (see Section 5.4).

Please note – For Unit 1, which is assessed by WJEC, teachers **must not** allow a learner an additional opportunity to improve their evidence before the work is submitted to WJEC for marking. **Teachers must follow the instructions included in the assessment pack.**

4 MALPRACTICE

Before the course starts, the teacher is responsible for informing candidates of WJEC's regulations concerning malpractice. Candidates must not take part in any unfair practice in the preparation of work for WJEC Entry Level / Level 1 Foundation Design and Technology.

Information regarding malpractice is available in our Guide to preventing, reporting and investigating malpractice.

All cases of suspected or actual malpractice must be reported immediately to WJEC (malpractice@wjec.co.uk). If candidates commit malpractice, they may be penalised or disqualified from the examinations.

In all cases of malpractice, centres are advised to consult the JCQ booklet Suspected Malpractice: Policies and Procedures.

5 TECHNICAL INFORMATION

5.1 Making entries

This is a unitised qualification. Candidates are entered for each unit separately.

Assessment opportunities will be available in the summer series until the end of the life of this specification.

Unit 1 will be available in June 2028 (and every June thereafter). Candidates will need to complete all Unit 1 topic tests within the same assessment window. Unit 2 will be available in June 2029 (and every June thereafter).

Entry for individual units must be made by submitting the relevant unit shown below:

		Entry Codes	
		English medium	**Welsh medium**
Unit 1	Topic tests		
Unit 2	Design and Make Task		

5.2 Qualification entry

The qualification will be awarded for the first time in summer 2029.

Candidates will be entered for the qualification when entering for aggregation (cash-in).

Aggregation does not take place automatically; it is necessary to enter the relevant code for aggregation to take place.

	English medium	**Welsh medium**
Cash-in code		

The current edition of our Entry Procedures and Coding Information gives up-to-date entry procedures.

5.3 Grading, awarding and reporting

WJEC Entry Level / Level 1 Foundation Design and Technology is reported on a 4 point scale: Entry 1 Pass, Entry 2 Pass, Entry 3 Pass and Level 1 Pass (where Level 1 Pass is the highest grade). Candidates who do not achieve the uniform marks required to achieve an Entry 1 Pass will have their achievement recorded as U (unclassified) and will not receive a certificate.

Individual unit results are reported on a uniform mark scale (UMS) with the following grade equivalences:

	MAX.	Weighting	UMS	Level 1	Entry 3	Entry 2	Entry 1
Unit 1	40	30%	60	48	36	24	12
Unit 2	60	70%	140	112	84	56	28

The uniform marks obtained for each unit are added up and the qualification grade is based on this total.

	MAX.	Weighting	UMS	Level 1	Entry 3	Entry 2	Entry 1
Subject Award	100	100%	200	160	120	80	40

5.4 Resitting assessments

Candidates may resit Unit 1, the WJEC marked assessment, twice (three attempts in total). The better uniform mark score from the three attempts will be used in calculating the final overall grade.

Candidates may resit Unit 2, the centre marked assessment, once (two attempts in total). The better uniform mark score from the two attempts will be used in calculating the final overall grade.

When resitting an assessment, the candidate must submit a new assessment, completed within the same levels of control. They cannot improve previously submitted work.

If a candidate has been entered for an assessment but is marked absent (a), the absence does not count as an attempt.

If a candidate is recorded as being awarded '0' marks, then it will be assumed that the evidence generated for assessment was not worthy of credit; this will be counted as an attempt.

When resitting an assessment, provided that the candidate has not exceeded the maximum number of attempts, marks from the other units will be carried forward.

If a candidate exceeds the number of attempts for any of the assessments, they will be required to retake the qualification.

5.5 Retaking the qualification

If a candidate enters Unit 1, the WJEC marked assessment, for a fourth time or Unit 2, the centre marked assessment, for a third time, they must re-enter and retake all assessments.

When retaking a qualification, a candidate may have up to three attempts at Unit 1, the WJEC marked assessment, and up to two attempts at Unit 2, the centre marked assessment. However, no results from units taken prior to the retake can be used in aggregating the new grade(s).

Appendix A: Opportunities for embedding elements of the Curriculum for Wales

Curriculum for Wales Strands	Unit 1	Unit 2
Cross-cutting Themes		
Local, National & International Contexts		✓
Sustainability aspect of Local, National & International Contexts		✓
Relationships and Sexuality Education		✓
Diversity		✓
Human Rights Education		✓
Careers and Work-Related Experiences	✓	✓
Cross-curricular Skills - Literacy		
Listening	✓	✓
Reading	✓	✓
Speaking	✓	✓
Writing	✓	✓

Curriculum for Wales Strands	Unit 1	Unit 2
Cross-curricular Skills - Numeracy		
Developing Mathematical Proficiency		✓
Understanding the number system helps us to represent and compare relationships between numbers and quantities		
Learning about geometry helps us understand shape, space and position and learning about measurement helps us quantify in the real world		
Learning that statistics represent data and that probability models chance help us make informed inferences and decisions		
Digital Competence		
Citizenship		
Interacting and Collaborating		✓
Producing		
Data and Computational Thinking		✓
Integral Skills		
Creativity and Innovation		✓
Critical Thinking and Problem Solving	✓	✓
Planning and Organisation		✓
Personal Effectiveness	✓	✓