

Website Exemplar
GCE (AS) Resistant Materials
Unit: 6RM01
Topic: Hole Punch.

Notes		
A	Performance Analysis	<p>Analysis of the first hole punch offers appropriate comments under each specification heading, although there is some overlap. For example some comments in Function could be used in Performance requirements. However, anomalies such as this are acceptable.</p> <p>The 'similar product' chosen is so similar that it does not allow scope for comparison and this is reflected in comments made by the student such as 'the function of both products is the same' and 'both products are made from the same materials'.</p> <p>Mark range 4-6</p>
B	Materials & Components	<p>Materials for all parts of the hole punch are identified, although the requirement is for two only.</p> <p>Properties of materials are generic, but when describing advantages and disadvantages, some of these relate to the needs of the product.</p> <p>Alternative materials are listed, but without any further information to say why they would be suitable alternatives.</p> <p>Environmental issues are considered appropriately.</p> <p>Mark range 7-9</p>
C	Manufacture	<p>Appropriate manufacturing processes are identified and alternatives suggested, but without reasoning to say why they would be used in the product.</p> <p>Advantages and disadvantages are discussed but these are generic and not focused on the needs of the product.</p> <p>Although a column entitled 'Justification' is included which includes statements such as 'die casting produces a high quality finish' and 'it produces more products in a shorter time', there is no attempt to say why these features are important to the manufacture of the product.</p> <p>Appropriate statements are made regarding environmental impact.</p> <p>Mark range 7-9</p>
D	Quality	<p>An appropriate range of quality control checks is presented, focusing on various parts of the hole punch and a quality assurance system that meets assessment requirements is shown. Standards are considered superficially and fail to describe how they influence the manufacture of the product.</p> <p>Mark range 4-6</p>
E	Design & Development	<p>A range of initial ideas is presented and these are accompanied by some technical information which is sparse, especially on the first ideas page.</p> <p>The statement 'the good thing about designs 2, 5 and 6 is that they do</p>

		<p>not have surfaces that can be vandalised' is invalid as no materials or surface finishes are specified.</p> <p>Some effort is made to look at one or two sub-systems, but this is superficial. Some materials are suggested but are not always appropriate or justified for their suitability.</p> <p>Limited evaluation of some designs is recorded, but this is subjective and superficial; an assumption that a shelter would have the capacity to hold ten people cannot be made if, as in this case, no dimensions are established on designs.</p> <p>Development of an initial idea includes further design input, but this is undetailed, lacking information on manufacture and materials.</p> <p>Materials are considered on page 20 but only as possibilities when by this point in development specific materials for use should be stated.</p> <p>Simple modelling is carried out using polyurethane foam, although the student says it is polystyrene. It is unclear why this modelling is done, as it does not reflect the curved nature of the seating it is meant to emulate and it is impossible to see how it would 'assist a 3rd party in manufacture' as stated by the student.</p> <p>Mark range 7-12</p>
F	Communicate	<p>A range of communication techniques is presented including sketching, modelling and CAD, demonstrating a competent level of skill in their use when conveying design details. Annotation contains technical language that is presented logically, but it often lacks precision in use.</p> <p>(Mark range 5-8)</p>
G	Production Plan	<p>A comprehensive plan for production is presented which includes a detailed sequence of events in the correct order, reference to realistic time scales, quality control and safety. A detailed flow chart is also presented, which is unnecessary as it does not generate any more marks than have already been achieved.</p> <p>Mark range 4-6</p>
H	Making	<p>Two manufacturing tasks are presented, one made entirely from wood and the other from metal. Together they meet the minimum assessment requirements for making tasks of two materials and two processes.</p> <p>Both tasks require demanding skills and these are carried well by the student who demonstrates accuracy in cutting finger joints, veneering, assembly and finishing an attractive jewellery box.</p> <p>The fruit bowl, produced from gilding metal, requires exacting skills in beaten metal that involve cutting, hollowing, planishing and finishing. The stand for the bowl is silver soldered, another challenging skill.</p> <p>This broad range of skills and techniques is carried out with precision and quality, but the student fails to justify the selection of materials for use during manufacture, so cannot access the very highest mark.</p> <p>Mark range 13-18</p>

1	Testing	<p>A range of tests is carried out on the jewellery box and these are set against the manufacturing criteria set at the beginning of the task. Third party testing is recorded, but this is superficial and not set against set criteria.</p> <p>Mark range 4-6</p>
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