

Y9 Block 1: Upcycling/sustainability

Key words

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.

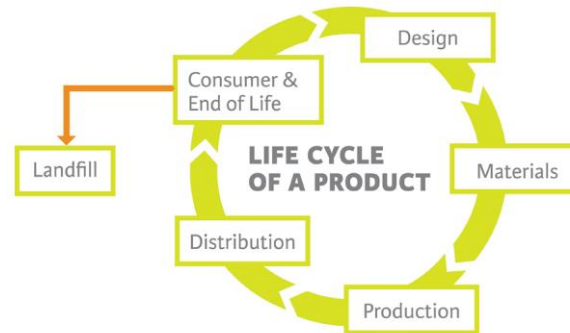
Research-investigation into and study of materials and sources in order to establish facts and reach new conclusions

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 brief: Design and make a product that is influenced by sustainable design.



SUSTAINABLE DESIGN PRINCIPLE

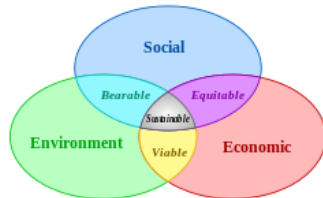


Low-impact materials
 Energy efficiency
 Emotionally durable design
 Sustainable design standards
 Design for reuse and recycling
 Bio mimicry
 Service substitution
 Renewability

Design Process:

- Task analysis and research plan
- Research and evaluation
- Specification
- Research evaluation
- Initial design ideas
- Design development and prototypes
- Trials of techniques and samples
- Final design concept

Examples of sustainable design:



Design Strategies

You can use design strategies to come up with initial design ideas without getting you on a bad one. Designing is a really complex process and there are several different ways of doing it:

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 prioritised- their thoughts are given a lot of attention at every stage of design and manufacture

Iterative design: Centred around the design process of evaluation and improvement at each stage of designing.

When you are designing a product it is easy to get stuck on a particular idea. This is called design fixation and it can stop you thinking creatively and coming up with innovative ideas.

Following the design strategy can help you avoid design fixation and encourage you to look at your design in a critical way to make improvements. Other ways to avoid are-

- Collaboration
- Honest feedback
- Focusing on new solutions
- Using fresh approaches

You can also annotate your designs to fully explain further using ACCESS FM

- A= Aesthetics
- C= Cost
- C= Customer
- E= Environment
- S= Size
- S= Safety
- F= Function
- M= Materials

Prototypes/toile



A toile or prototype is a fabric, card or paper version of you design ideas. At this stage of the design process it is completed to help you identify any parts which could not work or to refine ideas as you develop samples or designs. You will be expected to create a prototype for you coursework.

