Hello Year 10 Design & Technology Students.

I hope this pack finds you well. As you may well be aware, you were due to start your coursework also known as the Non Examination Assessment (NEA) in June, this coursework is the final project you complete as part of your GCSE in Design & Technology.

You will formally start your coursework when you return to school but to best prepare you for this, this pack has been produced with tasks that could be later used in your coursework once reviewed with your teacher.

The coursework starts with something called a contextual challenge and ends with you making a product. The product must solve a design problem you will identify, and the problem must link to the starting contextual challenge.

The contextual challenge given to you for the coursework this year is:

Enhancing everyday life – Research into problems and design a product that would help a person or persons carryout basic important tasks in everyday life.

You may complete your preparation/ draft coursework tasks by hand on loose pieces of paper or they can be word processed on a computer. It is important that either way you are able to share this work with your teacher when we return to school.

If while working through these tasks you find yourself unsure on what to do, please email your class teacher so that they can help you.
Mr Hunt's class: m.hunt@passmoresacademy.com
*Mrs Mignot's class: a.mignot@passmoresacademy.com*

Please turn to the next page to see the first tasks you are required to complete as part of your coursework preparation work.
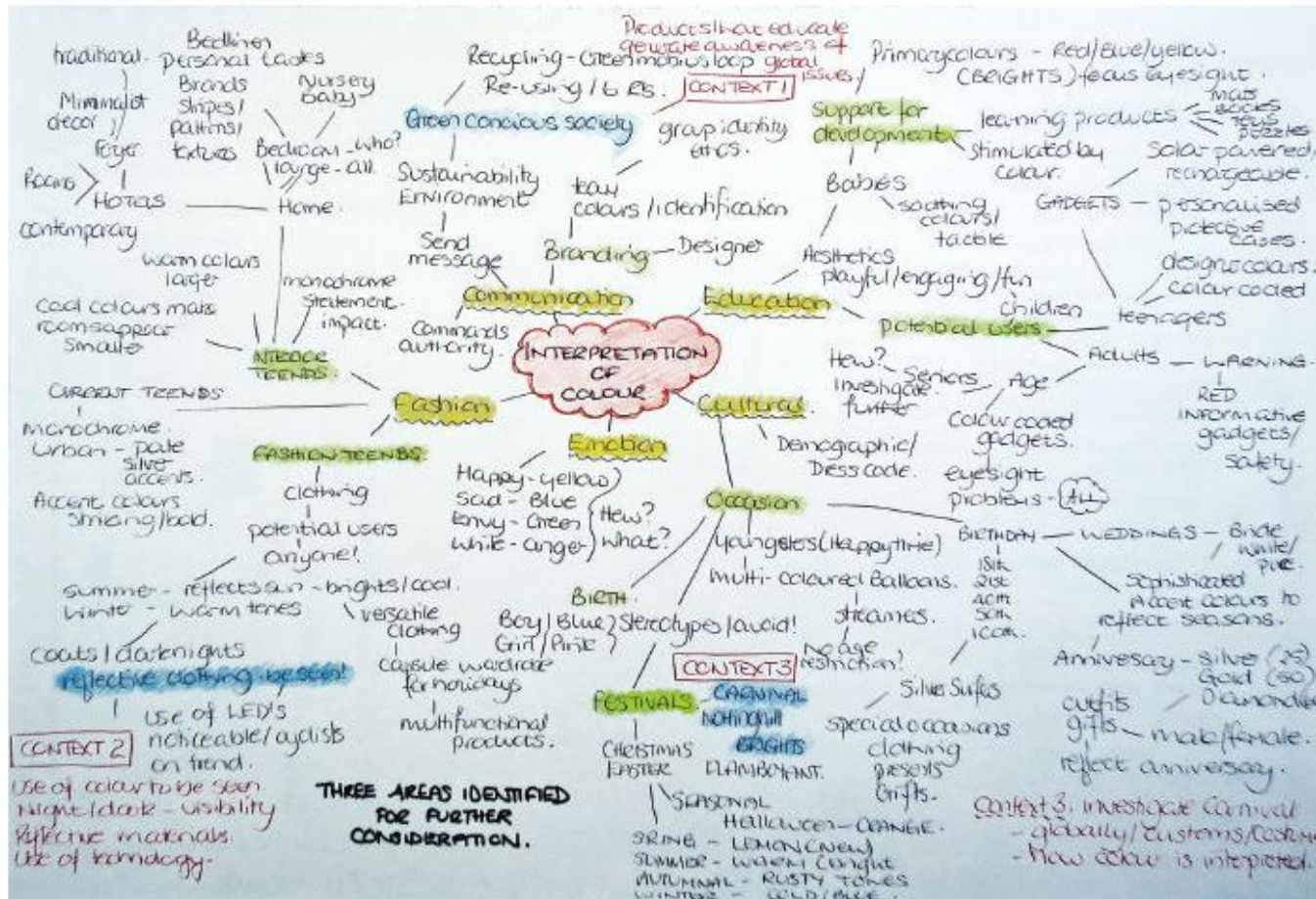
Task 1- Should take 1 hour to complete.

Create a mind map showing your interpretation of the contextual challenge and list as many design possibilities as possible.

The example below shows the level of interpretation possible. This example is based on the theme of colour..

Start your work like this:

Enhancing everyday life
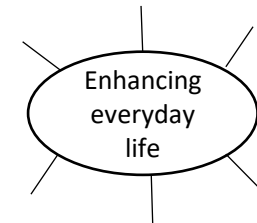
Help!

1. Consider listing everyday problems everyone encounters.
2. Consider listing problems that only some groups of people encounter in everyday life. (Disability, age related)
3. Think of different places that people go everyday and list problems they encounter there.

Task 2- Should take 1 - 2 hours to complete.
Take three everyday problems that you have identified from your Task 1 mind map.
Write one paragraph for each problem fully explaining the problem and then **suggesting possible solutions**. You can talk about how a new product or services could help.

This example below is based on the theme of the problem of space when cooking.

When people cook they can encounter a problem when it comes to how much surfaces and space they have around them. It is a problem as it can lead to them making mistakes when cooking because they are not organised. People with small kitchens encounter this problem every time they cook, the people that encounter this problem are also the people who do the cooking so not everyone. The type of person who would encounter this problem often would likely be an adult as children and elderly people don't cook for them selves and large groups of people much. Without having a house extension this problem cannot be solved by making the kitchen bigger, instead it could be solved by providing extra surfaces or ways of keeping things organised in a small space. To enhance this everyday problem I would suggest a product that can organised the different types of cooking equipment and ingredients in a kitchen while providing extra surfaces. This could involve moving shelves. By having a product with moving shelves that could slide in and out the user of the kitchen could easily move things in or out the way simply with a push!

Start your work like this:

Problem 1

Problem 2

Problem 3

Help!
Ensure you answer these questions in your paragraphs:

Why is it a problem?
How often do people encounter the problem?
List and explain the different groups of people who encounter the problem?
What are the issues with the problem that cannot be changed or improved?
What are the issues with the problem that could be changed or improved?
What is your suggestion to improve this problem?
What would your solution do and how would it work?

Task 3- Should take 1 hour to complete.

Choose one of the problems you have explained in task 2 as the problem you will aim to solve for this coursework project.

Don't worry if you don't think your problem or suggested product are 'very good' they will have lots of potential that can be figured out together once we are back at school.

You now need to identify and fully explain the potential user of your suggested product/ service that will solve the problem you have identified.

The example below is based on a product that is aimed at a female young adult user who cares about fashion and the environment.

My potential user is a female in the 18–28 age group. My client is a 23-year-old female. She lives with her friends in a shared house in a trendy part of the city. She has recently finished university and has started her first job. She earns her own money and uses it to pay her way in the house and to fund her shopping habit. She likes going running with her friends to keep fit and healthy. She couldn't live without her iPhone and iPad. She drives a Mini car, but often walks to keep her carbon footprint low and show some consideration for the environment. She is increasingly aware of issues of sustainability and environmental issues, and is moving towards buying organic food. She relaxes at weekends with her friends – she may go to a few nightclubs or parties – this helps take away the stresses of her working life. She is fashion-conscious and has the latest trends in her wardrobe. Her clothes are stylish yet practical. Her favourite places to shop are H&M, River Island and Topshop. She also buys online. She enjoys most genres of music, but mainly listens to indie bands and chart music.

The products that would appeal to her must reflect her lifestyle – fashion-forward, but practical to reflect her work life and partying. She would very much like sustainable eco-friendly products that fit in with her increasing 'green consciousness'.

Your work may look like this:

Help!
You can create this person using your own ideas as long as they are realistic and they are the typical person who would use your product. You need to show you understand the type of person you are designing for. Feel free to add pictures or sketches to show more about the potential user and their lifestyle. For example if they are a football player you could draw out their football boots.

Task 4- Should take 2 hours to complete

Now that you have an idea of what product you want to make you can start **to draw and sketch out some ideas** for what it might look like and **write down notes and draw diagrams of how it will work.**

Try and draw a few different ideas just to show some different ways it could look or work.

This example below is an electronic score counter device that can be used for outdoor sports.

Help!
You do not need to draw these designs in 3D if you find that too challenging.

If you do draw it in 2D you can draw your design from multiple angles so that you can show the front, side and top.

When adding notes to your design make sure you explain any different materials and show how it works and how people use it.

Add colour to your designs to make them look as realistic as possible.

Task 5- This task will be on going so a time limit has not been put down. This could take you 10+ hours to complete!

To **gather as much information about your design problem and potential user** as possible. This is so you can develop and improve your design.

Here are 5 different research tasks you could carry out:

1 Product analysis – the analysis of a competitor product. Consider, for example, the form, style and function, materials and construction processes, quality issues, performance characteristics, environmental/ sustainability factors, overall strengths and weaknesses. Be sure to identify, analyse and record what is of value to your design. Consider how the information could be used effectively.

2 Interview- Conduct a survey or questionnaire with your potential clients or users – this should directly influence the decisions you make and drive your design thinking forward. Keep all questions focused – avoid anything that is unnecessary, and include an analysis of your results.

3 Studying the work of professionals, past or present is a useful tool. Analyse what makes them and their products successful. You could also simply take inspiration from their work for your designs. Again, make sure there is a purpose to this activity. For example if you were designing a new phone, you could look at Apple or Samsung.

4 Analyse current trends – this could be done in local stores or online. Identify key factors and record how this helps move your design thinking forward. You could also disassemble an existing product to find out how it fits together. This could lead to a better understanding of materials, components and processes that you could use. Be sure to analyse your findings.

5 Produce a mood board or concept board – collect images, materials, colours and text that can help focus your ideas and gain a visual understanding of the task ahead. Again, focus on client needs and views, avoiding unnecessary information.

Help!
When completing your **product analysis** try to talk about different aspects of the design.
You can use an analysis tool such as ACCESSFM to help you.

This example is looking at a lamp:

Provide details of the results of your Analysis of a Competitor Product.

A: The product looks very enticing, with the card working well to create a nice relaxing mood with the spacers. The material helps the light bounce off it to create an almost dim light that is still enough to see with. It has a quality finish looking modern and sleek yet comforting at the same time. The product almost looks as though it is inspired by a beehive.

C: The product looks as though it cost £10-£15 to make and could sell roughly for £25-£40 maximum. The product looks affordable and good value for money for the quality of the product.

C: the product looks as though it is designed for older teens to young adults as it has a modern look about it. Specifically ages 15-25 years old, though could entice older and younger people too. The product could be used in most rooms though especially the living room and bedrooms, as these are relaxing rooms that require a relaxing mood. The lamp will help to create a nice mood, so the client can enjoy relaxing after a hard day at work or school etc.

E: The product is made from card and potentially made from wood, however it is unclear if it is made from reused or recycled materials. Furthermore, the materials used can most likely be recycled, which is a bonus once the client has finished with it. Being a lamp, and hacBung a valuable purpose, this product will be popular and easy to resell or give away once the client has finished with it.

S: The product does look safe, however the corners look like they are quite sharp and would need to be placed above eye height in case the client has a dog or small children. For the most part though, there appears to be no small parts or hot parts to burn the client with.

S: The size looks very reasonable for a light as it looks as though it will give off enough light to create a nice, comforting mood. The proportions appear appropriate for the intended use though maybe could go smaller at the top to create a more 'beehive' like look.

F: The product works very well, with it giving light off like it is designed to do. It is however unclear as to see whether it is battery operated or has a plug. The batteries will run out quicker and will cost more to replace. The product looks easy to use and easy to replace a lightbulb.

M: The product is made from cardboard and wood. The material choice works well to create a nice mood, though maybe colours will work better to help create a more relaxing mood. The materials used look environmentally friendly and as though they will not have a major affect on the environment, especially if they are reused or recycled.

This example is looking at a docking station:

This example is looking at interviewing a teenage girl about fashion.

Interview

Name: Age: 17

Would you prefer a skirt or dress in your wardrobe and why? Could you describe what type of dress/skirt would be your preference and all its components such as pockets fastenings and decorations?

Personally, I would prefer a skirt in my wardrobe as it can be paired with different tops in different styles and colours for a wide variety of looks. I also think that skirts can create a more casual look than a dress and more casual looks are what I tend to go for.

I would like either an a-line skirt or a tight fitting skirt in my wardrobe, definitly more of a mini skirt than a longer skirt. A pocket might be useful on the back for my phone, and a zip on the back would be nicest because then it is easy to put on.

What type of colour would you want to wear and why? Does this change with the weather or season?

In general I prefer muted colours, because I feel like they look more sophisticated and I think they look better with my dark brown hair. Although, in summer I sometimes wear brighter reds and oranges because they fit with the brightness of the summer. But mostly just the style of my clothes change with the seasons.

What is the most important factor in a garment for you (eg. comfort, appearance) and why?

I would say both appearance and comfort are very important because I want to look good whilst feeling comfortable throughout the day. Although, I would say that being comfortable is more important as I wouldn't want to wear a garment that will irritate me all day.

Which fabrics do you think are more sustainable, natural or synthetic and why? What do you think the fashion industry should do to help the environment?

I think that natural fabrics are more sustainable because they don't produce as much carbon dioxide to produce and they come from a renewable source. Although it can be very polluting to import them so more locally sourced fabrics are better.

I think that too many clothes are thrown away into landfill so I think that the fashion industry should promote giving old clothes to charity shops and buying clothes from charity shops, also re-using the material of old clothes.

Would you be drawn to a garment that has recycled buttons, fabrics or even rubbish on it? Would it matter how much it cost if you were drawn to it?

I would definitely be drawn to an item of clothing made from recycled material because I think thats really creative. I also really like the idea of rubbish being used although I think that is more of a run way look rather than everyday wear as it isn't very practical. If I saw a creative peice made from recycled material, the price wouldn't matter within reason.

This example is looking at the professional design style of Disney artists in the film Aladdin:
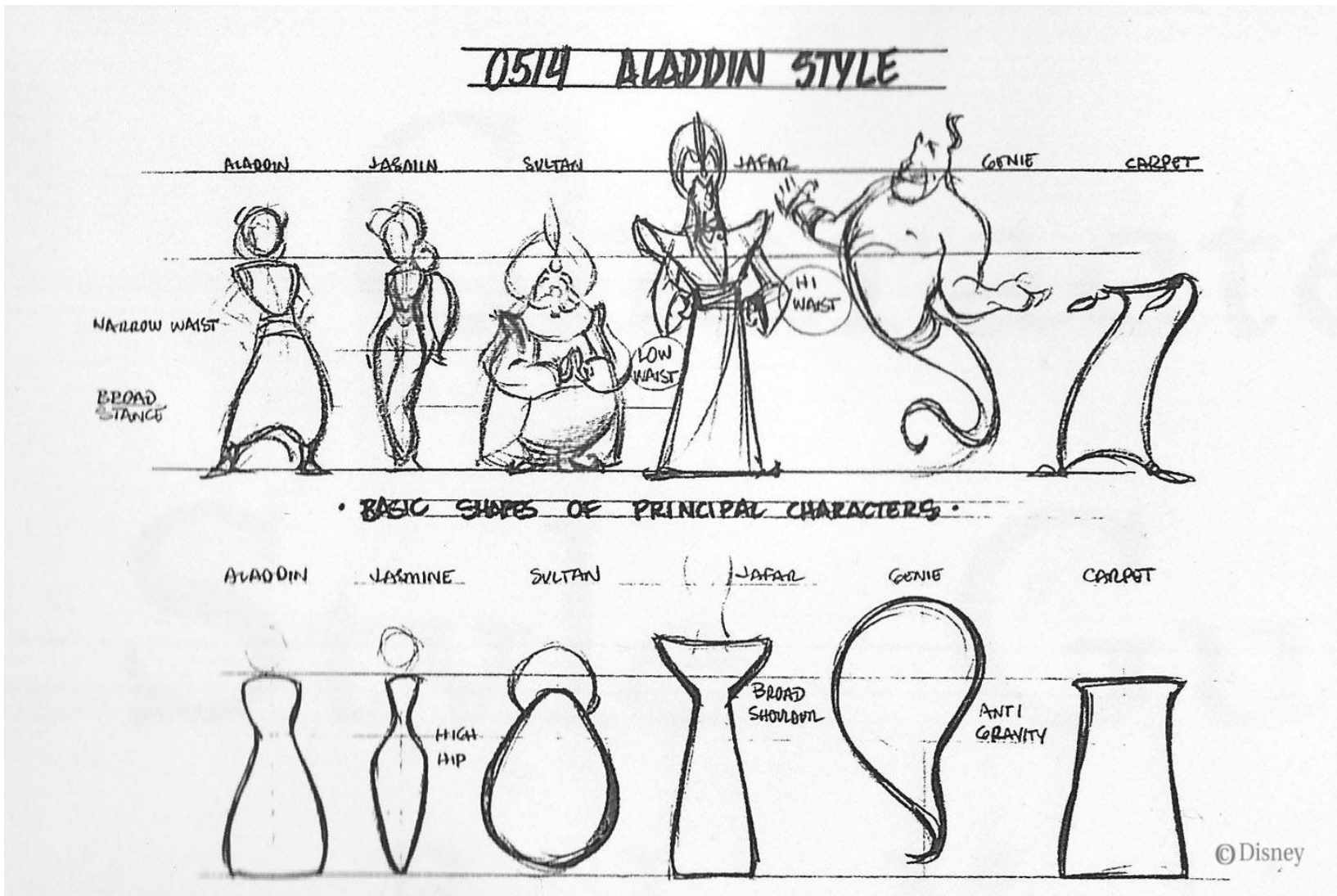
SECONDARY RESEARCH. USER REVIEWS

Column 1

Bike Phone Holder for Smartphones, Won't Break or Rust, Patented & Design Award Winning Universal Bicycle Phone Mount, Compatible with Road & Mountain Bikes, and also Motorbikes & Scooters

Technical Details

Bike type	All-Mountain
Color	Dark Blue
Size	Handlebar Mount
Display size	6 inches
Number of items	1
Batteries included?	No
Brand name	Bone Collection

Additional Information

| Product Dimensions | 19 x 4 x 6.5 cm |
| Shipping Weight | 18.1 g |

Dominant material(s): silicone
Reviews: 518
Problems suggested by the reviews:

Function

"Its as described and does hold my phone on the bike securely.... but everything shakes, vibrates and moves around so the screen itself is unusable..."

"It takes all my strength fit it, and then it doesn't work properly"

"I quickly became irritated with just how much your phone bounces about..."

"Annoying tendency to rotate with gravity..."

"Sorry but this wasn't really suitable for my bike ... or my phone"

"The straps obstructs the corners, making it difficult to use the phone on the go. It's a struggle to use the back button / active apps button, and because it blocks the light sensor..."

"Cant hold onto non-slip handlebars, keeps slipping around no matter how tight you pull it."

Quality/ safety

"The promise of 'won't break' has not held out. One of the corner"

"Then the rear strap actually snapped..."

"It's not very sturdy or secure."

Aesthetics

its dark bluey grey colour doesn't provide a fully coordinated match to my all-black bike + accessories.

Cost

"Good product but not worth £16.95 ... I've found cheaper sellers..."

"Very overpriced... "

"£5-7 would be a more reasonable price point."

Ergonomics   Sustainability   Target Market
Size   Environment   Materials   Construction
Cost

These areas were not mentioned in the reviews, therefore are not an issue or are not as important to the consumer as the other areas.

Column 2

Phone Holder,Bike Mount,Visun Universal Cell Phone Bicycle Handlebar & Motorcycle Holder Cradle with 360 Rotate for iPhone And All Android phone Google Nexus 5 4 and GPS Device Up to 3.7in wide

Technical Details

| Batteries included? | No |
| Brand name | Visun |

Application method

Dominant material(s): rubber + plastic
Reviews: 145
Problems suggested by the reviews:

Function

"Doesn't fit"

"I got this because of the reviews, but it is very hard to install on the bike and it doesn't stay on the bike but loosens and then turns around. Putting the phone into it can be a bit tricky too. Not ideal design."

"Trash . Doesn't fit road bikes..."

"This thing is pretty awful. It rattles very loudly when not in use and rattles very loudly when in use. It also works it-self loose very quickly if you take it off road. Returned. "

"The clamp is way too small, won't even allow me to screw the clamp together on the other side. So when I put the phone in it just flops to one side. This clamp won't fit any standard handle-bars and you've got no chance of it fitting around your stem. "

Quality/ safety

"Can't tighten it enough, keeps flop-ping, my phone actually fell out and shattered as a result as well. not impressed."

"Broke on first use, had to buy a new one at a bike shop. Flimsy and pathetic. I would ask for a refund but can't be bothered with the hassle of 6 odd quid "

"Its just too hard to place onto bike. Once i did figure it out it took me a long time and the parts are so small it ended up falling off."

"Really bad doesn't fit on my bike and hard to try to place it. Cheap material just threw it "

Ergonomics

"You have to unscrew it, put your phone in, screw it. When you reach the destination, you have to unscrew it, take your phone out. It's bit time consuming. "

Aesthetics   Sustainability   Target Market   Cost
Environment   Size   Construction   Materials

These areas were not mentioned in the reviews, therefore are not an issue

Column 3

Bike Phone Holder, Techole Universal Handlebar Bicycle Phone Mount, 360 °Rotatable Adjustable Shock-Absorbing Bike & Motorcycle Smartphone Holder Cradle with Extendable Silicone Strap for iPhone X, 8,7,6S, Samsung S9+, other 3.5-6.2 inch Smartphone, GPS,etc

Technical Details

Color	Black
Height	6.40 centimetres
Length	10.40 centimetres
Width	11 centimetres
Batteries included?	No
Brand name	Techole

Additional Information

Dominant material(s): plastic
Reviews: 51
Problems suggested by the reviews:

Target Market

"the bike mount isn't really wide enough for an adults bike "

Function

"The holder doesn't work as well with a large phone "

"The rubber holders also slip off "

"you'll find it very hard to secure your phone "

"This item broke after two rides "

Quality/ safety

"I lost an iPhone 7 to this holder as the top part managed to separate itself from the rest of the holder. This isn't a "coming loose" issue, this is poor quality casting that has led to the piece effectively shearing off. .."

"This item broke after two rides "

"the plastic area that holds the phone snapped off by itself, causing me to fall of my bike "   This item

"the stem snapped "

"This thing broke after a few hours of use. I do not recom-mend this to anyone. One star."

Aesthetics   Sustainability   Size   Environment
Cost   Materials   Construction   Ergonomics

These areas were not mentioned in the reviews, therefore are not an issue or are not as important to the consumer as the other areas.

The example below is a mood board about recycling and sustainability:
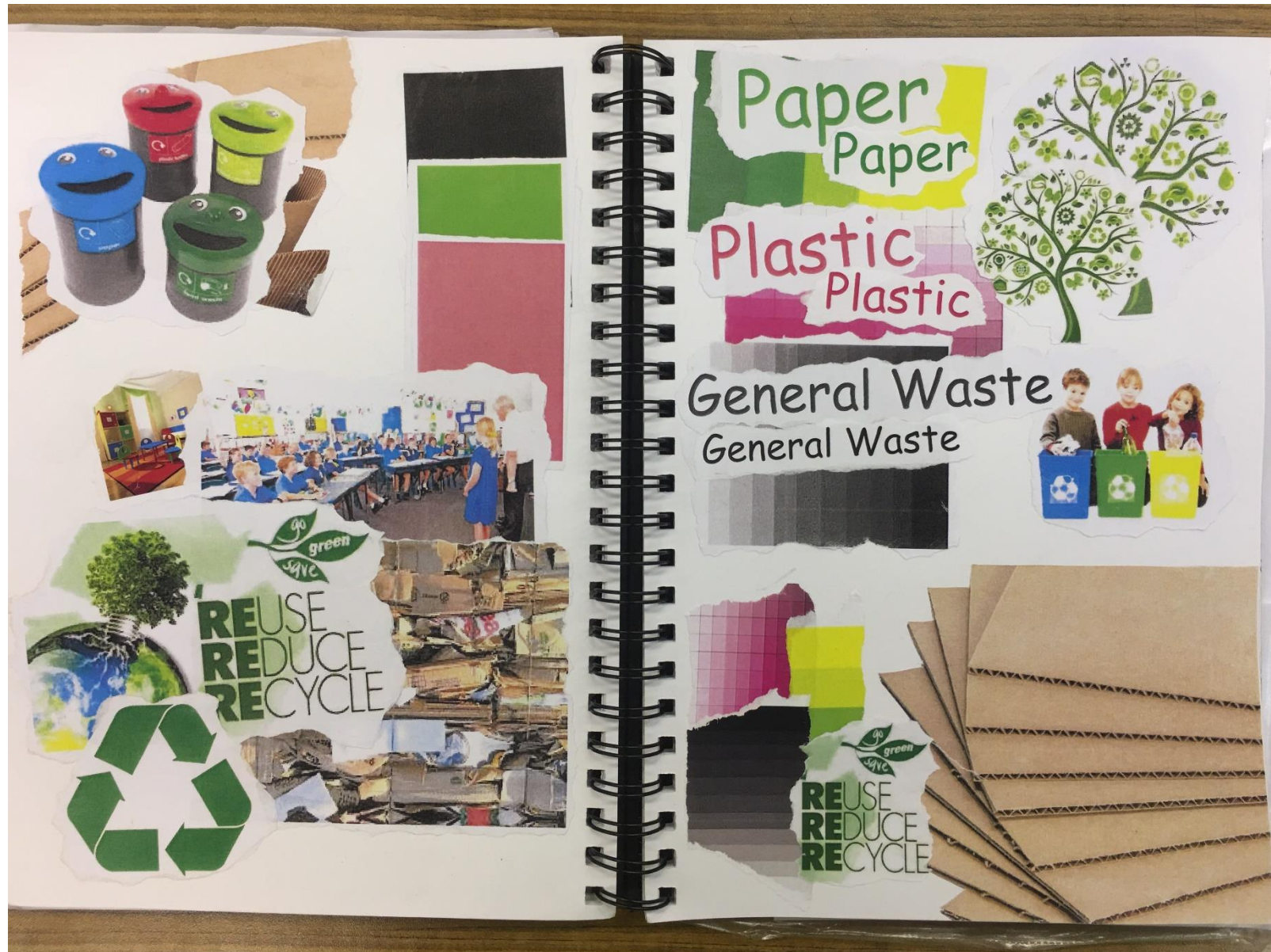
Preparation/ Draft Research Checklist

Task	Complete
Task 1- Contextual Challenge Mind Map	
Task 2- Problem Identification	
Task 3- Potential User Explanation	
Task 4- Initial Design Ideas	
Task 5- On going research - Product analysis	
Task 5- On going research - Interview	
Task 5- On going research - Studying the work of professionals	
Task 5- On going research - Analyse current trends	
Task 5- On going research - Mood board or Concept board	