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.

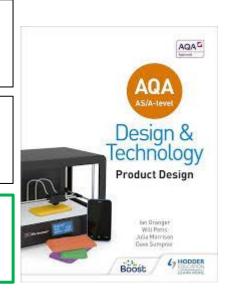
Your annotated sketches or CAD drawings or drawn on photos of further models are to be presented on pages 2 and 3 (slides 15 and 16 of this PowerPoint).

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.



# AQA Design & Technology – Product Design - code 7552

#### **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
- 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



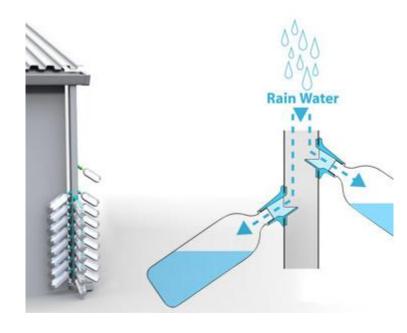


### Social, Moral and Ethical issues – Design for Poverty

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.





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







### The wall of Everyday Objects at the Design Museum

Task 2: Find your favourite objects from around your home / immediate area (remember to ask the permission of the owner) and lay them out neatly on a table.

Take a photo

Now explain why you have chosen these objects.

Is it because it is an essential item that you couldn't live without

Or

An item that has had a profound impact on society

Or

Is a good example of excellent design

Or

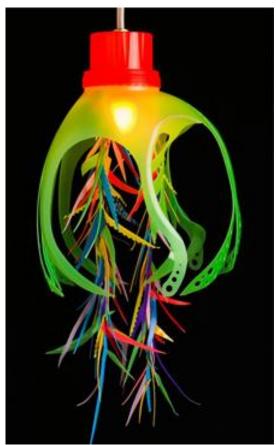
Is an example of irresponsible design or poor design

### 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.

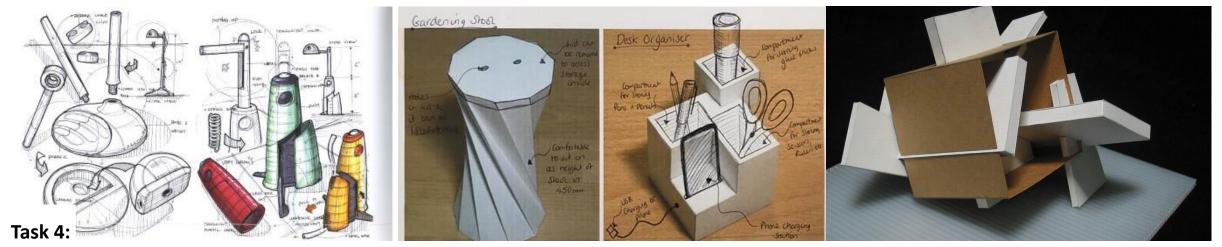
The light should appeal to those concerned about the environment and wish to have a statement piece in their living space.







Portfolio / evidence of design work for a statement piece for the living room – Pages 2 and 3 (slides 15 and 16)



Having created a model for task 2 on slide 11, we now ask that you plunge into designing a range of alternative solutions. Therefore.....

Do I create an 'Interview the target market' page (NO) just add any comments you have obtained from a parent or sibling to support your design work. Do I generate an 'Investigate existing products' page (NO) just refer to existing products (via annotated photos) when they support your design work.

### But do.....

Generate an array of experimental, creative, innovative design concepts (excellent design pages will include weak design concepts, just ignore these, we will!). The key here is we want you to fully explore the design task on <u>slide 11</u> – be creative and think outside of the box. Avoid Google images but we do recommend you look at Pinterest <a href="https://www.pinterest.co.uk">https://www.pinterest.co.uk</a>. Also consider using your research on 'The Work of Others' at GCSE to inspire/inform your design work.

Do consider creating more models to realise some of your design concepts in 3 dimensions – very helpful if you are struggling to sketch the concept. Do consider annotating/drawing on top of the photos of your models (as shown in the image above).

5) Design pages (sketches, CAD drawings, models,) must include annotation, this will show your design thinking regarding the products function, choice of materials, ergonomics and the products strengths and weaknesses. They must also include evidence of third-party feedback which you have used to inform the next design iteration/the next development.

All design concept sketches must be presented on pages 2 & 3 (slides 15 and 16)

