Here is the mark scheme for the GCSE Resistant Materials coursework.

This represents 60% of your overall GCSE marks.

You will start the coursework in Year 10 of the three year course and your teacher will guide you through each section.

You can use the mark scheme to see how you can optimise your marks for each section.

Ideally you want to be performing in the two top boxes for each section as this will enable you to gain the most marks the boxes lower than this are only going to gain you enough marks to achieve a grade below a 'C'.

The total marks are out of 90.

Summary of Controlled Assessment Criteria

The following is a summary of the assessment criteria for the controlled assessment together with an indication of how these marks relate to the assessment objectives.

Assessment Criteria	Maximum Mark allocation	AO1	AO2	AO3
1. Investigating the design context	8	5		3
2. Development of design proposals (including modelling)	32	2	30	
3. Making	32	2	30	
4. Testing and Evaluation	12			12
5. Communication	6	6		
Total	90	15	60	15

Criterion 1 Mark Band	Investigating the Design Context
7– 8	• 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
5–6	• Good understanding and analysis of the design context • Good analysis of relevant products or systems undertaken • Good analysis of relevant research and context • Design criteria which reflects the analysis undertaken • Target market for product has been identified
3–4	• Basic understanding and analysis of the design context • Some analysis of related products or systems undertaken • Made a superficial analysis of most of the research material and the context • Design criteria reflects most of the analysis undertaken • Some consideration has been taken of the likely consumer/user
0–2	• Limited understanding or analysis of design context • Minimal analysis of other products or systems undertaken • Provided little evidence of research and analysis of context • Design criteria is very general and lacking in any detail • Limited understanding of the target market/user evident

Criterion 2 Mark Band	Development of Design Proposals (including modelling)
26–32	• 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
19–25	• Imaginative ideas demonstrating a degree of creativity, which are further developed to take account of ongoing research • An appropriate design strategy, with evidence of planning, adopted for most aspects • Development of design proposals take into account the main aspects relating to a variety of social, moral, environmental and sustainability issues • Good development work achieved through working with a variety of techniques and modelling (including CAD where appropriate) • Appropriate materials/ingredients and components selected with regard to their working properties • Product/manufacturing specification is complete and reflects key aspects of the analysis undertaken
12–18	• Design ideas show some degree of creativity and further development • An appropriate design strategy, with some evidence of planning, adopted for some aspects • Developments of design solutions are influenced to some extent by factors relating to social, moral, environmental and sustainability issues • Adequate development work achieved through working with a range of techniques and modelling (including CAD where appropriate) • Materials/ingredients and components selected with some regard to their working properties • Product/manufacturing specification reflects most aspects of the analysis
6–11	• Ideas show some variation in approach or concept • A limited design strategy, with minimal planning, is evident • Some consideration taken of social, moral, environmental and sustainability issue in development of design solutions • Development work is lacking in detail but makes reference to a number of techniques and modelling (including CAD where appropriate) • Materials/ingredients and components selected with limited regard to their working properties • Limited product/manufacturing specification which reflects most obvious features of analysis
0–5	• Ideas are lacking in imagination with minimal development or further research • Little evidence of a logical approach being adopted, with no indication of planning • Development work shows little consideration of social, moral, environmental and sustainability issues • Basic development work undertaken using a limited range of techniques • Materials/ingredients and components selected with little regard to their working properties • Produced a simple product/manufacturing specification which is general in nature

Criterion 3 Mark Band	Making
26–32	• 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
19–25	• Final outcome shows very good level of making/modelling/finishing skills • Selected and used appropriate tools, materials and/or technologies including, where appropriate, CAM correctly and safely • Outcome demonstrates a high level of demand • Quality control checks applied in the manufacture of the product • The outcome is suitable for the target market and could be commercially viable with further development
12–18	• Final outcome shows good level of making/modelling/finishing skills • Used appropriate materials, components, equipment and processes correctly and safely (including CAM) • Parts of outcome show high levels of demand • Applied quality control checks broadly but superficially • The outcome requires further development in order to be suitable for the target market
6–11	• Final outcome is largely complete and represents a basic level of making/modelling/finishing skills • Used materials, components and equipment correctly and safely (including CAM if appropriate) • Some aspects of outcome are demanding • Some evidence of limited quality control applied throughout the process • The outcome has some weaknesses which limit its suitability for the target market
0–5	• Final outcome is incomplete or represents an undemanding level of making/modelling/finishing skills • Used materials, components and equipment safely under close supervision • Worked with some assistance to produce outcome of limited demand • There is limited evidence of any quality control and levels of accuracy are minimal • The outcome has significant weaknesses which limit its suitability for the target market

Criterion 4 Mark Band	Testing and Evaluation
9–12	• 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
6–8	• Appropriate testing and evaluation evident throughout the designing and making process • Most aspects of the final outcome have been tested against the design criteria and/or the product/manufacturing specification • Evaluate and justify the need for improvements or modifications to the product
3–5	• Evidence of some testing and evaluation leading to the production of the final outcome • Some evidence of testing against the design criteria and/or the product/manufacturing specification • Some improvements or modifications to product suggested
0–2	• Minimal testing and evaluation throughout the designing and making process • Limited or no testing of final outcome against the design criteria and/or the product/manufacturing specification • Limited mention of some improvements or modifications that could be made to the product

Criterion 5 Mark Band	Communication
5–6	• 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
3–4	• Design folder shows some skill in choice of material for inclusion but includes some irrelevant content • Most decisions communicated with some clarity and with some use of technical language • There are a small number of errors in grammar, punctuation and spelling
0–2	• Design folder shows excessive duplication of information and a lack of brevity and focus resulting in irrelevant content • Ideas and decisions communicated at a simplistic level with a limited grasp of the concepts involved and a limited use of technical vocabulary • Numerous errors in grammar, punctuation and spelling