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| **Y11 Autumn Term GCSE Design and Technology – Resistant Materials Board: Edexcel**  |
| **Key Topics** | **Exam Dates** | **Controlled Assessment** | **What the student needs to do:** |
| Research and Investigation to inform design* Consumers Needs
* Anthropometrics
* Ergonomics
* Product Analysis
* Specification

Generation of design ideas* Generating alternative design ideas
* Drawing Skills
* Working to a Specification

HALF TERMEvaluating ideas against a specificationDeveloping ideas* Sketching techniques
* Presenting information
* Modelling

Working Drawings* CAD
* Orthographic Projection
* Sectional Drawing

Cutting lists | HALF TERM | Design and Make Project:- Research and Investigation (15 marks)- Generating Ideas (16marks) HALF TERM- Review of ideas(4 marks)- Developing and modelling(9 marks)- Working Drawing and cutting list(6 marks) | Produce research into their design brief, looking at existing products, talking to potential users about their needs and collecting other relevant data.All research must be relevant and lead to a detailed specificationGenerate at least 6 **different** ideas that meet their specification. Labelled with details of materials and processes.Use a range of drawing techniques.Objectively evaluate all of their ideas against each point in their specification.Taking 2 or more of their initial ideas, develop a final proposal that is different and improved on their original ideasUse modelling to test the ideaDraw up final proposal in detail, including all materials, dimensions, joints and finishesProduce a Cutting List ready to buy materials over Christmas Break |
| **Y11 Spring Term** |
| **Key Topics** | **Exam Dates** | **Controlled Assessment** | **What the student needs to do:** |
| Planning out a manufacture processManufacture Process* Working to a production plan
* Independently selecting and using hand and power tools
* Working to time limitations
* Importance of a quality finish

Testing the success of a productEvaluating against a specification | Course completed in Spring term | Design and Make Project- Production Plan(6 marks)- 16 hours of Manufacture1. arks)

-Testing and Evaluating (6 marks) | Produce lesson by lesson plan of their manufacture, including time, tools, health and safety and quality control checksFollowing their production plan they have 16 hours to make their product.Selecting and using tools independently and with accuracyTest and evaluate their product against each of the points in their specification. |