
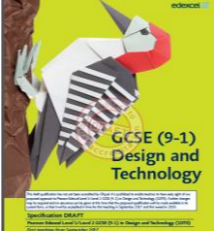




	AQA	EDEXCEL	OCR	WJEC Eduqas
				
	<a href="http://filestore.aqa.org.uk/resources/design-and-technology/specifications/AQA-8552-SP-2017-V0-1.PDF">http://filestore.aqa.org.uk/resources/design-and-technology/specifications/AQA-8552-SP-2017-V0-1.PDF</a>	<a href="http://qualifications.pearson.com/content/dam/pdf/GCSE/design-and-technology/2017/specification-and-sample-assessments/Specification-GCSE-L1-L2-in-Design-and-Technology.pdf">http://qualifications.pearson.com/content/dam/pdf/GCSE/design-and-technology/2017/specification-and-sample-assessments/Specification-GCSE-L1-L2-in-Design-and-Technology.pdf</a>	<a href="http://www.ocr.org.uk/Images/304658-specification-draft-gcse-design-and-technology-j310.pdf">http://www.ocr.org.uk/Images/304658-specification-draft-gcse-design-and-technology-j310.pdf</a>	<a href="http://www.eduqas.co.uk/qualifications/design-and-technology/gcse/GCSE-Design-and-Technology-Specification.pdf">http://www.eduqas.co.uk/qualifications/design-and-technology/gcse/GCSE-Design-and-Technology-Specification.pdf</a>
<i>Pages</i>	52	84	60	50
<i>Assessment</i>	<p>10% Identify, investigate &amp; outline design possibilities</p> <p>30% Design &amp; make prototypes that are fit for purpose.</p> <p>20% Analyse &amp; evaluate:</p> <p>40% Demonstrate and apply knowledge &amp; understanding of:</p> <ul style="list-style-type: none"> <li>• technical principles</li> <li>• designing and making principles.</li> </ul>	<p>10% Identify, investigate &amp; outline design possibilities</p> <p>30% Design &amp; make prototypes that are fit for purpose</p> <p>20% Analyse and evaluate</p> <p>40% Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>• technical principles</li> <li>• designing and making principles</li> </ul>	<p>10% Identify, investigate &amp; outline design possibilities</p> <p>30% Design &amp; make prototypes that are fit for purpose</p> <p>20% Analyse and evaluate</p> <p>40% Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>• technical principles</li> <li>• designing and making principles</li> </ul>	<p>10% Identifying and investigating design possibilities.</p> <p>30% Design and make prototypes that are fit for purpose</p> <p>20% Analyse and evaluate:</p> <p>40% Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>• technical principles</li> <li>• designing and making principles</li> </ul>
<i>Exam format</i>	<p>2 hours</p> <p>100 Marks</p> <p>50 %</p>	<p>1 Hour 45 mins</p> <p>100 Marks</p> <p>50%</p>	<p>2 hours</p> <p>100 Marks</p> <p>50 %</p>	<p>2 hours</p> <p>100 marks</p> <p>50%</p>
<i>Exam paper</i>	<a href="http://filestore.aqa.org.uk/resources/design-and-technology/AQA-85521-SQP.PDF">http://filestore.aqa.org.uk/resources/design-and-technology/AQA-85521-SQP.PDF</a>	<a href="http://qualifications.pearson.com/content/dam/pdf/GCSE/design-and-technology/2017/specification-and-sample-assessments/SAMs-GCSE-L1-L2-in-Design-and-Technology.pdf">http://qualifications.pearson.com/content/dam/pdf/GCSE/design-and-technology/2017/specification-and-sample-assessments/SAMs-GCSE-L1-L2-in-Design-and-Technology.pdf</a>	<a href="http://www.ocr.org.uk/Images/304667-unit-j310-01-principles-of-design-and-technology-insert-sample-assessment-material.pdf">http://www.ocr.org.uk/Images/304667-unit-j310-01-principles-of-design-and-technology-insert-sample-assessment-material.pdf</a>	Not yet published (23/05/16)
	Some questions have the option to choose to answer in context to a material area.	All students must answer section A on core content then choose section B according to material specialism	Q5 & 6 answered about material specialism. Other questions based on core knowledge	Not yet published (23/05/16)
<i>Core Knowledge and understanding</i>	Core technical principles covers core technical principles and all content must be taught. Specialist technical principles covers specialist technical principles where students will go into greater depth. Each principle should be taught through at least one material category or system.	All students must study the Core content plus at least one material category.	Learners should build in-depth knowledge, understanding and design development skills that relate to one or more of the following main categories of materials	Learners are required to study all of the content in the five core areas. Learners are required to study at least one of six in depth areas, to ensure they have an in-depth knowledge and understanding of a specific material area and/or components and systems to support their design and make activities

<p><i>Core</i></p>	<ul style="list-style-type: none"> <li>• New and emerging technologies</li> <li>• Energy storage and generation</li> <li>• Modern and smart materials</li> <li>• Systems approach to designing</li> <li>• Mechanical devices</li> <li>• Materials and their working properties</li> </ul>	<ul style="list-style-type: none"> <li>• The impact new and emerging technologies</li> <li>• How the critical evaluation of new and emerging technologies informs design decisions</li> <li>• How energy is generated and stored</li> <li>• Developments in modern and smart materials</li> <li>• The functions of mechanical devices</li> </ul> <p>How electronic systems provide functionality to products and processes</p> <ul style="list-style-type: none"> <li>• The use of programmable components to embed functionality into products</li> <li>• Categorisation and properties of materials</li> <li>• All design and technological practice takes place within contexts which inform outcomes</li> <li>• Investigate environmental, social and economic challenges</li> <li>• Investigate and analyse the work of past and present professionals and companies</li> </ul>	<ul style="list-style-type: none"> <li>• How can exploring the context a design solution is intended for inform decisions and outcomes?</li> <li>• Why is usability an important consideration when designing prototypes ?</li> <li>• What are the opportunities and constraints that influence design and making requirements?</li> <li>• How do developments in design and technology influence design decisions and practice?</li> <li>• What are the impacts of new and emerging technologies when developing design solutions?</li> <li>• How do designers choose appropriate sources of energy to make products and power systems?</li> <li>• How can design solutions be communicated to demonstrate their suitability?</li> <li>• How do designers source information and thinking when problem solving?</li> <li>• What are the main categories of materials available to designers when developing design solutions?</li> <li>• Why is it important to consider the characteristics and properties of materials and/or system components when designing?</li> <li>• Why is it important to know the different available forms of specific materials and/or systems components?</li> <li>• How do we introduce controlled movement to products and systems?</li> <li>• How do electronic systems provide functionality to products and processes?</li> </ul>	<ol style="list-style-type: none"> <li>1. The impact of new and emerging technologies</li> <li>2. How the critical evaluation of new &amp; emerging technologies informs design decisions</li> <li>3. How energy is generated and stored</li> <li>4. Developments in modern and smart materials, composite materials &amp; technical textiles</li> <li>5. Electronic systems provide functionality to products and processes</li> <li>6. The use of programmable components to embed functionality into products</li> <li>7. The functions of mechanical devices, to produce different sorts of movement</li> <li>8. Broad understanding of the categorisation and properties of a range of materials</li> </ol>
<p><i>Material categories</i></p>	<ul style="list-style-type: none"> <li>• Paper and board</li> <li>• Timber</li> <li>• Metal based materials</li> <li>• Polymers</li> <li>• Textile based materials</li> <li>• Electronic and mechanical systems</li> </ul>	<ul style="list-style-type: none"> <li>• Metals</li> <li>• Polymers</li> <li>• Timbers</li> <li>• Systems</li> <li>• Textiles</li> </ul>	<ul style="list-style-type: none"> <li>• Papers and boards</li> <li>• Natural and manufactured timber</li> <li>• Ferrous and non-ferrous metals</li> <li>• Thermo and thermosetting polymers</li> <li>• Natural, synthetic, blended and mixed fibres, and woven, non-woven and knitted textiles</li> </ul>	<ul style="list-style-type: none"> <li>mechanical devices</li> <li>b. Papers &amp; boards</li> <li>c. Natural &amp; manufactured timber</li> <li>d. Ferrous &amp; non-ferrous metals</li> <li>e. Thermoforming &amp; thermosetting polymers</li> <li>f. Fibres &amp; textiles</li> </ul>

<p><i>Specialist technical principles (one material area)</i></p>	<ul style="list-style-type: none"> <li>• Forces and stresses</li> <li>• Ecological and social footprint</li> <li>• Scales of production</li> <li>• Sources and origins</li> <li>• Using and working with materials</li> <li>• Stock forms, types and sizes</li> <li>• Specialist techniques</li> <li>• Surface treatments and finishes</li> </ul>	<ul style="list-style-type: none"> <li>• Physical and working properties and their social and ecological footprint</li> <li>• The way in which selection of is influenced</li> <li>• The impact o forces and stresses</li> <li>• Stock forms, types and sizes</li> <li>• Alternative processes that can be used to manufacture</li> <li>• Specialist techniques and processes</li> <li>• Appropriate surface treatments and finishes</li> <li>• Design contexts</li> </ul>	<ul style="list-style-type: none"> <li>• How can exploring the context and design solution is intended for informed decisions and outcomes?</li> <li>• How can design solutions be communicated to demonstrate their suitability?</li> <li>• Why is it important to consider the characteristics and properties of materials and/or system components when designing?</li> <li>• Why is it important to understand the sources or origins of materials and/or system components?</li> <li>• Why is it important to know the different available forms of specific materials and/or systems components?</li> <li>• What gives a product structural integrity?</li> <li>• How can materials and products be finished for different purposes?</li> <li>• How can materials and processes be used to make iterative models?</li> <li>• How can materials be manipulated and joined in different ways in a workshop environment when making final prototypes?</li> <li>• How do industry professionals use digital design tools when exploring and developing design ideas?</li> <li>• How do processes vary when manufacturing products to different scales of production?</li> <li>• How do new and emerging technologies have an impact on production techniques and systems?</li> <li>• How can cost and availability of specific materials and/or system components affect their selection when designing?</li> </ul>	<ol style="list-style-type: none"> <li>1. The sources, origins, physical and working properties of the material categories or the components and systems, and their ecological and social footprint</li> <li>2. The way in which the selection of materials or components is influenced by a range of factors, such as functional, aesthetic, environmental, availability, cost, social, cultural and ethical</li> <li>3. The impact of forces and stresses on materials and objects and the ways in which materials can be reinforced and stiffened</li> <li>4. Stock forms, types and sizes in order to calculate and determine the quantity of materials or components required</li> <li>5. Alternative processes that can be used to manufacture products to different scales of production</li> <li>6. Specialist techniques and processes that can be used to shape, fabricate, construct and assemble a high quality prototype, including techniques such as wastage, addition, deforming and reforming, as appropriate to the materials and/or components being used</li> <li>7. Appropriate surface treatments and finishes that can be applied for functional and aesthetic purposes</li> </ol>
<p>NEA</p>	<p>30–35 hours approx.  20 marks Investigating  30 marks Designing  30 marks Making  20 marks Analysing and evaluating</p>	<p>16 marks Investigate  42 marks Design  36 Marks Make  6 Marks Evaluate</p>	<p>16 marks Manage  12 marks Explore  24 marks Create  16 marks Evaluate  16 marks Quality of design iterations  16 marks Quality of final prototype</p>	<p>maximum of 35 hours  10 marks Identifying &amp; investigating design  10 marks Developing a design brief &amp; spec.  30 marks Generating &amp; developing design ideas.  30 marks Manufacturing a prototype.  20 marks Analysing &amp; evaluating design decisions &amp; prototypes</p>

<i>NEA tasks</i>	<ul style="list-style-type: none"> <li>◇ A high profile event</li> <li>◇ Addressing the needs of the elderly</li> <li>◇ The contemporary home</li> <li>◇ Children's learning development</li> <li>◇ The world of travel and tourism</li> </ul>	<ul style="list-style-type: none"> <li>◇ Improving living and working spaces (environments and objects)</li> <li>◇ Developing communities</li> <li>◇ Expanding human capacity</li> </ul>	<ul style="list-style-type: none"> <li>◇ <b>Public spaces</b> : The sensitive design of public spaces can enhance users' experiences and interactions with that space. Explore a space in your locality with the view to enhancing the users' experiences within that space.</li> <li>◇ <b>Personalities</b> - Explore the theme 'personalities' and use this exploration as the basis for designing a product</li> <li>◇ <b>Dining</b>: Dining can be a wonderful social and cultural experience that does not only focus on the eating of food. Explore the ways design can enhance the experiences for any of the</li> </ul>	Not yet published (23/05/16)
	<a href="http://filestore.aqa.org.uk/resources/design-and-technology/AQA-85522-NEA.PDF">http://filestore.aqa.org.uk/resources/design-and-technology/AQA-85522-NEA.PDF</a>	<a href="http://qualifications.pearson.com/content/dam/pdf/GCSE/design-and-technology/2017/specification-and-sample-assessments/SAMs-GCSE-L1-L2-in-Design-and-Technology.pdf">http://qualifications.pearson.com/content/dam/pdf/GCSE/design-and-technology/2017/specification-and-sample-assessments/SAMs-GCSE-L1-L2-in-Design-and-Technology.pdf</a>	<a href="http://www.ocr.org.uk/Images/304668-unit-j310-02-03-iterative-design-challenge-sample-assessment-material.pdf">http://www.ocr.org.uk/Images/304668-unit-j310-02-03-iterative-design-challenge-sample-assessment-material.pdf</a>	Not yet published (23/05/16)