

Your NEA project

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).

1. **Providing a safe and comfortable home**
2. **Working towards a sustainable future**
3. **A high profile activity or occasion**

You will research and investigate one 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 produce a series of designs and develop one or more, leading to a final manufactured prototype. This will be fully tested and evaluated.

Independence

With your project it is important that this must be 100% completed by you. Too much feedback could lead to you losing marks. Although I can guide and make suggestions, it is up to you to make choices on-

- Your final design

- Materials
 - Tools and equipment
 - How you make your final idea.
- Every task, project and homework you have been asked to complete have been in preparation for you to be confident in taking on this task.

Keywords:

Sustainability - able to be maintained at a certain rate or level.

Recycled - convert (waste) into reusable material.

Upcycling - reuse (discarded objects or material) in such a way as to create a product of higher quality or value than the original.

Research - investigation into and study of materials and sources in order to establish facts and reach new conclusions.

Prototype - a first or preliminary version of a device or vehicle from which other forms are developed

Client - a person or organization using the services of a professional person or company

Justify - show or prove to be right or reasonable.

Design Strategies:

Design fixation - When you get stuck on a particular idea. It can stop you thinking creatively and coming up with innovative ideas.

Systems approach - This means breaking down the process into a number of different strategies and doing each in turn.

User-centred design - The wants and needs of the client are prioritized - their thoughts are given a lot of attention at every stage of design and manufacture

Iterative design - Centered around the design process of evaluation and improvement at each stage of designing.



Videos links for the project

Identifying design opportunities

<https://www.bbc.com/bitesize/guides/zbn6pbk/revision/2>

Creating and working with design specifications and design briefs

<https://www.bbc.com/bitesize/guides/zbn6pbk/video>

Iterative design process:

Iterative design is the process of continual improvement, of a concept, prototype, design or product. 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.

CYCLE 1 IDENTIFYING & INVESTIGATING DESIGN POSSIBILITIES

- Identify, investigate and outline design possibilities to address needs and wants.
- Task analysis, client identification, designer/existing products research.

CYCLE 2 IDENTIFYING & INVESTIGATING DESIGN POSSIBILITIES

- Generating Ideas, make prototypes that are fit for purpose
- Analyse & evaluate initial designs, prototyping, modelling, client feedback, developed ideas.

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

- Design & make prototypes that are fit for purpose Developing design ideas
- Analyse & evaluate manufacturing plans, creation of the final piece, evaluation and client evaluations, photographic evidence.

CYCLE 5: TESTING & EVALUATION OF THE FINAL CONCEPT

- Analyse & evaluate of final piece against the brief, client, needs/purpose, testing by the client in situ, further development of manufacturing

Communication and literacy

The majority of your work will be in written form. To ensure you gain the most marks you will need to ensure each page is-

- Legible and clear text fonts
- Little to no spelling and grammar mistakes
- Font size no bigger than size 12 (18-20 for titles)
- Little to no repetition of work or large amounts of text