

**DESIGNING AND MODELLING - 6220**

**Unit Aim:** This unit aims to help learners to acquire the knowledge and skills to design and model a product of their own choosing.

**Credit Value:** 4

**Evidence must include:**

	LO1	Assessment Criteria	Amplification of Content	Examples of Tasks	Examples of Evidence
<b>ENTRY 2 (E2)</b>	Know how to research features of a product suitable for design work.	<b>AC 1.1</b> Find images of a similar product or products to that chosen for design work. <b>AC1.2</b> Identify the basic features of a chosen product or products chosen for design work.	✓ Know how to research features of a product suitable for design work – this could be done by group work, question and answer, practical illustrations, exemplar material.	<b>LO1, LO2 and LO3</b> can be assessed by candidates completing either a set task or tasks. (The tasks are left to the centre or teacher) Possible suggested tasks: <ul style="list-style-type: none"> <li>• <b>Task A</b> Design a storage unit for holding an everyday item in the home.</li> <li>• <b>Task B</b> You have been asked to re-design the graphics in the Design and Technology department. You are to focus on signs; symbols and a new logo design for the department.</li> <li>• <b>Task C</b> Design a carrying case for the Olympics in 2012.</li> <li>• <b>Task D</b> Your mother and father often interrupt you when you are working at home. Design a 'Do not disturb' sign for your bedroom. It must have an electric light which runs off a DC supply.</li> </ul>	
		<b>AC1.1</b> Find images of a similar product or products to that chosen for design work. <b>AC1.2</b> Comment on the key features of a chosen product or products chosen for design work.			
<b>LO2</b>	<b>Assessment Criteria</b>	<b>Amplification of Content</b>			
Be able to create a design brief and specification.	<b>AC2.1</b> Create a basic design brief for the planned product. <b>AC2.2</b> Identify some important points that will need to be considered in the design of the chosen product.	✓ Be able to create a design brief and specification			
	<b>AC2.1</b> Create a design brief for the planned product. <b>AC2.2</b> Write a design specification for the chosen product. <b>AC2.3</b> Explain the purpose of the planned product.				
<b>ENTRY 3 (E3)</b>	<b>LO3</b>	<b>Assessment Criteria</b>	<b>Amplification of Content</b>		
Be able to present design ideas.	<b>AC3.1</b> Communicate initial creative ideas. <b>AC3.2</b> Identify a suitable design for modelling.	✓ Be able to present design ideas - this could be done by group work, question and answer, practical demonstrations, the use of colour to enhance an idea, exemplar material/illustrations.			
	<b>AC 3.1</b> Communicate creative design ideas using, 2D/ 3D sketches or drawings. <b>AC3.2</b> Produce a working drawing. <b>AC 3.3</b> Select a design and show how it meets the brief.				

**\*\*ALL EVIDENCE MUST BE IDENTIFIED ON THE RELEVANT ASSESSMENT RECORD SHEET\*\***

## MAKING A PRODUCT - 6221

**Unit Aim:** This unit aims to help learners to acquire the knowledge and skills to make a product of their own choosing.

**Credit Value:** 4

**Evidence must include:**

	LO1	Assessment Criteria	Amplification of Content	Examples of Tasks	Examples of Evidence
ENTRY 2 (E2)	Be able to choose suitable materials for the chosen product.	<b>AC1.1</b> Select from a given list appropriate material(s) for the chosen product. <b>AC1.2</b> Select from a given list appropriate fixing methods for the chosen product.	✓ Be able to choose suitable materials for the chosen product.	The type of tasks should come from a design and technology background. It is essential that learners do not over stretch themselves, i.e. the task should be achievable by the candidate with respect to their ability and time allowed. The task could be from a set of pre-produced drawings from a text book or teacher. The ideal would be from learners own set task and ideas. Possible suggested tasks: <ul style="list-style-type: none"> <li>• <b>Task A</b> Make a wooden storage unit for holding an everyday item in the home.</li> <li>• <b>Task B</b> Make a rack for the kitchen.</li> <li>• <b>Task C</b> Make a carrying case for an important celebration or event such as the Olympics.</li> <li>• <b>Task D</b> Your mother and father often interrupt you when you are working at home. Make a 'Do not disturb' sign for your bedroom. It must have an electric light which runs off a DC supply.</li> </ul>	
		<b>AC1.1</b> Select appropriate material(s) for the chosen product. <b>AC1.2</b> Explain their choice of materials. <b>AC1.3</b> Choose appropriate fixing methods. <b>AC1.4</b> Explain their choice of fixing methods.			
LO2	<b>Assessment Criteria</b> <b>AC2.1</b> Select from a given list appropriate tools for making the product. <b>AC2.2</b> Use equipment for making the product in a correct manner. <b>AC2.3</b> Apply an appropriate finish to the product.	<b>Amplification of Content</b> ✓ Be able to manufacture their chosen design.			
ENTRY 3 (E3)	Be able to manufacture their chosen design.	<b>AC2.1</b> Select appropriate tools for making the product. <b>AC2.2</b> Use equipment for making the product in a correct manner. <b>AC2.3</b> Apply an appropriate finish to the product.			
		LO3	<b>Assessment Criteria</b> <b>AC 2.1</b> Identify some strengths and weaknesses of their product design. <b>AC2.1</b> Identify the main strengths and weaknesses of their product design. <b>AC2.2</b> Make suggestions for improvement.	<b>Amplification of Content</b> ✓ Review their manufactured product.	
	Review their manufactured product.				

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## PLANNING- 6222

**Unit Aim:** This unit aims to help learners to acquire the knowledge and skills to plan the making of a product of their own choosing.

**Credit Value:** 3

**Evidence must include:**

	LO1	Assessment Criteria	Amplification of Content	Examples of Tasks	Examples of Evidence
ENTRY 2 (E2)	Know the importance of planning the making of a product.	<b>AC 1.1</b> Identify the key points to be taken into account in manufacturing the chosen product. <b>AC 1.2</b> Identify the main stages of manufacturing the product. <b>AC1.3</b> Estimate the length of time required for different stages of manufacturing the product.	✓ Know the importance of planning	For candidates to fully understand the assessment criteria for this unit, it would be better for them to be working on a product that they are modelling or making. The production/making plan can be in any format, it could just be a series of short bullet points, a table, Gantt chart, flow diagram, etc. The plan could include: <ul style="list-style-type: none"> <li>• The main stages of making.</li> <li>• The tools/equipment required.</li> <li>• Health and Safety issues.</li> <li>• Estimated lengths of time for the making.</li> <li>• Actual lengths of time for the making.</li> <li>• Tracking of quality issues.</li> <li>• Evaluation statements.</li> </ul> You could also consider doing the plan as a series of tasks, such as those shown below: <ul style="list-style-type: none"> <li>• <b>Task 1</b> Brainstorm the key points to be considered before you start to think about planning the making of your product. i.e. I need working drawings, tools, pillar drill, etc.</li> <li>• <b>Task 2</b> Do a weekly diary of how and what you are going to make.</li> <li>• <b>Task 3</b> Produce a Gantt chart for the making your product.</li> </ul>	
		<b>AC1.1</b> Explain the key points to be taken into account in manufacturing the chosen product. <b>AC1.2</b> Describe the main stages of manufacturing the product. <b>AC1.3</b> Estimate the length of time required for different stages of manufacturing the product. <b>AC1.4</b> Give reasons for the estimates of time required.			
LO2	<b>Assessment Criteria</b> <b>AC2 .1</b> Produce a basic plan of manufacture. <b>AC2.2</b> Identify some of the tools and processes required to manufacture the product.	✓ Be able to create a plan of manufacture			
Be able to create a plan of manufacture.	<b>AC2.1</b> Produce a detailed plan of manufacture. <b>AC2.2</b> Identify the tools and processes required to manufacture the product.				
ENTRY 3 (E3)	Be able to review a plan of manufacture.	<b>Assessment Criteria</b> <b>AC3.1</b> Make changes to their plan of manufacture where appropriate. <b>AC3.2</b> Record changes to their plan of manufacture.	✓ Review and change their manufacturing stages.		
		<b>AC3.1</b> Make changes to their plan of manufacture where appropriate. <b>AC3.2</b> Record changes to their plan of manufacture. <b>AC3.3</b> Explain the reasons for changing their plan (e.g. more efficient and/or effective production).			

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**HEALTH AND SAFETY - 6223**

**Unit Aim:** This unit aims to help learners to acquire and apply Health and Safety working practices in the context of Design and Technology work.

**Credit Value:** 3

**Evidence must include:**

	LO1	Assessment Criteria	Amplification of Content	Examples of Tasks	Examples of Evidence	
<b>ENTRY 2 (E2)</b>	Know about hazard or risks in the workshop environment.	<b>AC1.1</b> Identify workshop areas where there may be hazard or risk. <b>AC1.2</b> Identify where there may be hazard or risk when using general tools such as hand tools. <b>AC1.3</b> Identify where there may be hazard or risk when using machines such as pillar drills, lathes etc. <b>AC1.4</b> Identify Health and Safety symbols and diagrams.	✓ Be able to assess a hazard or situation.	There are no specific tasks required; however the candidate should relate their evidence of work, to the work that they are actually working on. You could also support their evidence by considering the following tasks: <ul style="list-style-type: none"> <li>• Draw a simple map of the workshop and indicate any important signs or symbols</li> <li>• Produce a general guide for a workshop.</li> <li>• On the map given of the workshop provided, locate areas that are hazardous.</li> <li>• Write a simple guide to using a cutting knife or scissors.</li> <li>• Design a sign to inform fellow students that they must use gloves.</li> <li>• Make a collage of photos showing good practice</li> <li>• Write a list of precautions when using a machine.</li> </ul>		
		<b>AC1.1</b> Explain why there may be a hazard or risk in specific workshop areas. <b>AC1.2</b> Explain why there may be a hazard or risk when using general tools such as hand tools. <b>AC1.3</b> Explain where there may be a hazard or risk when using machines such as pillar drills, lathes etc. <b>AC1.4</b> Explain Health and Safety symbols and diagrams.				
<b>LO2</b>	<b>Assessment Criteria</b>	<b>Amplification of Content</b>				
<b>ENTRY 3 (E3)</b>	Be able to apply health and safety practices.	<b>AC2.1</b> Select the correct tool(s) for a particular process of making. <b>AC2.2</b> Use equipment correctly under guidance when making products. <b>AC2.3</b> Use general workshop machinery under guidance.	✓ Be able to apply Health and Safety practices.			
		<b>AC2.1</b> Select the correct tool(s) for a particular process of making. <b>AC2.2</b> Select the correct equipment for making the product in the correct manner. <b>AC2.3</b> Use general workshop machinery with limited guidance.				
	<b>LO3</b>	<b>Assessment Criteria</b>	<b>Amplification of Content</b>			
		<b>AC 3.1</b> Produce a risk assessment for a given situation.	✓ Be able to make a risk assessment.			

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