

GCSE Subject Level Guidance for Design and Technology

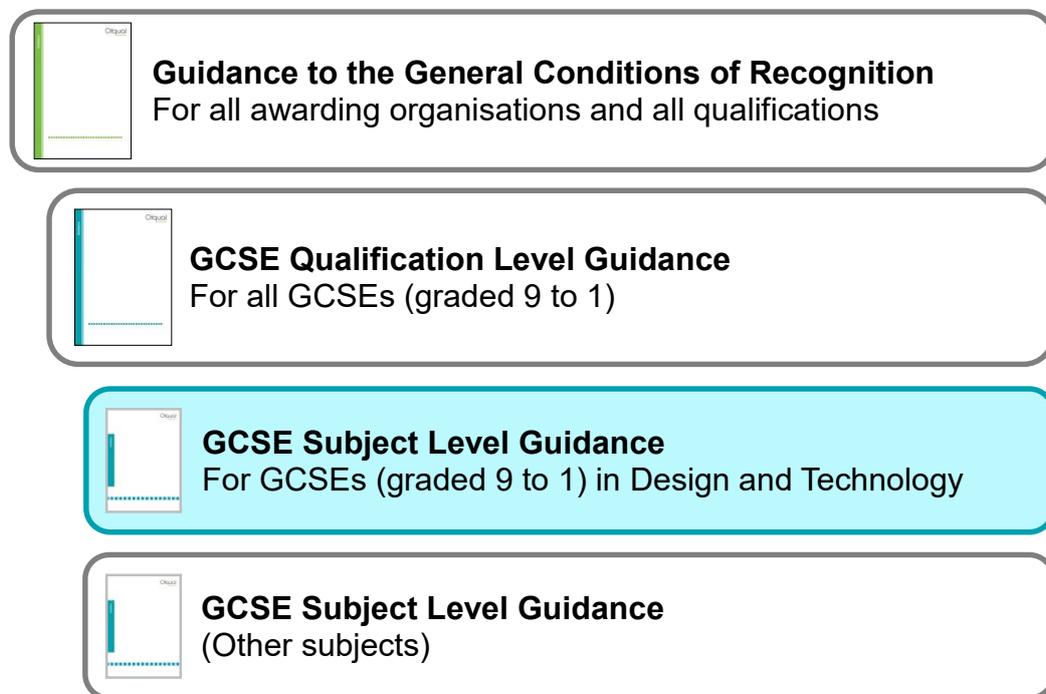
February 2016

Contents

Introduction.....	2
Guidance set out in this document.....	3
Guidance on assessment objectives for GCSE Qualifications in Design and Technology	4

Introduction

This document (highlighted in the figure below) is part of a suite of documents which outlines our guidance for awarding organisations offering GCSE Qualifications in Design and Technology.



This document sets out guidance which applies to all GCSE Qualifications (graded from 9 to 1) in Design and Technology. It supports the *GCSE Subject Level Conditions and Requirements for Design and Technology*¹.

This document constitutes guidance for the purposes of section 153 of the Apprenticeships, Skills, Children and Learning Act 2009 (the '2009 Act') and Condition GCSE(Design and Technology)1.

An awarding organisation has a legal obligation under the 2009 Act to have regard to this guidance, where relevant, in relation to each GCSE Qualification in Design and Technology that it makes available or proposes to make available. Condition GCSE(Design and Technology)1 imposes the same obligation in respect of the guidance below which is issued under that Condition.

¹ www.gov.uk/government/publications/gcse-9-to-1-subject-level-conditions-and-requirements-for-design-and-technology

An awarding organisation should use the guidance in this document to help it understand how to comply with the *GCSE Subject Level Conditions and Requirements for Design and Technology*.

Guidance set out in this document

This document provides guidance on assessment objectives for GCSE Qualifications (graded 9 to 1) in Design and Technology

Guidance on assessment objectives for GCSE Qualifications in Design and Technology

Condition GCSE(Design and Technology)1.2 allows us to specify requirements and guidance relating to assessment objectives for GCSE qualifications in Design and Technology.

We published our requirements in relation to assessment objectives in *GCSE Subject Level Conditions and Requirements for Design and Technology*, and reproduce them in the table below.

	Objective	Weighting
AO1	Identify, investigate and outline design possibilities to address needs and wants	10%
AO2	Design and make prototypes that are fit for purpose	30%
AO3	Analyse and evaluate – <ul style="list-style-type: none"> ■ design decisions and outcomes, including for prototypes made by themselves and others ■ wider issues in design and technology 	20%
AO4	Demonstrate and apply knowledge and understanding of – <ul style="list-style-type: none"> ■ technical principles ■ designing and making principles 	40%

We set out below our guidance for the purposes of Condition GCSE(Design and Technology)1.2. This guidance explains how we expect awarding organisations to interpret these assessment objectives in terms of:

- the different ‘strands’ within each of the assessment objectives;
- the discrete ‘elements’ within each assessment objective and its strands that questions and tasks could target and/or seek to credit – our expectation is that each and every question/task should target or seek to credit at least one of these elements, and may target or seek to credit multiple elements across one or more assessment objectives;
- the coverage expectations, such as in relation to the different elements within each assessment objective and how those elements should be sampled over time; and

- the key areas of emphasis in each assessment objective and the particular meaning for the subject of any key terms and phrases used; defined terms are shown in bold text, followed by their definitions.

In line with the obligations set out in Condition GCSE(Design and Technology)1.2, we expect awarding organisations to be able to demonstrate how they have had regard to this guidance. For example, an awarding organisation could map how it has regard to the guidance as it:

- develops its sample assessment materials;
- delivers the qualification;
- develops and applies its approach to sampling the elements into which the assessment objectives are divided; and
- monitors the qualification to make sure it addresses all elements appropriately.

AO1: Identify, investigate and outline design possibilities to address needs and wants			10%
Strands	Elements	Coverage	Interpretations and definitions
n/a	1a – Identify and investigate design possibilities to address needs and wants	<ul style="list-style-type: none"> ■ Full coverage in every task that addresses it. ■ A reasonable balance between elements 1a and 1b. 	<ul style="list-style-type: none"> ■ Identify means looking at areas and opportunities in which designs can take place. ■ Investigate means pursuing ideas and gathering information relating to a context. ■ Identify and investigate are interdependent. The processes work together and take place in no particular order. ■ Outline means to produce a design brief and specification to inform AO2
	1b – outline design possibilities to address needs and wants		

AO2: Design and make prototypes that are fit for purpose			30%
Strands	Elements	Coverage	Interpretations and definitions
n/a	This assessment objective is a single element	<ul style="list-style-type: none"> Full coverage in every task that addresses it 	<ul style="list-style-type: none"> Design means the generation and development of ideas that can be presented to a third party, and can be evaluated and tested. However, the actual analysis and evaluation forms part of AO3. Prototype means an appropriate working solution to a need or want that is sufficiently developed to be tested and evaluated (for example, full sized products, scaled working models or functioning systems). In the context of a prototype, fit for purpose means (in addition to being a working solution) addressing the needs/wants of the intended user. Making skills can be assessed through the designing and making of the prototype(s), as well as the nature and quality of the final prototype.

AO3: Analyse and evaluate –		20%	
<ul style="list-style-type: none"> ■ design decisions and outcomes, including for prototypes made by themselves and others ■ wider issues in design and technology 			
Strands	Elements	Coverage	Interpretations and definitions
1 – Analyse and evaluate design decisions and outcomes, including for prototypes made by themselves and others	1a – Analyse design decisions and outcomes, including for prototypes made by themselves and others	<ul style="list-style-type: none"> ■ Full coverage in each set of assessments² (but not in every assessment). ■ A reasonable balance between the strands within this assessment objective, and between the elements within each strand 	<ul style="list-style-type: none"> ■ In the context of this assessment objective: <ul style="list-style-type: none"> □ analyse means deconstructing information and/or issues to find connections and provide logical chain(s) of reasoning, □ evaluate means appraising and/or making judgements with respect to information and/or issues, and □ analysis and evaluation should draw on underpinning knowledge and understanding. ■ Each set of assessments need not cover both design decisions and outcomes in the context of both prototypes made by the Learner and prototypes made by others. But there should be a reasonable balance between each of: <ul style="list-style-type: none"> □ design decisions and outcomes; and □ prototypes made by the Learner, prototypes made by others, and other contexts within design and technology.
	1b – Evaluate design decisions and outcomes, including for prototypes made by themselves and others		
2 – Analyse and evaluate wider issues in design and technology	2a – Analyse wider issues in design and technology		
	2b – Evaluate wider issues in design and technology		

² For the purposes of this guidance, a 'set of assessments' means the assessments to be taken by a particular Learner for a GCSE Qualification in Design and Technology. For clarity, the assessments taken by Learners may vary, depending on any possible routes through the qualification.

AO4: Demonstrate and apply knowledge and understanding of –			40%
<ul style="list-style-type: none"> ▪ technical principles ▪ designing and making principles 			
Strands	Elements	Coverage	Interpretations and definitions
1 – Demonstrate and apply knowledge and understanding of technical principles	1a – Demonstrate knowledge of technical principles	<ul style="list-style-type: none"> ▪ Full coverage in each set of assessments (but not in every assessment). ▪ No more than 10% of total marks should reward demonstrating knowledge in isolation.³ ▪ A reasonable balance between the elements in each strand. 	<ul style="list-style-type: none"> ▪ Both technical principles and designing and making principles are aspects of subject content. Awarding organisations should explain their approach to targeting them in their assessment strategies. ▪ The emphasis in this assessment objective should be on the demonstration and application of knowledge and understanding of technical principles.
	1b – Demonstrate understanding of technical principles		
	1c – Apply knowledge and understanding of technical principles		
2 – Demonstrate and apply knowledge and understanding of designing and making principles	2a – Demonstrate knowledge of designing and making principles		
	2b – Demonstrate understanding of designing and making principles		
	2c – Apply knowledge and understanding of designing and making principles		

³ Marks that 'reward demonstrating knowledge in isolation' include any mark awarded solely for recalling facts or other knowledge that is part of the specification. It does not include marks awarded for selecting appropriate knowledge (for example, to evidence an argument), or for applying knowledge to a particular context.

We wish to make our publications widely accessible. Please contact us at publications@ofqual.gov.uk if you have any specific accessibility requirements.



© Crown copyright 2016

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit <http://nationalarchives.gov.uk/doc/open-government-licence/version/3> or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: publications@ofqual.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at www.gov.uk/ofqual.

Any enquiries regarding this publication should be sent to us at:

Office of Qualifications and Examinations Regulation

Spring Place
Coventry Business Park
Herald Avenue
Coventry CV5 6UB

2nd Floor
Glendinning House
6 Murray Street
Belfast BT1 6DN

Telephone 0300 303 3344

Textphone 0300 303 3345

Helpline 0300 303 3346