GCE D&T 6MR04 Product Design: Resistant Materials Technology Assessment Guidance.

The assessment guidance outlined below underpins the assessment criteria published in the Edexcel GCE Design and Technology: Product Design Specification. The guidance emphasises some of the key points that must be considered carefully when awarding marks to candidate work. It is designed to help supervising teachers assess candidate work with close reference to the assessment criteria. The criteria published in the GCE Design and Technology Specification are the official resource that must be used when assessing candidate work. Please be aware that the guidance produced here is not an alternative set of assessment criteria nor does it replace the published criteria.

Assessment Criteria	Assessment Guidance - Key Issues to Consider When Marking 6RM04
A. Research and analysis	• Project choice should centre on a commercial approach in consultation with a client/user group. • Analysis should be used to determine design needs through a client/user group interview which should be summarised to guide research. • Analysis should reflect a shared approach between client/user group and designer to the brief to clarify design needs. • Research should focus closely on the design needs identified and should be selective and useful in producing a specification and when designing. • Primary research should be carried out wherever possible and include analysis of existing similar products. • A summary of research findings should be used to identify key points to include in the product specification.
B. Product specification	• Specification points should be developed in consultation with a client/user group. • Specification points should be realistic, measurable and justified. • Key statements should reflect research information. • Statements regarding relevant sustainability issues should be included.

C. Design	• Designs should be realistic, workable and technically detailed. • Fewer designs that are well analysed should be focused on rather than many that are undetailed. • Sub-systems of design ideas should be included and explored graphically. • Annotation should include details of possible materials and processes that could be used during manufacture. • Annotation should refer to design needs and justify how designs meet/do not meet these and include client/user group feedback.
Review	• Evaluative comments should be used to determine the most successful design ideas/part ideas and should be reviewed against specification points. • A review of designs should be used to select which one (or combined features of more than one) will be taken forward and developed. • Client input should be used to help determine the suitability of each design. • Realistic issues of sustainability should be considered. • Review of designs should be presented as an objective discussion, justifying why designs should or should not move on to development; marks out of ten and tick boxes should be avoided.
Develop	• Design development should show further design input to refine details into a final design proposal. • The final design proposal should be modelled in either resistant materials or 3D CAD. • Modelling should be justified to say what it is testing. • The final design proposal should be evaluated objectively against design criteria. • Client feedback should be used to assist in design development and final design proposal.
Communicate	• A range of media, including CAD should be used with skill and accuracy. • There should be enough information presented in the final design proposal to allow a third party to make the product. • Annotation should use technical language logically to convey information.
D. Planning	• There should be a recognisable sequence of making tasks presented in the correct order. • Quality control and safety checks should give details of what they are and how they are carried out. • Time should be recorded in minutes/hours and not in lessons,

	days or dates.
E. Use of equipment	• Tools, processes and equipment should be selected and used independently to demonstrate skills in making tasks. • Awareness of safety issues should be evident during making. • No more than 50% use of CAM should be employed.
Quality	• The final product should consist of well made component parts, accurately assembled. • The product should match its specification and function as intended. • Material selection should be justified.
Complexity/level of demand	• The making task should be challenging and appropriate to A2 standards, one year on from AS. • A range of skills and processes should be used with accuracy and precision.
F. Test and evaluate	• At least two tests should be carried out against measurable making criteria. • Tests should focus on the performance and quality of the finished product. • Tests should be described in detail and should include information on how they were carried out and what the results were. • Evaluation comments should focus on points of specification and should not include a description of making or problems encountered. • Evaluation from the client/ user group should relate to measurable making criteria and not be superficial or congratulatory. • Suggestions for modifications should relate to performance and quality. • A life cycle assessment should be carried out on the product to check its sustainability.