

A level Product Design

Change is inevitable, what part are you going to play?



Welcome to A level Product Design.

Tasks to complete over the summer holiday. If you have any questions, please email Mrs Creed or Mr Barnett @ DRC@Hardenhuish.wilts.sch.uk or AZB@hardenhuish.wilts.sch.uk

Task 1

Look over slides 5-9 with a family member and discuss the various issues that are associated with the content on each slide. For example, slide 8 'Designs against humanity', have you or your family member seen examples locally or nationally where the design of a product / environment actively discourages interaction / use by a sector of society? How does that make you feel? Should the council be expected to install facilities for the homeless rather than install products that force them to leave? What would you design?

Task 2

Complete the task on Slide 10. Remember to offer a detailed explanation for why you included each artifact. Try to identify the specific reasons i.e. I am particularly impressed with how the product has been engineered to be easily disassembled. Each element just unclips, and the material type is written on each part to aid recycling.

Your photo(s) and detailed explanation is to be presented on page 1 of your 3-page submission (to be added to slide 14 of this PowerPoint).

Task 3

Complete the modelling task on Slide 11 and photograph your finished model.

The photograph(s) must then be added to page 2 (slide 15 of this PowerPoint).

Task 4

Complete the design task on slide 12.

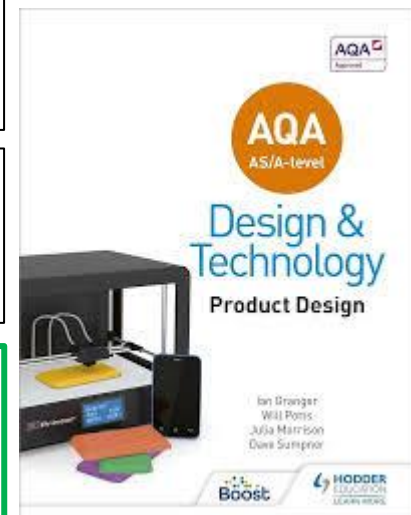
Your annotated sketches or CAD drawings or drawn on photos of further models are to be presented on pages 2 and 3 (slides 15 and 16 of this PowerPoint).

Task 5

We encourage you to view the Specification. To do this please use the hyperlink on slide 13.

We also recommend purchasing the textbook that accompanies the course, this is AQA AS/A level Design & Technology Product Design. ISBN 978-1-5104-1408-2

We wish you a lovely summer holiday and look forward to teaching you in September.



AQA Design & Technology – Product Design - code 7552

- Non-Exam Assessment:
- Unlike GCSE you decide on a Design Brief that addresses the needs of a client / target market.
- Through exploration, design work and extensive development a working prototype is realised that addresses the Design Brief.

Expect to:

- Design experiments to trial design concepts, materials and electronic components etc.
- Liaise with a client – conduct interviews and or surveys
- Produce hand draw and or CAD sketches
- Model in card, blue foam and PLA (use the 3D printer)

Over 70% of the NEA marks are derived from your experiments, designs, models and the working prototype.



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Examined assessment:

Paper 1:

- Core technical principles and core design & manufacture principles
- 2 hours
- Mixture of short answer, multiple choice and extended response questions
- 25% of A level

Paper 2:

- Specialist knowledge - technical & designing & manufacture
 - 2 hours
 - Mixture of short answer, multiple choice and extended response questions
 - 25% of A level
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- Section A - product analysis based questions
 - Section B – commercial manufacture



Social, Moral and Ethical issues – Design for Poverty

Social issues are those such as environment, health, poverty discrimination and unemployment

Moral and Ethical issues are related to people's beliefs, such as what they believe is right or wrong



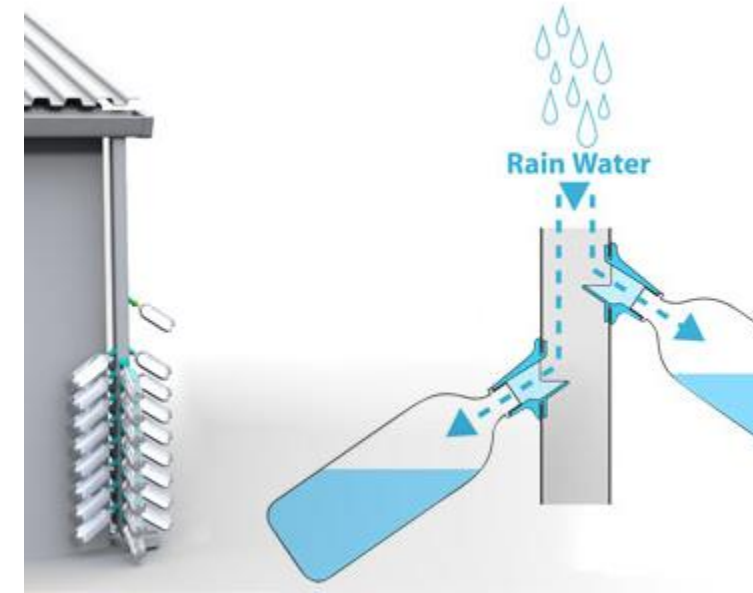
Dr Panjwani estimated that, in Pakistan, 30 percent of all diseases and 40 percent of all deaths are due to poor water quality.

Designers have a responsibility / a duty to design responsibly and to meet the needs of their customers



Social, Moral and Ethical issues – Design for Poverty

Poverty is a difficult problem to diagnose let alone solve but nonetheless as designers we can address different aspects of poverty and hope by dealing with each point in the problem, we can begin to collapse the systemic process and give back the dignity every person deserves.



The RainDrops system simply allows people to adapt standard plastic bottles to an existing gutter system to collect rain water.

This changes water storage from the most to the least expensive part of the system. These are much easier to clean and replace than larger storage units.

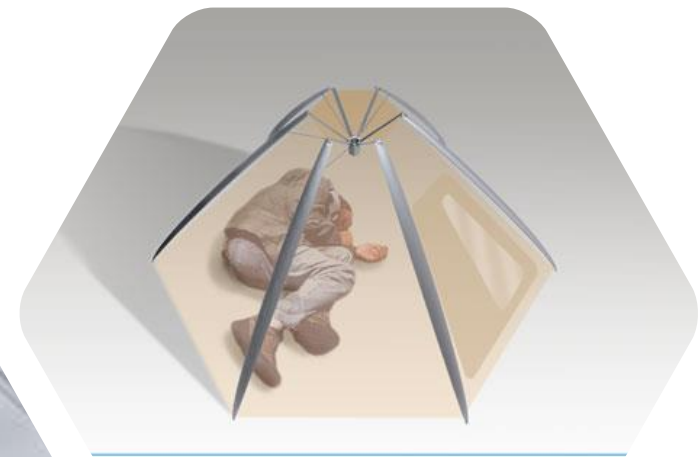
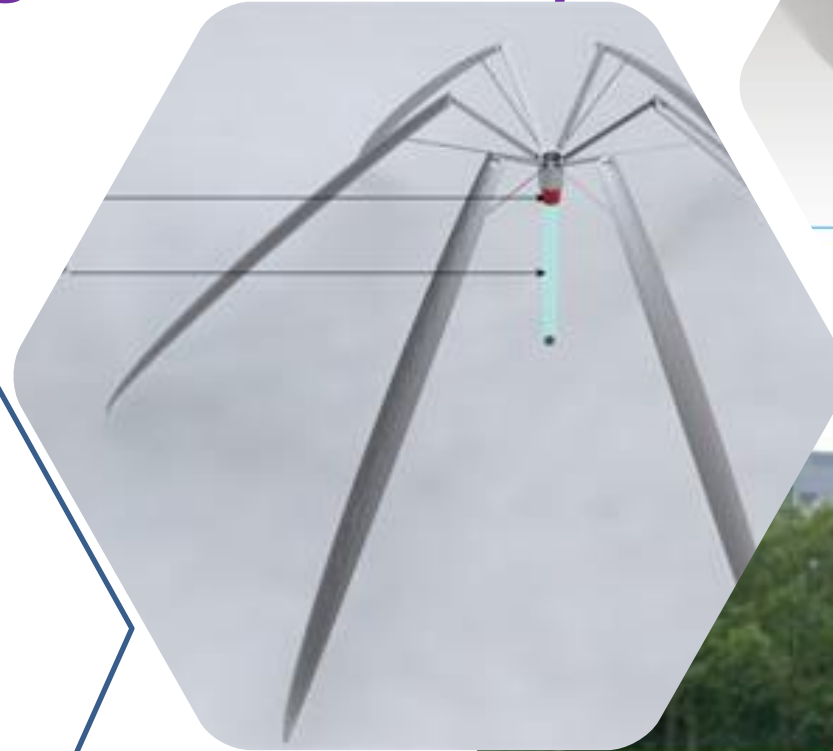
The repurposing of these plastic bottles will also give value to many bottles that are otherwise headed for landfills.

Social, Moral and Ethical issues

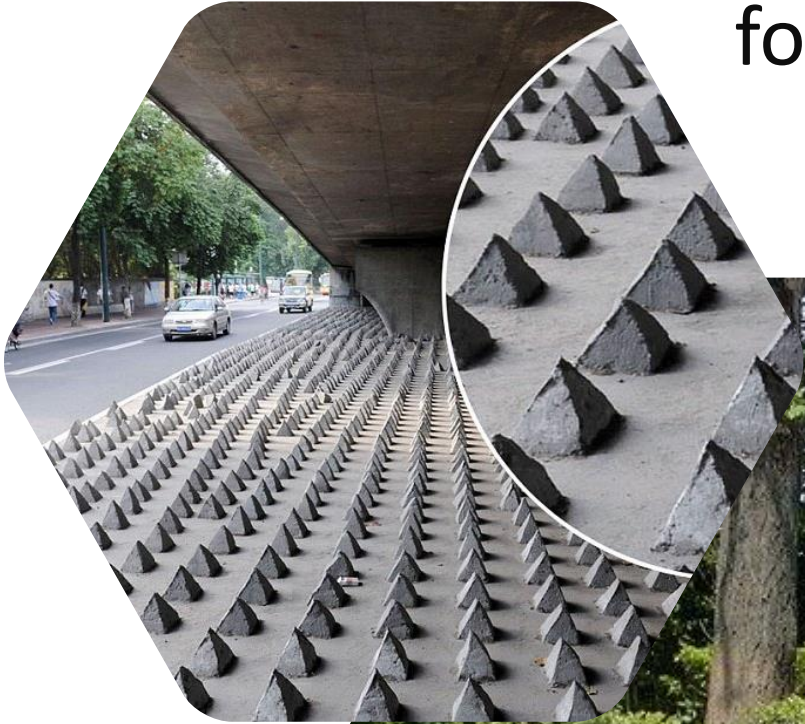
Design for Poverty

H2OME provides the user with shelter from the elements and cold and at the same time it acts as a water collection/filtration system so clean, safe drinking water is available at all times.

When the H2OME is being used as a shelter the specific shape of the structure collects rainwater or any water for that matter and funnels it through a carbon water filter, which then empties into a water bladder for storage.



Designs against Humanity – Designed for good or evil?



Technology push or the insatiable desire to manufacture for profit or the solution to a Social need?

KeepCup – a reusable coffee cup designed for use within barista coffee machines



The growing problem of electrical waste



Task 3:

Take one piece of single use plastic (water bottle, drinking straw, disposable cup, disposable knife and fork) and use it (or many of it!) to create a table, ceiling or floor light.

The light should appeal to those concerned about the environment and wish to have a statement piece in their living space.



Before you embark, on the A level course I recommend you view the technical principles and designing and making principles sections of the Specification, the links are below.

<http://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-7552/subject-content/technical-principles>

<http://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-7552/subject-content/designing-and-making-principles>

