

Technology—Keystage 3

Design and make task - Mobile phone/MP3 stand

You will learn how to:

- generate a number of design ideas for your mobile phone/MP3 stand
- develop one of those ideas into a design solution
- make an accurate model of your design solution
- Work out the cost of making your mobile phone/MP3 stand
- plan the making of your mobile phone/MP3 stand
- accurately make your mobile phone/MP3 stand
- Design a suitable package for your mobile phone/MP3 stand
- test and evaluate your finished product

Context

Marsh Promotional Products Ltd specialise in products that promote films, television programmes and books. They have asked you to design a stand for either a mobile phone or MP3 player to be used either next to the bed or on a desk that is based on either a film, television programme or book.

Client: Marsh Promotional Products Ltd.

Design Brief: To design a stand for a mobile phone or MP3 player so that it stands vertically or slopes back slightly and allows the screen to be easily seen. It is to be based on a film, T.V. programme or book.

Design Specification:

1. It must hold a mobile phone or MP3 player vertically or slightly sloping.
2. It must be possible to see the screen clearly.
3. It should be possible to plug in the charger and headphones whilst in the stand.
4. It should be appealing to young people aged 11—16 years old.
5. It must be well made and robust enough to be used for a number of years.
6. It must be well finished and look attractive.
7. The cost of the materials must not exceed 80p
8. It should be safe for all people to use.
9. It must not damage the phone/MP3 in any way.
10. When making the phone/MP3 stand it should have as little impact on the environment as possible.



Start Date	Finish Date	Teacher
Name	Tutor Group	

Page (fill in)	Checklist for your design folder	Student mark (Circle)	Teacher mark
	Collect and analyse pictures of existing phone/MP3 stands	😊 😐 😞	
	Conduct a survey to find out what film, T.V programme, book characters people would want their stand to be based on	😊 😐 😞	
	Produce a range of design ideas	😊 😐 😞	
	Show your designs to a group of people and record their opinions of each design.	😊 😐 😞	
	Produce a well drawn, annotated final design with dimensions. If possible do this using CAD software.	😊 😐 😞	
	Work out the cost of making your design.	😊 😐 😞	
	Write down the constraints you have had to think about when designing your phone/MP3 stand	😊 😐 😞	
	Do a detailed step by step plan for making your phone/MP3 stand.	😊 😐 😞	
	Keep a record of the changes you make to your design as you make it.	😊 😐 😞	
	Make your phone/MP3 stand.	😊 😐 😞	
	Test and write a report for your finished phone/MP3 stand	😊 😐 😞	
	Evaluate the phone/MP3 stand against the specification.	😊 😐 😞	
	Draw your finished phone/MP3 stand and suggest ways it could be further improved.	😊 😐 😞	
	Effort for this project.	😊 😐 😞	
	Totals		

What have you enjoyed about this project:

What have you found hard with this project:

Suggestions for how this project could be improved:

Mobile phone/MP3 stand Homeworks

	Must be completed by all students	Should be completed by most students to show greater understanding
1	Draw and measure the phone/MP3 player for which you are designing a stand	Collect possible pictures of film, TV or book characters for your designs.
2	Produce a 1 point perspective drawing of a mobile phone/MP3 player	Also produce a 2 point perspective drawing of a mobile phone/MP3 player. www.technologystudent.com
3	Produce an Orthographic drawing of a mobile phone or MP3 player to scale.	Use CAD software to produce an accurate orthographic drawing of a mobile phone/MP3 player. (eg Google Sketchup, free to download)
4	Produce three isometric design drawings of possible mobile phone/MP3 stands, one made from wood, one from metal and one from plastic.	Produce two extra designs that use more than one material
5	Research and describe how to make the edges of acrylic smooth after they have been sawn.	Describe how the laser cutter can be used to cut out shapes in acrylic.
6	Explain how a jig could help you to make 100 mobile phone/MP3 stands quicker and with greater accuracy.	Explain how a jig/mould could be used to shape acrylic using an oven to heat and soften the plastic.
7	Design a mobile phone/MP3 stand that has a wooden or metal frame but uses fabric to hold the device in place.	Research different possible fabrics that could be used to make a mobile phone/MP3 holder
8	Explain with clear steps how you would go about making the mobile phone/MP3 stand you designed for homework 8	Explain three different ways of joining fabric to itself.
9	Explain how a mobile phone/MP3 stand made from mild steel could be protected to stop it from rusting.	Research and explain the process of electroplating.
10	Design the packaging for your mobile phone so that it can be hung from a hook in the shop in a blister pack.	Produce an information card to go in the blister pack. If possible use a computer to do this.
11	Describe how a wooden mobile phone/MP3 stand could be decorated using pyrography.	Research and explain how to use wood stain to colour wood. www.technologystudent.com
12	Produce a clearly labelled diagram of your mobile phone/MP3 stand and say what materials you have used and how they are joined together.	Show your finished stand to a group of people and ask their opinions of it and how it could be improved.