

GCSE D&T Resistant Materials 4560

Student Name:

Assessor: NS / CG

Hours Spent	Description of Page contents	Good work	Poorer work	Hints	A3 Page	Max. Mark	Deadline Date
4	<p><u>Investigating the Design Context</u></p> <ul style="list-style-type: none"> • Discrimination shown when selecting and acquiring relevant research that will promote originality in designing • • Excellent understanding and analysis of the design context • • Detailed analysis of relevant existing products or systems undertaken related to design intentions • • Comprehensive analysis of relevant and focused research undertaken • • Clear and specific design criteria identified, reflecting the analysis undertaken • • Target market identified and the intended consumer/user profiled 	<p><i>Used a wide variety of appropriate sources to gather relevant research information</i></p> <p><i>Analysed the task and the research material logically, thoroughly and effectively.</i></p> <p><i>Produced a detailed specification, which focuses closely on the analysis.</i></p>	<p><i>Gathered minimal research information.</i></p> <p><i>Provided little evidence of analysis of task or research.</i></p> <p><i>Produced a simple specification.</i></p>	<p>Most candidates now start with a clear (client) brief and are able to make a prompt start to gathering any information that will assist them with their designing. Better candidates analyse the task rapidly, sometimes using a mind mapping technique. A research plan can be identified by this analysis. It needs to be concise, focused, relevant and used to influence the design. Less efficient candidates may spend many hours assembling a huge volume of research material, which is completely ignored when designing. Do not include copious notes on materials etc It is sufficient to justify material choice with a simple, reasoned statement (and this is possibly better done during the development section).</p> <p>Specifications must consider the needs of the client, designer, manufacturer and user. Students must remember that final product quality is judged against how well their product meets the specification (fitness for purpose), which must be very focused and detailed. Weaker specifications are often specifications for the coursework project, not the product itself.</p>	4	8	<p><i>Begin 1st March 2010</i></p> <p><i>26th March 2010</i></p>
16	<p><u>Development of Design Proposals (Including Modelling)</u></p> <ul style="list-style-type: none"> • Imaginative and innovative ideas have been developed, demonstrating creativity, flair and originality. Further developments made to take account of ongoing research • A coherent and appropriate design strategy, with clear evidence of a planned approach, adopted throughout • The implications of a wide range of issues including social, moral, environmental and sustainability, are taken into consideration and inform the development of the design proposals • Excellent development work through experimentation with a wide variety of techniques and modelling (including CAD where appropriate) in order to produce a final design solution • Appropriate materials/ingredients and components selected with full regard to their working properties • Fully detailed and justified product/manufacturing specification taking full account of the analysis undertaken 	<p><i>Produced a wide range of distinct proposals, which satisfy the specification.</i></p> <p><i>Used one or more of their proposals and relevant knowledge of techniques, manufacturing and working characteristics to develop a detailed and coherent design solution; produced a correct sequence of activities which shows where, why and how practical production decisions were made; tested, objectively evaluated and effectively modified their work throughout the process as appropriate; selected and skillfully used a wide range of communication, graphical and ICT skills, which have helped to clarify their thinking and are sufficient to convey ideas to themselves and others effectively and precisely.</i></p> <p><i>Provided evidence that they have considered and taken account of relevant issues, industrial practices and systems and control.</i></p>	<p><i>Produced a solution, with rudimentary forward planning.</i></p> <p><i>Attempted a superficial evaluation of the outcome of their work;</i></p> <p><i>demonstrated very limited communication, graphical and ICT skills;</i></p> <p><i>Provided little or no evidence of having considered industrial practices and systems and control.</i></p>	<p>Presentation needs to start with many rapid and usually small sketches on a few sheets of paper being followed by detailed development to move an idea from a loose concept to an item capable of manufacture.</p> <p>CAD has been used effectively by an increased number of candidates, and as confidence grows, some are starting to use CAD earlier in the development section. This allows them to explore various detail solutions with accuracy and evaluate them on screen. Taking screen dumps and showing them on a single A3 sheet allows development of ideas to be shown effectively.</p> <p>ProDESKTOP is useful in allowing the student to produce high quality 3D images. They can then easily explore surface finishes and produce orthographic drawings. Other CAD software such as '2D Design' can also be used effectively in design development.</p> <p>One of the best ways to plan making is through a flowchart with feedback loops to consider quality control. Candidates should use, or consider the use of, jigs and templates in construction. Students should also consider how their product might be manufactured in quantity, or modified for manufacture in quantity. These aspects reflect good industrial practice.</p>	10	32	<p><i>10th September 2010</i></p>

18	<p align="center"><u>Making</u></p> <ul style="list-style-type: none"> Final outcome(s) shows a high level of making/modelling/finishing skills and accuracy Selected and used appropriate tools, materials and/or technologies including, where appropriate, CAM correctly, skilfully and safely Worked independently to produce a rigorous and demanding outcome Quality controls are evident throughout the project and it is clear how accuracy has been achieved. The outcome has the potential to be commercially viable and is suitable for the target market 	<p><i>Recorded and justified the need for any changes or adaptations; used appropriate materials, components, equipment and processes (including CAM) consistently correctly, skilfully and safely; made a complete product of high quality.</i></p>	<p><i>Used materials, components and equipment safely under close supervision; produced references to the use of CAM where appropriate; produced an undemanding or incomplete outcome.</i></p>	<p>Students MUST finish their making in time to test the products with users and seek client reaction in their evaluations. Where this is done, a photograph of the product in use is good evidence of the testing. Students must also keep a DETAILED photographic record of each stage of the making to show how the product developed. Video can be used to good advantage here.</p>	4	32	<p align="center">4th March 2011</p>
6	<p align="center"><u>Testing and Evaluation</u></p> <ul style="list-style-type: none"> Detailed testing and evaluation as appropriate throughout the designing and making process taking account of client/user or third party opinion All aspects of the final outcome have been tested against the design criteria and/or the product/manufacturing specification Evaluate and justify the need for modifications to the product and consideration given as to how the outcome might need to be modified for commercial production 	<p><i>Demonstrated an ability to satisfy accurately and completely all the demands of the design solution; thoroughly considered QA & QC and applied them consistently and successfully. Has shown clearly how the product can be batch or mass produced.</i></p>	<p><i>Some evidence of QA and QC. No consideration of Industrial Production</i></p>	<p>The best evaluations also test the product against the original specification. Candidates need to make use of digital media to show the progression of ideas through modelling or construction. This recording can accompany planning showing how work has progressed and any subsequent modifications required. Final views of the product in action are an excellent way of clearly showing how the final product looks and works in it's environment Make sure that you complete the product at LEAST 3 WEEKS BEFORE the final deadline – this is the minimum time required for an evaluation.</p>	2	12	<p align="center">25th March 2011</p> <p align="center">Final checked folder in 7th April 2011</p>
Within entire folder	<p align="center"><u>Communication</u></p> <ul style="list-style-type: none"> Design folder is focused, concise and relevant and demonstrates an appropriate selection of material for inclusion All decisions communicated in a clear and coherent manner with appropriate use of technical language The text is legible, easily understood and shows a good grasp of grammar, punctuation and spelling 	<p><i>High quality graphics and text, including freehand, measured, CAD, Word Processing and any other appropriate technique required for effective communication. Spelling Punctuation and Grammar will be of a high standard.</i></p>	<p><i>Very limited graphic techniques. Poor Grammar and spelling.</i></p>	<p>Use the most appropriate techniques for good communication, but try to show your versatility.</p>	All page	6	

**Please Note the deadline dates refer to the FINAL deadline for that section. Please refer to your Calendar booklet to find the interim deadlines for each individual page
PLEASE ENSURE THAT YOU STICK TO THESE DEADLINES**

REMEMBER that the examiner only sees your project as a series of photographs – not in real life! YOU have to make sure that the folio clearly shows how your design came about and developed, and that it is easy to understand your thinking.

**TOP TIP – Get someone who knows nothing of your project to read your folder at the end, if it makes sense to them it will probably make sense to the examiner!
As we are using an e-folio (A4 Powerpoint slides) you will need up to TWICE the number of slides as A3 pages shown on the table above. E.g 4 A3 pages = UP TO 8 slides!**