WCSA



Home Learning Book – Learning Cycle 2

Year 11 Design & Technology Resistant Materials Focus

Completion dates;

Week 1 Week 5

Week 2 Week 6

Week 3 Week 7

Name:	Tutor Group:
Teacher(s):	

Why is regular home learning important?

- ➤ It can improve a student's thinking and memory skills. This is vital for the new GCSEs.
- > It helps students to develop positive study skills and habits that will serve them well throughout life.
- ➤ Home learning encourages students to use time wisely and efficiently.
- > It teaches students to work independently.
- ➤ Home learning teaches students to take responsibility for their own work.
- ➤ It allows students to review and practice what has been covered in class and consolidate their knowledge and skills.
- > Equally important, it helps students to get ready for the next day's class.
- ➤ It helps students learn to use resources, such as libraries, reference materials, and computer Web sites to find information.
- ➤ It encourages students to explore subjects more fully than classroom time permits.
- > It allows students to extend their learning by applying skills to new situations.
- ➤ Home learning helps parents learn more about what their children learning in school.
- > It allows parents to communicate with teachers about learning in order to support their children efficiently.

Week 1: Investigation

1.	Prir	mary and secondary research are both necessary for the modern designer.	
	(a)	Give one example of primary research.	[1]
	(b)	Give one example of Secondary research.	[1]
	, ,		

2. Evaluate the advantages and disadvantages of each of the computer mice below with regards to ergonomics, anthropometrics, manufacturing cost and durability:



Mouse A



Mouse B

[4]

3.	Advantages of Mouse A	Advantages of Mouse B
		A Skateboard Heimet is Shown below.
	Disadvantages of Mouse A	Disadvantages of Mouse B
(6	u g g e e s t	

Week 2: The work of others part a

1. Investigate **two** designers from the following list and create a case study about them and their work.

Select your **three** favourite creations by each designer; include at least **one** image of their products and an explanation of why you chose each of the three. Then write approximately 300 words about the designers' work and their history.

To help you, an exemplar is provided in Raymond Loewy Case study.doc.

Graphic design	Textile design	Architecture	Product / industrial design
Harry Beck	Coco Chanel	Marcel Breuer	Gerrit Reitveld
	Alexander McQueen	Norman Foster	Ettore Sottsass
	William Morris	Charles Rennie Macintosh	Raymond Templier
	Mary Quant	Aldo Rossi	Louis Comfort Tiffany
	Vivienne Westwood		Alec Issigonis

Total 15 marks

Week 3: Keywords

Research and explain the definitions of the following key words giving examples where appropriate:

Key Word	Definition
Specification	
Evaluation	
Aesthetics	
Function	
Primary data	
Secondary data	
Ergonomics	
Anthropometrics	
Client	
Survey	

Week 4: The work of others part b

2. Investigate **two** design companies from the following list and create a case study about each of them and their work.

Select your **three** favorite creations by each company; include at least **one** image of their products and an explanation of why you chose each of the three. Then write approximately 300 words about the company philosophies, their work and their history.

Technology companies	Fashion / clothing companies
Apple	Gap
Alessi	Primark
Dyson	Under Armour
Braun	Zara

Total 12 marks

Week 5: Design strategies

(a)	Des	cribe what is meant by iterative design.	
(b)	Jus	tify one appropriate design strategy for the following:	
	(i)	Redesigning the flow of people through a congested railway station.	
	(ii)	Designing an asthma inhaler for an infant.	
You iten		about to interview a client who has asked you to design one of the following	
•	We	dding dress	
•	Bur	glar alarm system	
•	Des	k lamp	
(a)	_	gest three pieces of information that you will need to gather in order to t designing for your client?	

Testing is an important part of the designing process.	
State and explain one method of testing.	[2]

Week 6: Communication of design ideas

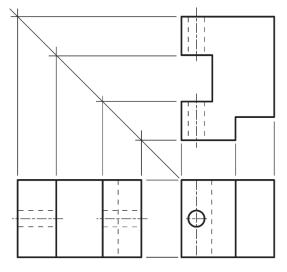
- 1. Exploded isometric projection is a common drawing technique.
 - (a) Describe what is meant by 'exploded' drawing.

[1]

(b) Briefly explain **one** reason why exploded isometric drawing would be suitable for product repair instructions.

[1]

2. The working drawing shown below is drawn using 3rd angle orthographic projection.



Redraw the object using isometric projection.

[3]



3.	Modelling is commonly used to create a prototype system or product for each stage in the design process.			
	(a)	Suggest one suitable material for the fabrication of a model.	[1]	
	(b)	Explain two advantages of modelling in the design process.	_ [4]	
			_	
			_	
			<u> </u>	

Week 7: Communication of design ideas

Make a rough sketch of a house shape in 2D plan view or oblique projection.
 When you are satisfied with the design, draw it in two-point perspective.

- 2. Freehand sketching is a useful and informal method of quickly getting ideas on paper. Sketches can be made in two- or three-dimensions.
 - (a) Use freehand sketching to make some ideas for a design of a house door handle.
 - (b) Render the design to suggest the feel and texture of the handle.
 - (c) Annotate the sketch to communicate your idea and to show the materials, manufacturing processes and use of sustainable materials.