Yr12 Bridging Task: Product Design

For your yr12 course you will be working through the design process, including market research, product analysis, designing, prototyping and making modifications to your ideas. You will also be expected to work to parameters including user needs, environmental issues and manufacturing constraints. For this summer project you will complete a range of tasks that will better prepare you for our expectations in September. Please bring all of this work to your first lesson- the presentation is up to you. Should you have any questions please email me R.Mason@ksn.org.uk Mr Mason

You are going to design a new piece of wooden furniture for ONE of the following contexts:

- **Flat pack garden furniture**
- **2 in 1 work seat/desk for nursery children**
- **Portable stool for use in an Art Gallery**

Firstly you need to identify a user:

SITUATION

Who? – Identify in the client in detail.

What? – What are the requirements of your client?

Where? – Where is the client located?

Why? – Why is the design required and what is it intended to achieve?

Market Research/Product Analysis

Identify 6 products that you use at home. (at least 2 should be seating/desks of some sort).

Analyse all 6 products.

Research how they were made- think of manufacturing methods like cutting, moulding, joining and finishing. Why were those methods chosen?

What they are made from (just saying plastic is not enough!).

Materials used and why?

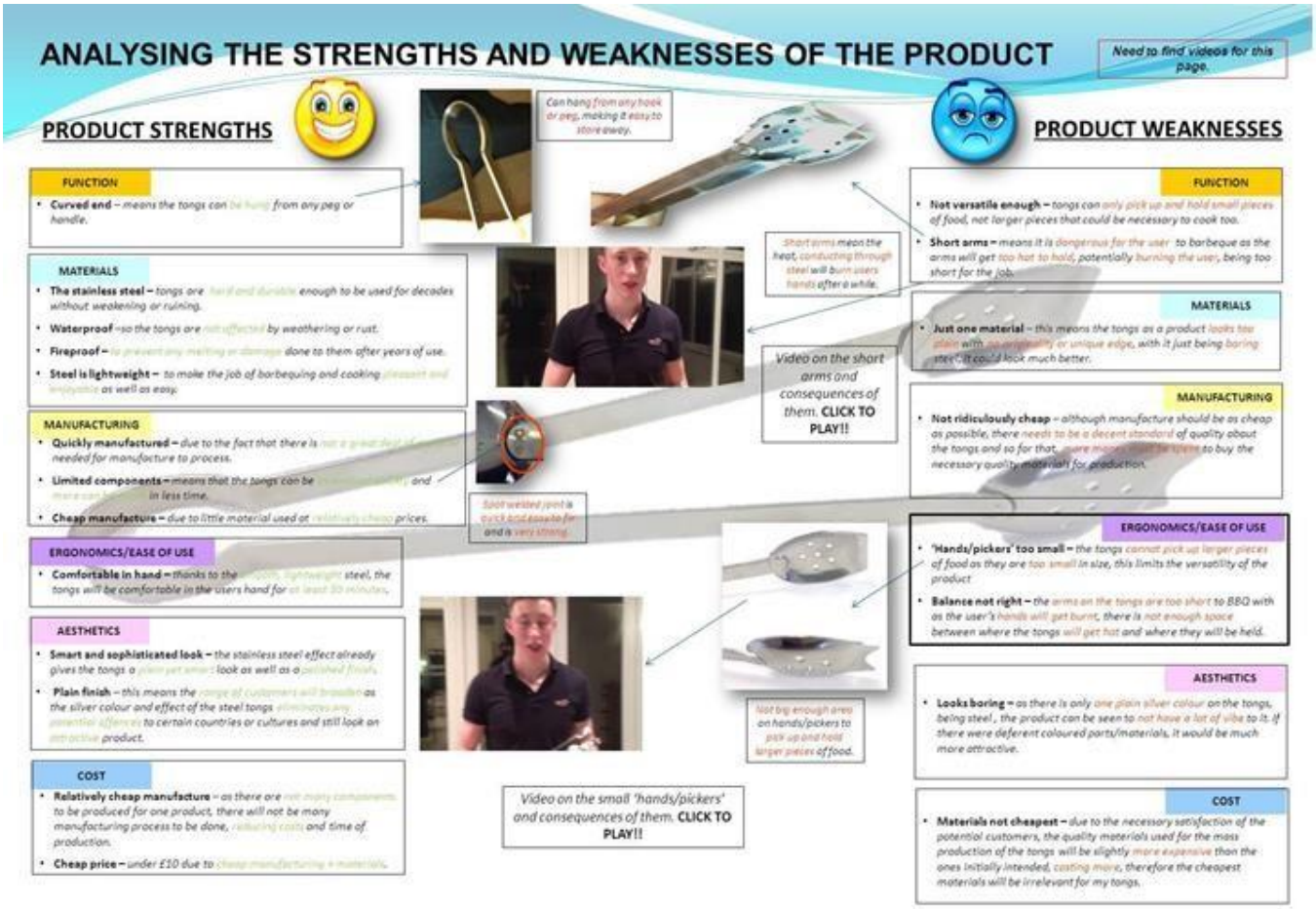
How is the product used?

How has the product been designed to be 'user friendly'?

How environmentally friendly is the product/ manufacturing methods.

What are the strengths and weaknesses?

Please see an example below.



Design Brief

This statement is probably the most important in the whole project. It sets out the task which must be completed

Writing the brief correctly is a very important task. A brief can not only all allow you to design a whole host of exciting outcomes but if written incorrectly, can also constrain your thinking. If the brief is too specific then it will limit your design work **EXAMPLE**

"Design and make a compendium of games for the Doctors surgery in Kenilworth"

(No scope, poor opportunity for design)

"Design and make a product that will entertain the patients in the Doctors surgery in Kenilworth. The design must incorporate a range of ideas"

(Provides a lot more scope and opportunity to design a quality product)

Produce the above information as a well presented paragraph.

ANALYSIS OF BRIEF

Read the Situation and Design Brief, then MINDMAP any related questions and issues which come to mind and which can be researched
For example:

What is the purpose of this design?
How will the design work?
Is the design influenced by form or function?
Who will use the design?
Who will the design effect and how?
Where will the design be used?
Does the design need to take into account any special requirements?
Are ergonomics relevant to this design? How?
What construction issues need looking at?
Will the product need to take into account any Health and Safety regulations?
Does the Design need to take into account any economic parameters?

Write each point (and any others you can think of) and comment on each in depth.

Initial Design Ideas:

- Produce a 4-6 **initial design ideas**.
- These should be really **creative** at this point – don't get fussy with the drawings! Think outside of the box, forget how you will manufacture them at this stage.
- Use rendering to enhance your sketches.
- Annotate your designs. Consider: materials, function, client, size, safety etc.

Homework task:

Design Situation/

Task 3: Aesthetic Modelling

- Select your best design and using suitable materials model your idea. (Card, paper, plastics, tape, staples, glue)
- Photograph your model and print this out to add to your work. (If you can, bring models to school in Sept.)
- Leave plenty of white space around your images to allow you to sketch and annotate (you may want the same image more than once to allow you to produce more than one sketch).

<u>Manufacturing challenge:</u>

You have been asked to keep costs down, so you now have to adapt your design so that it can be made entirely from one sheet of timber. The size of the sheet is 1500x1000mm

Sketch some ideas to show how your design could be adapted (it must reflect the original idea).

Draw timber size sheet to scale on a sheet of paper. Map out the pieces you would need to cut out to create the final product including dimensions. Try to use all of the sheet to minimise wastage.