

Design & Technology

Home Learning & Transition Unit Year 8

Sustainability - Mobile Phone Holder

Week 1 Task 1, 2 &3

You are asked to read the design context and design brief in detail to understand nature of your task over the following weeks and especially to understand the importance of sustainability and the need for you to try reduce your carbon footprint as much as possible. You should be aware that most but not all of their designs should be using recycled or reclaimed materials.

Task 1 - Investigate and research existing products on the market that you find interesting for their phone holder. Use ACCESS FM to help annotate your images

Aesthetics

Does the product look good?

Does it make good use of colour and texture?

What has inspired it's appearance? (E.g. is it organic? Is it industrial?)

Cost

What is the estimated cost of the product?

Does it offer value for money?

Safety

How has the designer considered safety issues in the products design?

Think about the ways it is being used and how different parts have been joined together.

Size

Are the product's proportions appropriate for its use?

If you increased or decreased the products size, would it look or function better?

Customer

Who is the product designed for?

How and where would they use it?

What effect will it have on their lives and relationships?

Does the product target a particular age group or sector of people?

Environment

What is the product's impact on the environment?

What happens to the product after use?

How long will it last?

What factors limit/lengthen its life span?

Can it be repaired?

Can parts be replaced?

How easily can it be recycled?

Function

Does the product do the job it was intended to do?

How does it work?

How easy is it to use?

Material

What materials are used to make the product and why?

Would another type of material work better?

What impact could the designer's choice of material have on the environment?

Where do the materials and other resources needed for production come from?
Are they likely to run out?

Task 2 - investigate the sizes of your phone or measure and complete the table.

Tasks 3 – Read the specification and answer questions at the bottom of the page.

Week 2

Hope you are all well? This week, please work on Task 4 (two pages)

Task 4 - Sketch your initial ideas and read D&T Tips for a higher grade. Produce a range of initial ideas 7or 8 (see booklet).

Week 3

Hope you are all well again and keep up the good work? This week, please work on Task 5 (one page) and Task 6

Task 5 – Development: Using your favourite design from your initial ideas develop this further to produce your final design e.g. improve it to make it even better (include measurements in mm’s).

Task 6 – Model (Prototype) - Produce an accurate and scale model of your phone/ipads holder from your development and test it! (see booklet).

Week 4

Task 7 - Sketch your final design and read D&T Tips for a higher grade (see booklet two pages).

Week 5

Task 8 – Produce full size version and take photographs of your phone holder

Due to school closure – you can produce your design out of materials you have at home, e.g. use the recycle box and find materials such as cereal boxes etc. Take a range of photographs and test it! (see booklet).

Week 6

Task 9 – Manufacturing flow chart – think about how you made your project and try to write a list of every step involved. Use this to the make a flowchart (an example will be sent out by your teacher)

Tasks 10 – Parts list – list all pieces that you would have liked to use and not just saying cereal box.

Design & Technology

GCSE Transition Unit Year 8 to Year 9

Sustainability - Mobile Phone Holder

Design Context:

Environmental issues are more and more important to consumers, to help them reduce their carbon footprint and help the environment. You have been asked to design and manufacture a mobile phone holder that will reduce the effects on the environment and reuse existing materials that you have at home or in school. These materials will need to be either reclaimed or up cycled

As a designer, you have a social responsibility - a duty to act in a way that benefits society and the environment. Environmental, social and ethical factors can be tricky to get your head around but are essential to help and protect our planet.

Design Brief:

Using mainly **recycled or reclaimed materials**, design a sustainable phone/ipad holder to hold securely your electronic product/device. Your product or products should be **as environmentally friendly as possible** to reduce the carbon footprint. Most materials should be either reclaimed or recycled to produce a high quality and unique product that is **functional and aesthetic pleasing**.

You should develop a range of creative ideas to ideally use old materials again in a different manner. You are not restricted on materials so long as most of the materials or components are reclaimed.



Task 1 Investigation - Image board

Investigate other creative phone holders that are currently available **and produce an image board designs below**. Using annotation, state why have you chosen these two designs to study, what do you like about the existing products that you have found. Use ACCEESS FM to help you annotate your images (your teacher will discuss this with you).

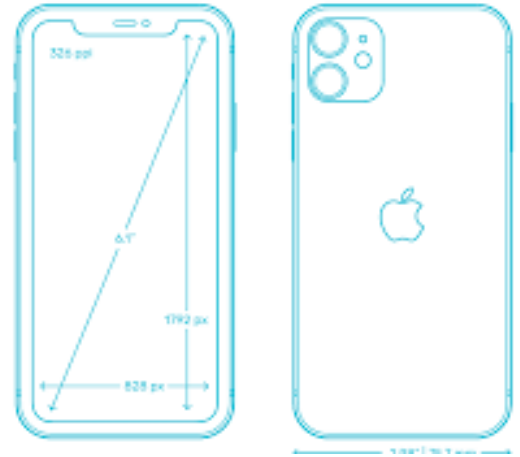


D&T Tips for a successful and a high grade!

- Collect visual images of existing phone holders
- Cut and paste to fill up this page to form a collage or use pic collage on your ipads.
- Add detailed comments (annotation) to explain why you have chosen these images and what do you like about them. Use ACCEESS FM.



Task 2 Investigation – Dimensions.



It is impossible to design for a product if you do not know the sizes needed. Measure your phone or ipad and record in the table below, always work in mm's.

Product:	Length:	Width:	Thickness:

Task 3 – Specification

Using the specification below, to help you generate a range of ideas (5 or 6). Use your sketching skills that you have learnt recently to help you draw in a variety of ways. Your designs must include the following:

Specification:

- It must appeal to your target audience. (state your target audience below),
- It must be mainly or entirely made from ethically sourced materials e.g. reclaimed or recycled materials.
- It must be functional as well as aesthetically pleasing e.g. it must work and look good.
- It must allow the phone/ipad to be used easily in an upright position.
- It must be light weight and portable, yet strong
- It must be able to fold away or be flat packed to save space and store easily.
- It must be a quality and well-constructed product.
- It must have a durable finish to protect the materials from wear and tear.
- It must be able to be manufactured in either batches or mass produced.

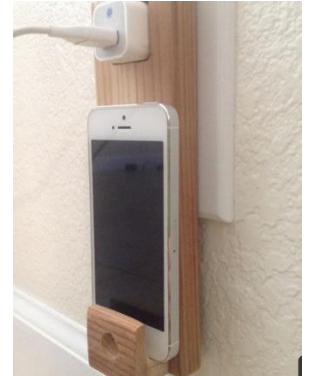
My target audience is or are:

Discuss in detail who and what your target audience is or are e.g. who is it for or aimed at?

Task 4 Initial ideas

Sketch your initial ideas below and read D&T Tips for a higher grade.

Produce a range of initial ideas 7 or 8 (by hand using different drawing and rendering techniques) and include annotation, apply surface decorations to give an indication of what it might be like. Look at existing phone holders from your image board to help for inspiration. **Do not copy any existing designs, all work must be your own.**



Task 4 Initial ideas continued –

D&T Tips for a higher grade

- Be creative, original and use your imagination.
- Outline your designs and keep sketches neat/feint.
- Draw your designs in both 2D and 3D to show different views.
- Add dimensions e.g. main measurements in mm's.
- Add detailed comments (annotation) to explain design decisions, discuss materials and construction.
- Ensure you cover all points on the specification fully.
- Ensure you discuss any environmental issues.



Task 5 – Development

Using your favourite design from your initial ideas develop this further to produce your final design e.g. improve it to make it even better (include measurements in mm's). Your teacher will explain what development means.

D&T Tips for a higher grade

- Be creative, original and use strong imaginative, eye-catching colours
- Outline you designs in black ink and keep sketches neat/feint
- Add dimensions e.g. main measurements in mm's
- Use coloured pencils (felt tipped pens can be a little harsh, messy and bleed through the page!)
- Add detailed comments (annotation) to explain design decisions, discuss materials and construction



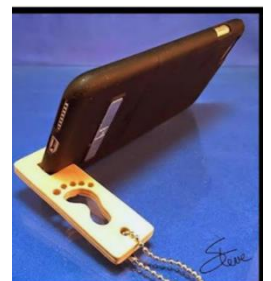
Task 6 – Model (Prototype)

Modelling is an essential part of designing and manufacturing. Produce an accurate and scale model of your phone/ipads holder from your development. Test your prototype to see whether your design works or could be improved. Record findings or suggestions from others and modify appropriately. Take a photograph using your ipad and stick below. Include any suggestions for improvements from either yourself, your teacher or your peers.

Task 7 Final Design Using your improved design (model and development) now generate your final design (include measurements in mm's).

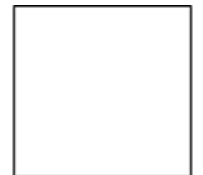
D&T Tips for a higher grade

- Be creative, original and use your imagination.
- Outline your designs and keep sketches neat/feint.
- Draw your designs in both 2D and 3D to show different views.
- Add dimensions e.g. main measurements in mm's.
- Add detailed comments (annotation) to explain design decisions, discuss materials and construction.
- Ensure you cover all points on the specification fully.
- Ensure you discuss any **relevant** environmental issues.



Task 8 - Produce full size version of your phone holder and take photographs.

Due to school closure - you can produce your design out of materials you have at home, e.g. use the recycle box and find materials such as cereal boxes etc. Produce a full-size version they would have been built in school out of wood, plastics or metals in card or other materials instead. You could colour or label your design with the materials that you think you might have used if in school. Take a few photographs with your phone (different angles) as well to test your design/model works. Stick or copy and paste below!



Task 9 Manufacturing Flowchart

Produce a flowchart to show the manufacturing steps involved to make your phone holder. Include Quality Control (QC) loops to show where you have checked quality and accuracy. (your teacher will explain the purpose of a flowchart).

Task 10 Parts List

Using your final design, list all pieces or components needed to produce your prototype below: Remember all measurements are in mm's.

Part Name:	Material:	Dimensions: (Length x Width x Thickness) (mm's)	Quantity:
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			