

The NEA is a single task that contributes 50% of all marks for the Design and Technology GCSE. Students will be given a choice of a number of Contextual Challenges (themes). They will research and investigate one or more of these themes, in order to find a design problem to solve.

Students will consider the design problem, from the point of view of a potential client / customer, leading to a design brief and specification. Then, they will produce a series of designs and develop one or more, leading to a final manufactured prototype. This will be fully tested and evaluated.

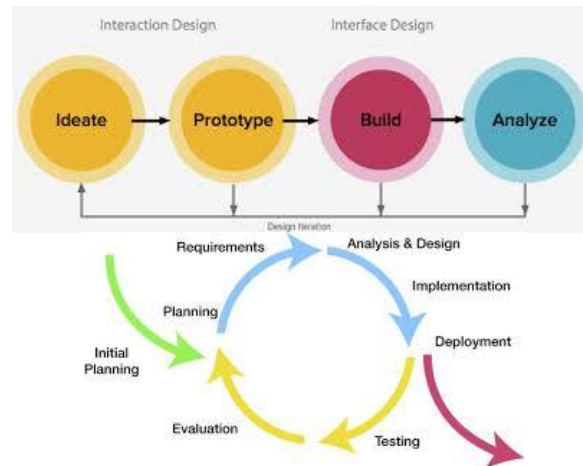
Students will produce a portfolio (written or digital), of approximately twenty design sheets. Examination boards recommend that students do not exceed twenty sheets and spend between 30 to 35 hours on the NEA, which includes the manufacture of the final prototype.

Throughout the process the teacher will not be able to give you specific feedback or tell you what to do. You will need to show your independence and take on the guidance given. Too much feedback could lead to you losing marks.

Iterative design is the process of continual improvement, of a concept, prototype, design or product. It is a **CYCLICAL** approach to the development of a product, whereby a design is improved by frequent testing, client feedback, focus groups, materials testing, prototype testing, design development and evaluation, until a final refined / developed design/product is reached.

It differs from the **linear** approach to design, whereby the designer goes through a number of predefined stages, one at a time, until a conclusive design is reached.

The **Iterative Design Cycle** works at it's best, when a student understands how each of it's individual components (we call them 'DESIGN TOOLS') can be used, to help in the design and development of a product.



**CYCLE 1 IDENTIFYING & INVESTIGATING DESIGN POSSIBILITIES**

- AO1: Identify, investigate and outline design possibilities to address needs and wants.
- AO3: Analyse & evaluate

**Tasks involved:** Task analysis, client identification, designer/existing products research and conclusions for each piece created.

**CYCLE 2 IDENTIFYING & INVESTIGATING DESIGN POSSIBILITIES**

- AO2: Generating Ideas, Design & make prototypes that are fit for purpose
- AO3: Analyse & evaluate

**Tasks involved:** initial designs, prototyping, modelling, client feedback, developed ideas.

**CYCLE 3 & 4 DEVELOPING DESIGN IDEAS TO ONE FULLY DEVELOPED IDEA**

- AO2: Design & make prototypes that are fit for purpose Developing design ideas
- AO3: Analyse & evaluate

**Tasks involved:** Manufacturing plans, creation of the final piece, evaluation and client evaluations, photographic evidence

**CYCLE 5: TESTING & EVALUATION OF THE FINAL CONCEPT**

- AO3: Analyse & evaluate

**Tasks involved:** Evaluation of final piece against the brief, client, needs/purpose, testing by the client in situ, further development of manufacturing