**12L Design and Technology Summer Work 2023**

**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.**

**I have also included the ‘A-level NEA AFL’ which lists the pieces of work to evidence in each section of your portfolio.**

 **If you have any questions, you can see me or email me to ask.**

**Kind regards**

**Mr Peacock**

**Section C of DT NEA portfolio:**

**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.