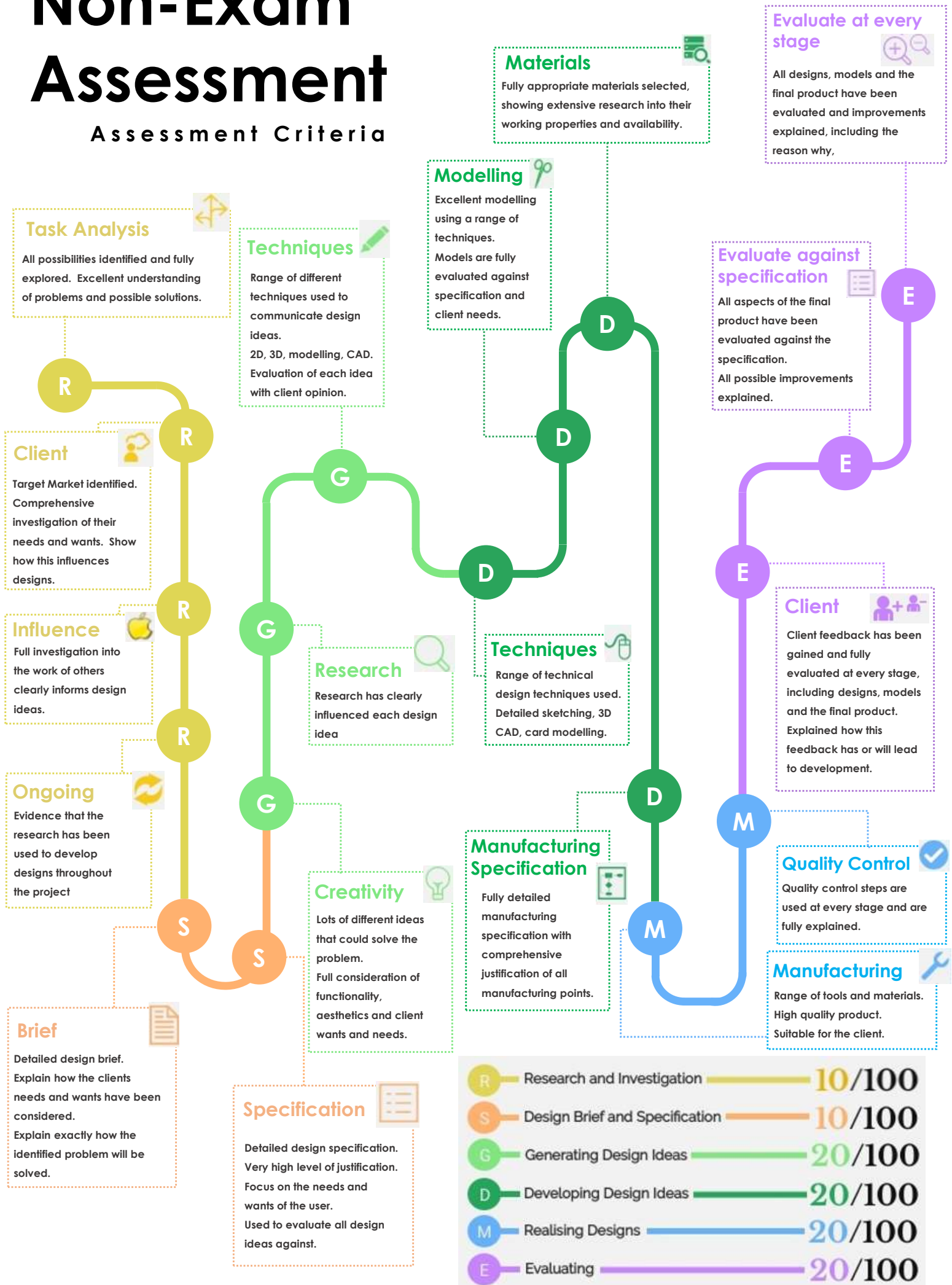


Non-Exam Assessment Criteria



Mindmap

This page is to show you have fully explored the context and all possible problems/solutions

- Fully explore ALL possibilities
- target market
- Problems that exist
- Possible solutions
- Product possible functions
- Environmental issues
- Safety considerations
- Manufacturing methods

Marks awarded for: Showing you have fully explored the task and all design possibilities

Marks lost for: Focusing on one idea. Not enough detail

Identifying the Problem

This page is to identify your client then prove that your client has a specific problem to solve and you have some ideas how to solve it

- The product you design must solve a problem.
- Focus on what problem your potential clients have.
- Give some ideas of possible solutions

Marks awarded for: Clearly identify a problem faced by potential clients giving possible solutions

Marks lost for: Guessing with no evidence. Not focusing on the client. No images or photos.

Modelling

Now you will make a model of your developed design. This will be made before and should be made and analysed as before.

- Create a nearer and more accurate model
- Should be to scale or correct size
- Must be fully evaluated and client opinion must be clear
- Suggest all possible improvements based on client feedback

Marks awarded for: Focused evaluation of how well the product functions. Client feedback and analysis

Marks lost for: Lack of client feedback

Development

This page will be a developed design based on improvements made from analysis of your design ideas. Once photographed and updated, you must test and analyse each model and explain what improvements you will make

- Take ideas from your first designs to draw a nearer, more developed idea
- Draw it from more than one angle (2D and 3D)
- Show any parts, or how it works.
- Explain all materials or options for materials, evaluate materials based on their properties.
- Annotation should focus on improvements based on client feedback

Marks awarded for: Excellent presentation. Clear development from first ideas based on client feedback

Marks lost for: Poor presentation. Not being clear how and why the design has developed from first ideas

Manufacturing Specification

This is a list of all materials you will need to make your product. It must include all dimensions including thicknesses.

- List of all materials that you will need, including all dimensions and thickness.
- List of all tools you will need
- Flowchart of all planned stages of making
- Quality control checks that you will make at each stage should be made very clear and explained.

Marks awarded for: Detailed materials list. Quality control checks are detailed

Marks lost for: Missing materials, client, Quality Control

Technical Drawing

This page should show all of the parts laid out to scale. All materials and dimensions should be made very clear. You could also show an 'exploded view' to show how the parts fit together and on top from and side.

- Show all of the individual parts
- Add dimensions to all sides of all pieces
- Clearly say what materials you will be using for each part and say why you have chosen these materials
- Show all parts slightly separated to show 'how they will be assembled'

Marks awarded for: Clear dimensions and materials given for each part. You have made it clear how the product will go together!

Marks lost for: Missing dimensions. No fully explaining all material choices

Manufacturing Diary

Page 1
This is a list of all materials you will need to make your product. You MUST include all materials, tools and QUALITY CONTROL checks.

Page 2
Photograph EVERY STAGE and every process when making your product.

- Put these in order and fully explain each one
- Include QUALITY CONTROL checks that you carried out at each stage.

Marks awarded for: Documenting every stage including quality control

Marks lost for: Missing stages, out of order, little/no quality control

Final Product

Page 1
Showcase photos of your final completed product.

Page 2
- Photograph showing off your final product

- Lots of different angles
- Show your product in use as well

Marks awarded for: Showing all details of your product

Marks lost for: Poor photo

Evaluation against Specification

On this page you must evaluate how well your finished product meets each of your specification points from the client. Include all possible improvements. You should also use client feedback when evaluating your product's success against each point.

- Fully evaluate your finished product against each specification point
- Give positives and negatives.
- Your evaluation of each point should be based on suitability for the user, not just your own opinion
- Suggest ways to improve each point:

Marks awarded for: Thorough evaluation, explaining the reason or evidence for each point and client feedback.

Marks lost for: Little client feedback, points not explained

Client Testing

Here you should include photos of you allowing your client to use your product and give detailed and specific possible improvements.

- Get detailed feedback and analyse it in detail

Marks awarded for: Suggesting improvements based on detailed client feedback.

Marks lost for: High level of detail in analysis

Marks lost for: Low detail level in analysis. Not many improvements suggested

Technical Testing

This part should include photos of you testing your product performing the function. It was designed to do. You should fully evaluate the success, including all possible improvements.

- Take pictures of your product being tested performing its intended function.
- Fully evaluate how well it did this and suggest improvements

Marks awarded for: Giving detailed and fully justified points

Marks lost for: Not enough detail, not explaining the reason for each point. Point not specific or measurable.

Improvements

This page should be a list of any improvements you have made to your product. You should refer to a clean feedback wherever possible.

- First off a photo of your final product in 'washout' (faded)
- Draw improvements over the top.
- Annotate to explain in detail the reason for all improvements.
- Improvements should all be based on evidence from evaluation, testing and client testing.

Marks awarded for: Many improvement suggestions given which are all based on results of evaluation, testing and client opinion.

Marks lost for: Not giving the reason for improvements. Little client testing discussed

Existing Products

This page is to show you can use analysis of existing products to improve your own designs.

- What products already exist that solve a similar problem to yours?
- Quote customer reviews and ANALYSE THEM. Your analysis should say what the customer liked and disliked, and how this will influence your design
- Analyse using ACCESSFM (Aesthetics, Cost, Customer, Environment, Safety, Size, Function, Material)
- Also photograph and analyse real life products existing products showing how their strengths and weaknesses influence your designs.

Marks awarded for: Fully explaining how existing products influence your designs

Marks lost for: Not talking or fully analysing customer opinion. Not saying how the product strengths and weaknesses will influence yours

Work of Others

This page is to show you know what makes other designers/ companies successful, and how they can influence your designs

- Pick some famous designers, design companies or design styles/movements
- What makes their design unique?
- What do people like/ dislike about their designs?
- Give some examples of their iconic designs/ products.
- Remember ACCESSFM
- Aesthetics - Cost - Customer - Environment - Safety - Size - Function - Material.
- Fully explain what ideas you could take from their designs into your own

Marks awarded for: Fully explaining how other designers will influence your designs.

Marks lost for: Not explaining how the designer's work will influence your designs. Talking about what you like, instead of clients

Client Needs

This page is to show you know exactly who your client is, and what their exact wants and needs are.

- Clearly identify your client (age range, gender, any specific hobbies etc.)
- Choose one person, from within your target market. Write everything you can about this person
- Interview and give quotes about what they want and why they are appropriate for your product.
- Analyse saying how this will influence your design

Client Profile:

- Focus a group of people in your target market
- What is the problem they face and their wants and needs
- Analyse results saying how this will influence your design
- Fully explain how this will influence your design
- What the wants and needs are
- Marks lost for: Not explaining how their wants and needs will influence your design

Technical Research

This page is for all of your research specific to the product you are trying to solve

- You should be researching all of the time throughout designing and making. This should all be recorded here.
- Materials: Research and test a range of materials. Explain their working properties, strengths and weaknesses and exactly why they are appropriate for your product.
- Ergonomics: What anthropometric (human) measurements have you taken and how will these influence the size and shape of your product?
- Sizes - Tools/processes - Finishes

Marks awarded for: Relevant and useful research, explained how it will influence design and making

Marks lost for: Not enough detail in research. Not clear how the research will influence design/making

Environment/Social

This page is to show you understand the impact your product can have on the environment and society

- Explain the potential dangers that can be done to help the environment through the production lifecycle (Raw material extraction, Design, Manufacturing, Transport, Product in use, Disposal)
- Social: Explain how the product can have an impact on society (Safe working conditions, health impacts of pollution, dangerous products, Fair Trade)
- Consider cultural differences and preferences.
- Explain how you will take this into account.

Marks awarded for: Explaining how the product can have an impact on the environment/society

Marks lost for: Not saying how this will impact your designs

Developing Design Ideas is worth 20 marks out of 100

Final Design

Page 1
This will be a next, expanded and to scale final design of your product, based on all improvements made from development and modelling. This page should include different angles and must explain material and you have chosen everything. All sizes should be included and justified.

- Accurate and to scale final drawing
- Draw different angles and technical parts
- Fully annotate the reason for all improvements made from previous designs based on client feedback.
- Fully explain all materials and reason for choice based on their properties
- Marks awarded for: Detailed and well presented drawing. Clear reason for material choices.
- Marks lost for: Not explaining reason for improvements or changes made.

Modelling

Here you will make card models of at least 2 of your design ideas. Once photographed and updated, you must test and analyse each model and explain what improvements you will make

- Use materials that are easy to cut and configure card
- Be as accurate as you can when cutting and gluing
- Fully evaluate your model, including analysis of client feedback.
- Suggest all possible improvements based on client feedback

Marks awarded for: Accurate models. Clear evaluation and improvements suggested

Marks lost for: Low quality models. Little evaluation or client feedback

Design Ideas

Page 1
Each design should be analysed against your specification points, so as well as for their suitability for your client.

- Get client opinions in quotes or surveys
- Fully analyse each bit of client feedback, saying what improvements you will make to the design as a result
- Fully evaluate each design against your specification points (ACCESSFM)
- Explain how your research (including the work of others) has influenced your designs
- Marks awarded for: Wide range of ideas. Explained how research influenced designs. Suggests improvements based on feedback
- Marks lost for: Poor layout and presentation. Little reference to research. Little evaluation or client feedback

Specification

This page is a list (or table) of exact and specific points of exactly what your product must have, be or do. You must also explain why each point is important.

- WHAT your product must have, be or do
- WHY this is important
- HOW YOU KNOW this is important (from what research)
- HOW YOU WILL TEST THIS at the end
- ACCESSFM (Aesthetics, Cost, Customer, Environment, Safety, Size, Function, Material)
- Also explain manufacturing constraints within the school.
- Add any other points you leave that are not given above

Marks awarded for: Giving detailed and fully justified points

Marks lost for: Not enough detail, not explaining the reason for each point. Point not specific or measurable.

Research Analysis

In this part you must sum up each part of your research, explaining how each part will influence your designs

- Put this into a table. Suggest further research
- Marks awarded for: Detailed analysis explaining how each piece of research will influence designs
- Marks lost for: Not explaining how research will help designs

Design Brief

This is a paragraph that sums up all areas of the problem your product is going to solve. It should include the client's wants and needs based on your research findings.

- ACCESSFM (Aesthetics, Cost, Customer, Environment, Safety, Size, Function, Material)
- Explain why each thing is important
- Marks awarded for: Explaining what your product will have/do and why each thing is important
- Marks lost for: Not enough detail. Failing to refer to client or original brief.

Design Brief and Specification are worth 10 marks out of 100

Realising designs (making) is worth 20 marks out of 100

Evaluating is worth 20 marks out of 100

20/100

We use **ACCESS FM** to help us write a **specification** - a list of requirements for a design - and to help us **analyse and describe** an already existing product.

ACCESS FM - Helpsheet

A

is for **Aesthetics**



Aesthetics means **what does the product look like?**
What is the: Colour? Shape? Texture? Pattern? Appearance? Feel? Weight? Style?

C

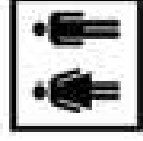
is for **Cost**



Cost means **how much does the product cost to buy?**
How much does it: Cost to buy? Cost to make?
How much do the different materials cost? Is it good value?

C

is for **Customer**



Customer means **who will buy or use your product?**
Who will buy your product? Who will use your product?
What is their: Age? Gender?
What are their: Likes? Dislikes? Needs? Preferences?

E

is for **Environment**



Environment means **will the product affect the environment?**
Is the product: Recyclable? Reusable? Repairable? Sustainable?
Environmentally friendly? Bad for the environment?
6R's of Design: Recycle / Reuse / Repair / Rethink / Reduce / Refuse

S

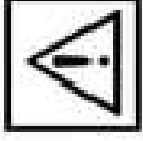
is for **Size**



Size means **how big or small is the product?**
What is the size of the product in millimeters (mm)? Is this the same size as similar products? Is it comfortable to use? Does it fit?
Would it be improved if it was bigger or smaller?

S

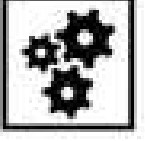
is for **Safety**



Safety means **how safe is the product when it is used?**
Will it be safe for the customer to use? Could they hurt themselves?
What's the correct and safest way to use the product? What are the risks?

F

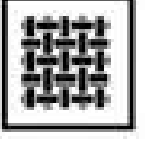
is for **Function**



Function means **how does the product work?**
What is the products job and role? What is it needed for? How well does it work? How could it be improved? Why is it used this way?


M

is for **Material**




Material means **what is the product made out of?**
What materials is the product made from? Why were these materials used? Would a different material be better? How was the product made? What manufacturing techniques were used?

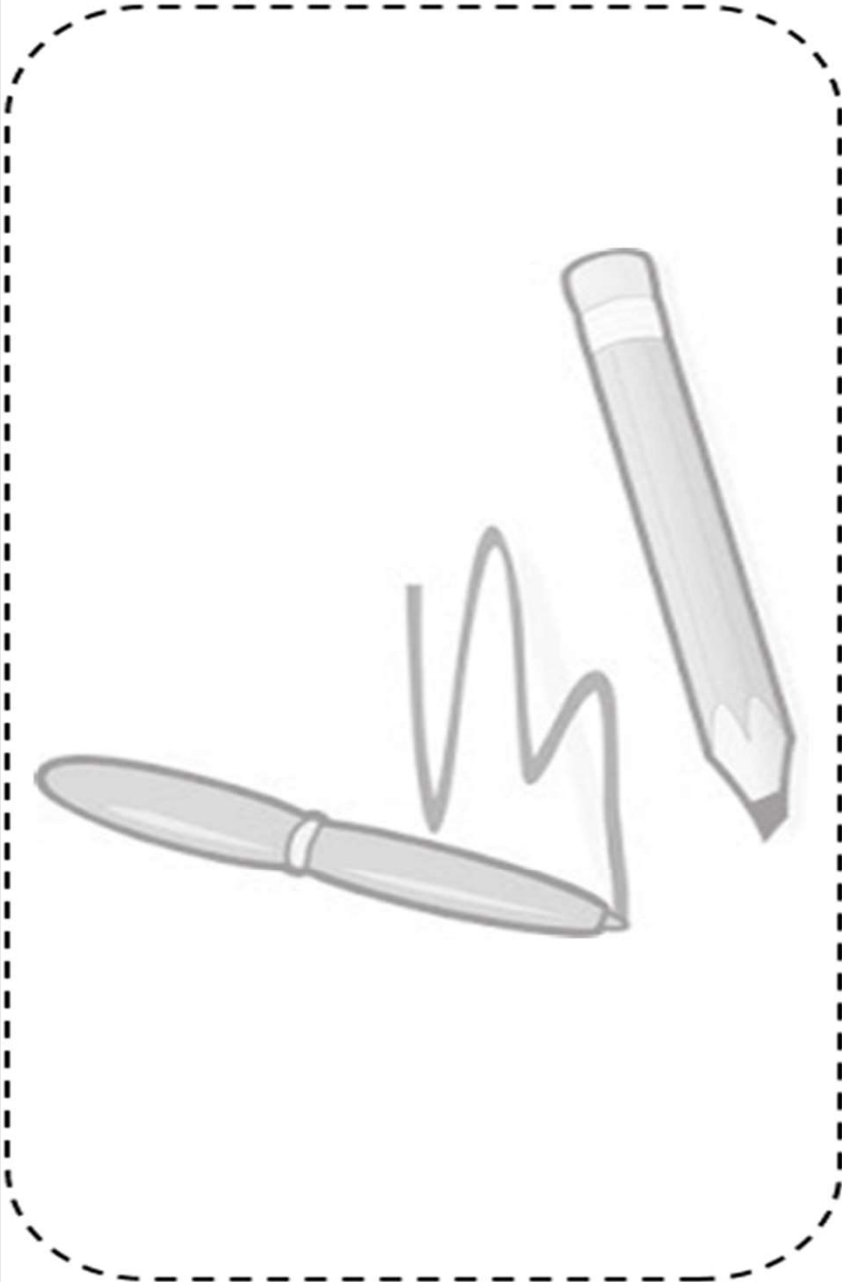
ANNOTATION SUPPORT FRAME – PRODUCT ANALYSIS / ACCESSFM / DIS-ASSEMBLY

<p>WHAT ARE YOUR <u>INITIAL FIRST IMPRESSIONS</u> OF THE PRODUCT?</p>	<p>WHAT DO YOU <u>LIKE & DISLIKE</u> ABOUT THIS PRODUCT?</p>	<p>AESTHETICS <u>APPEARANCE, SHAPE, STYLE, FORM,</u> <u>COLOUR, TEXTURE, PATTERN.</u></p>	<p>CUSTOMER WHO IS THE PRODUCT AIMED AT? USER, TARGET GROUP, TARGET MARKET?</p>	<p>COSTS WHAT IS THE <u>PRICE</u>? DOES IT LOOK <u>EXPENSIVE, CHEAP,</u> <u>VALUE FOR MONEY?</u></p>
<p>PICK IT UP WHAT DOES IT FEEL LIKE? HEAVY, LIGHTWEIGHT, COMFORTABLE, FIDDLY, BULKY</p>			<p>IS THIS PRODUCT <u>ENVIRONMENTALLY</u> <u>FRIENDLY</u> OR <u>SUSTAINABLE</u>?</p>	<p>WHAT IS THE <u>SIZE</u> (<u>SCALE, PROPORTION, DIMENSIONS</u>) OF THIS PRODUCT?</p>
<p>HOW HAS THE PRODUCT BEEN <u>MANUFACTURED</u> (WHAT TOOLS, MACHINES & PROCESSES)?</p>	<p>WHAT <u>JIGS, FORMERS, TEMPLATES,</u> <u>MOULDS</u> OR OTHER MAKING AIDS HAVE BEEN USED TO <u>ENSURE</u> <u>ACCURACY</u>?</p>	<p>WHAT <u>FINISH,</u> <u>DECORATION, PATTERN</u> or HAS BEEN APPLIED?</p>	<p>WHAT <u>MATERIAL/S</u> IS THE PRODUCT MADE FROM?</p>	<p>IS THIS PRODUCT <u>SAFE TO USE</u>?</p>
<p>ONE-OFF? BATCH PRODUCED? MASS PRODUCED?</p>	<p>WHAT <u>JOINING METHODS,</u> <u>FIXINGS</u> OR <u>COMPONENTS</u> HAVE BEEN USED?</p>	<p>WHAT IS THE MAIN <u>FUNCTION</u> OF THIS PRODUCT?</p>		


ANNOTATION SUPPORT FRAME – GENERATION OF IDEAS (SCARED or SCAMPERS TECHNIQUE)

<p>COMBINE: COMBINE SOMETHING FROM ANOTHER DESIGN / IDEA / PRODUCT</p>	<p>SCALE/SIZE: MAKE ONE PART BIGGER OR SMALLER.</p>	<p>SUBSTITUTE: WHAT CAN BE SUBSTITUTED OR REPLACED FOR SOMETHING ELSE?</p>	<p>COMBINE: WHAT ELSE CAN BE COMBINED OR ADDED?</p>	<p>ADAPT: HOW CAN IT BE ADAPTED OR ADJUSTED</p>
<p>ADD: ADD ONE NEW SHAPE OR FEATURE TO YOUR DESIGN / IDEA</p>				<p>MODIFY: CHANGE THE SHAPE, FORM, COLOUR, SIZE, HEIGHT, WIDTH, DEPTH, LENGTH.</p>
<p>REPLACE: REPLACE ONE PART OR YOUR DESIGN / IDEA WITH SOMETHING NEW.</p>				<p>MAGNIFY: MAKE IT/OR A PART OF IT BIGGER, HEAVIER, THICKER OR LONGER, ZOOM IN AND REDRAW PART OF IT.</p>
<p>ERASE: DELETE ONE PART OF YOUR PREVIOUS DESIGN / IDEA.</p>				<p>MINIFY: MAKE IT/OR A PART OF IT SMALLER, LIGHTER, OR SHORTER.</p>
<p>DUPLICATE: DOUBLE UP ONE PART OR FEATURE OF YOUR PREVIOUS DESIGN / IDEA.</p>	<p>REARRANGE: REARRANGE THE PATTERN, REPOSITION VERTICALLY OR HORIZONTALLY. ROTATE, INVERT IT.</p>	<p>ELIMINATE: WHAT CAN BE REMOVED, ERASED, TAKEN AWAY?</p>	<p>PUT TO ANOTHER USE: WHAT ELSE COULD THE PRODUCT BE USED FOR?</p>	


ANNOTATION SUPPORT FRAME – DESIGN DEVELOPMENT LABELS / QUESTIONS

<p>HOW COULD THIS DESIGN BE <u>CONSTRUCTED</u> OR <u>ASSEMBLED</u>?</p>	<p>WHAT IS THE <u>MAIN FUNCTION</u> OF THIS DESIGN?</p>	<p>WHAT DO YOU <u>LIKE & DISLIKE</u> ABOUT THIS DESIGN?</p>	<p>WHAT DOES YOUR <u>INTENDED USER LIKE & DISLIKE</u> ABOUT THIS DESIGN?</p>	<p>HOW DOES THIS DESIGN <u>COMPARE TO YOUR DESIGN CRITERIA</u>?</p>
<p>WHAT <u>MATERIALS</u> COULD BE USED TO MAKE THIS DESIGN?</p>				<p>WHAT CAN YOU DO TO <u>IMPROVE</u> THIS DESIGN?</p>
<p>WHAT <u>JOINING METHODS</u>, <u>FIXINGS</u> OR <u>COMPONENTS</u> COULD BE USED?</p>				<p>WHAT COULD YOU <u>ADD, REMOVE, INCORPORATE</u> TO THIS DESIGN?</p>
<p>WHAT <u>TOOLS</u>, <u>MACHINES & PROCESSES</u> COULD BE USED TO <u>MANUFACTURE</u> THIS DESIGN?</p>				<p>WHAT <u>OTHER FUNCTIONS</u> COULD YOU <u>INCLUDE</u> IN THIS DESIGN?</p>
<p>WHAT <u>FINISH</u>, <u>DECORATION</u> or <u>PATTERN</u> COULD YOU <u>APPLY</u>?</p>				<p>WHAT <u>JIGS, FORMERS, TEMPLATES, MOULDS</u> OR OTHER MAKING AIDS COULD BE USED TO <u>ENSURE ACCURACY</u>?</p>

ANNOTATION SUPPORT FRAME – HUMAN FACTORS – CONSIDERING THE TARGET USER

<p><u>FUNCTIONS AS INTENDED:</u> DOES IT FUNCTION AS YOU HAD ORIGINALLY INTENDED?</p>	<p><u>MEETS THE USER NEEDS:</u> DOES IT MEET THE NEEDS OF THE INTENDED USER?</p>	<p><u>USER FEEDBACK:</u> WHAT DOES YOUR USER THINK ABOUT THE DESIGN?</p>	<p><u>USER TESTING FEEDBACK:</u> WHAT ADAPPTIONS NEED TO BE MADE FOLLOWING USER FEEDBACK?</p>	<p><u>USER FEEDBACK:</u> WHAT DOES YOUR USER THINK ABOUT THE ADAPTED DESIGN?</p>
<p><u>ERGONOMICS:</u> HOW DOES THE USER INTERACT WITH YOUR DESIGN?</p>				<p><u>PACKAGING - PROTECTION:</u> HOW WILL YOUR DESIGN BY PACKAGED TO ENSURE IT IS PROTECTED IN TRANSPORT.</p>
<p><u>ANTHROPOMETRICS:</u> KEY MEASUREMENTS OF THE HUMAN FORM IN RELATION TO YOUR DESIGN</p>				<p><u>PACKAGING - SELLING:</u> HOW WILL YOUR DESIGN BE SOLD, PROMOTED AND DISPLAYED? HOW WILL YOU ATTRACT THE USER TO YOUR DESIGN?</p>
<p><u>HEALTH & SAFETY:</u> IS IT SAFE TO USE? IF NOT, WHAT NEEDS TO BE CHANGED?</p>				<p><u>PACKAGING - INSTRUCTIONS:</u> IS THERE REFERENCE TO HOW THE DESIGN IS USED, ASSEMBLED, DISASSEMBLED OR DISPOSED OFF?</p>
<p><u>LEGISLATION:</u> WHAT RELEVANT STANDARDS DOES YOUR DESIGN NEED TO MEET TO BE SUCCESSFUL?</p>	<p><u>INCLUSIVE:</u> CAN THE DESIGN BE USED BY EVERYONE? IF NOT, WHAT CAN YOU CHANGE TO MAKE IT MORE INCLUSIVE?</p>	<p><u>ADAPTIVE:</u> CAN YOUR DESIGN BE ADAPTED TO MAKE IT EASIER TO USE? WHAT ELSE CAN BE ADDED OR INCLUDED TO ACHIEVE THIS?</p>	<p><u>ASSISTIVE:</u> DOES OR CAN YOUR DESIGN HELP THE USER TO COMPLETE A SPECIFIC TASK MORE EASILY?</p>	<p><u>PACKAGING - INFORMING</u> WHAT SYMBOLS, LOGOS AND CUSTOMER INFORMATION IS REQUIRED ON THE PACKAGING?</p>

ANNOTATION SUPPORT FRAME – THE WIDER ISSUES – BEING A RESPONSIBLE DESIGNER

<p><u>MINIMISING IMPACT</u> CONSIDERING HOW YOUR DESIGN WILL BE MANUFACTURED, HOW CAN YOU MINIMISE THE IMPACT OF YOUR DESIGN?</p>	<p><u>CARBON FOOTPRINT</u> WHAT IS THE FOOTPRINT OF YOUR CHOSEN DESIGN? HOW CAN YOU REDUCE ITS CARBON FOOTPRINT?</p>	<p><u>SUSTAINABLE MATERIALS</u> ARE THE MATERIALS YOU HAVE SELECTED FROM A SUSTAINABLE SOURCE? WILL THEY LAST A LONG TIME? IS IT DURABLE?</p>	<p><u>REDUCE:</u> WHAT PARTS CAN YOU REDUCE IN SIZE TO SAVE MATERIAL? ARE ALL THE PARTS ACTUALLY NEEDED?</p>	<p><u>REFUSE:</u> WHAT MATERIALS COULD YOU REFUSE TO USE? COULD YOU REFUSE TO USE MATERIALS THAT HAVE NOT BEEN RESPONSIBLY SOURCED?</p>
<p><u>PRODUCT LIFE CYCLE</u> WHAT IS ITS LIFE CYCLE? WHAT CHANGES CAN YOU MAKE TO IMPROVE ITS LIFE CYCLE?</p>				<p><u>RETHINK:</u> HOW COULD YOUR DESIGN USE LESS MATERIAL? COULD YOU CHOOSE MORE ENVIRONMENTALLY FRIENDLY MATERIALS?</p>
<p><u>DISPOSAL OF PRODUCT</u> HOW IS YOUR DESIGN DISPOSED OF AT THE END OF ITS WORKING LIFE? WHAT CHANGES ARE NEEDED TO MINIMISE ENVIRONMENTAL IMPACT?</p>				<p><u>RECYCLE:</u> COULD PARTS BE MADE FROM RECYCLED MATERIALS? COULD YOU USE MATERIALS THAT CAN BE RECYCLED?</p>
<p><u>MORAL/ETHICAL:</u> ARE YOU CONSIDERING THE WELFARE OF THE PLANET AND THE PEOPLE WHO LIVE IN IT? IS YOUR DESIGN HARMFUL TO PEOPLE OR ANIMALS?</p>	<p><u>CULTURAL</u> IS YOUR DESIGN OFFENSIVE IN ANY WAY I.E. THE COLOUR SCHEME? WOULD THE SHAPE OR STYLE CAUSE OFFENCE IN SOME WAY?</p>	<p><u>INCLUSIVE / EXCLUSIVE:</u> CAN YOUR DESIGN BE USED BY EVERYONE? IS IT DESIGNED WITH A SPECIFIC GROUP IN MIND?</p>	<p><u>DESIGN FOR MAINTENANCE:</u> IS YOUR IDEA DESIGNED TO BE EASILY MAINTAINED? CAN IT BE EASILY DISSASSEMBLED? CAN PARTS BE REMOVED AND REPLACED?</p>	<p><u>REPAIR:</u> IS THE DESIGN EASY TO REPAIR WHEN IT IS BROKEN? CAN FIXINGS BE EASILY ACCESSED?</p>