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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 TERM  Evaluating ideas against a specification  Developing 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 specification  Generate 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 ideas  Use modelling to test the idea  Draw up final proposal in detail, including all materials, dimensions, joints and finishes  Produce 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 process  Manufacture 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 product  Evaluating against a specification | Course completed in Spring term | Design and Make Project  - Production Plan  (6 marks)  - 16 hours of Manufacture   1. arks)   -Testing and Evaluating  (6 marks) | Produce lesson by lesson plan of their manufacture, including time, tools, health and safety and quality control checks  Following their production plan they have 16 hours to make their product.  Selecting and using tools independently and with accuracy  Test and evaluate their product against each of the points in their specification. |