**12M Design and Technology Summer Work 2022**

**You will be working on Section C - Development of Design Proposals (25 marks). This section must be completed by the return to school in September. Use the Guidance PowerPoint attached to support you.
If you have any questions, you can see me or email me to ask.**

**Kind regards**

**Mr Peacock**

**Key Points:**

* Development of initial concepts showing originality and creativity.
* Design developments work towards meeting the Brief and Specification requirements. Analyse developed ideas against specification points.
* Range of sketches, CAD drawings, card modelling, testing ideas.
* Client and customer feedback / evaluation of developed ideas.
* Further research to support development of a solution.
* Detailed plan for manufacture to include – Final Design (Annotated), Part and Assembly drawings, Orthographic (dimensioned drawings), Parts / Materials list, Step by Step plan for manufacture.

**Pieces of work to evidence:**

* Sketches of ideas.
* Development sketches. Show changes to your design ideas.
* CAD Drawings.
* Card models.
* Test pieces. Manufacture parts to test how they look / work.
* Compare and evaluate development work against specification points and gain customer feedback. Focus group feedback.
* Further research to inspire solutions.
* Ergonomic and anthropometric data?
* Templates.
* Mockups.
* Final CAD design – Solidworks drawing.
* Exploded drawing.
* Orthographic.

**Section C – Development of design proposal(s)**

**Do’s**

* Select the design to develop

 - use the specification criteria and a scoring method

 - use the client/potential user feedback

* Use sketches, modelling and CAD to refine the aesthetics/form
* Use test pieces to explore possible materials and construction methods
* Make full size models and seek third party comment. **Refine design based on feedback.**
* Produce a working drawing with sufficient dimensions for a third party to make a prototype.
* Produce a detailed manufacturing plan- outlining each step of the making process, tools/equipment, materials and components, quality assurance and time.
* Produce a manufacturing specification. (Best practice is an exploded drawing, each part/component is identified, method of making and sizes given.

**Section C- Don’ts**

* Don’t develop the design without explaining the selection of design
* Don’t just produce one or two models
* Don’t produce working drawings without accurate dimensions.
* Avoid the leap from the chosen design idea to final design without **practical** exploration of materials, components, and methods of construction.