

A Level Product Design

Cycle 4

Week	Lesson	Topic	Task/project	Spec point	Page No.	Homework	Independent study: 5 hours per week	Assessment
1&2 UNIT 1	1	Packaging variations— Papers and boards & vacuum forming & die cutter	Packaging design for pewter keyring Create design in Photoshop for Keyring Explore safety standard labelling	3.1.4 Forming, redistribution and addition processes	19	Carry out research into paper and board forming processes: die cutting; laser cutting; creasing & bending Challenge: include industry techniques— find videos to include in PP Further Challenge: make comparisons between workshop & industry methods	Meeting mini deadlines for NEA	Graphic skills
	2	Packaging variations— Papers and boards & vacuum forming & die cutter	Packaging design for pewter keyring Complete packaging backboard design & print Use die cutter for back board cut out	3.1.4 Forming, redistribution and addition processes	19		Create logo for vinyl cutter—for packaging—get printed for final product	Practical skills
	3	NEA	Section A—ongoing Section B—Brief & Spec				Meeting mini deadlines for NEA	NEA tracking
	4	Packaging variations— Papers and boards & vacuum forming & die cutter	Workshop—create former for blister packaging for keyring and vacuum form & assemble—wastage in manufacturing	3.1.4 Forming, redistribution and addition processes	19		Meeting mini deadlines for NEA	
	5	NEA	Section A—ongoing Section B—Brief & Spec				Meeting mini deadlines for NEA	NEA tracking
	6	PG Online Unit 1: Topic 1— Performance	Performance characteristics of papers & boards PP & worksheet	3.1.2 Performance characteristics of materials	4	Complete homework sheet for Topic 1 Challenge: carry out further research beyond worksheet Further Challenge: create revision/flash cards with processes	PG Online Unit 1: Topic 2— Applications—worksheet & homework sheet	Self assess answers on worksheets
	7	NEA	Section A—ongoing Section B—Brief & Spec Section C—developing design concepts begins				Meeting mini deadlines for NEA	NEA tracking
	8	NEA	Section A—ongoing Section B—Brief & Spec Section C—developing design concepts begins				PG Online Unit 1: Topic 3—Recycling — worksheet & homework sheet	Self assess answers on worksheets
	9		Performance characteristics of papers & boards	Consolidation quiz—end of Unit 1 Test	3.1.2 Performance characteristics of materials	4		Meeting mini deadlines for NEA

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3&4 UNIT 6	1	Additive techniques	3d print project	3.1.7 Digital design and manufacture	30		Meeting mini deadlines for NEA	NEA tracking
	2	Exam topics: MATERIALS:: manufactured boards; polymers; properties of metals; smart materials; modern materials	Multi topic lesson focussing on materials—uses and properties	3.1.1 Materials and their applications 3.1.2 Performance characteristics of materials: Polymers ; Woods ; Metals; smart materials	3 5 7 8 15	Examination style question practise Challenge: write what 'indicative content' will be on the markscheme Further challenge: self assess yourself against your own criteria & compare	Meeting mini deadlines for NEA	Exam practice questions
	3	NEA	Section A—ongoing Section C—developing design concepts continues				Meeting mini deadlines for NEA	NEA tracking
	4	Unit 6— processing Papers & Boards	Forming processes Worksheet	3.1.4 Forming, redistribution and addition processes	19	Complete homework sheet for Topic 1 Challenge: carry out further research beyond worksheet Further Challenge: create revision/flash cards with processes	Meeting mini deadlines for NEA	Self assess answers on worksheets
	5	NEA	Section A—ongoing Section C—developing design concepts continues				Meeting mini deadlines for NEA	NEA tracking
	6	Exam topic: manufacturing processes for polymers & biodegradable polymers	Polymer example match to processes—research extension task	3.1.4 Forming, redistribution and addition processes	19		Meeting mini deadlines for NEA	NEA tracking
	7	Unit 6— processing Papers & Boards	Topic 3—Finishing—worksheet & homework sheet	3.1.4 Forming, redistribution and addition processes	19		Unit 6— processing Papers & Boards: T2: Bonding Jigs & Fixtures—worksheet & homework sheets	Self assess answers on worksheets
	8	NEA	Section A—ongoing Section C—developing design concepts continues				Meeting mini deadlines for NEA	NEA tracking
	9	Unit 6— processing Papers & Boards	Consolidation quiz—end of Unit 6 Test	3.1.4 Forming, redistribution and addition processes	19		Meeting mini deadlines for NEA	Test

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5&6 UNIT 5	1	Exam topics: MULTI Virtual modelling; in-house production; jigs consolidation	Multi topic lesson focussing on modelling & manufacturing process	3.1.4.5 The use of adhesives and fixings 3.1.6 Modern industrial and commercial practice 3.1.7 Digital design and manufacture	23 27 30	Fabrication processes (rotational moulding & press forming) - exam question practise Challenge: carry out deeper research into each method—find videos Further challenge: find suitable alternative solutions to each process—advantages/disadvantages?	Meeting mini deadlines for NEA	NEA tracking Exam question practise
	2	Exam topic: the needs of the user Efficiency of batch production techniques	Exam question practice Decoding markschemes	3.2.1 Design methods and processes 3.1.6 Modern industrial and commercial practice	39 27		Revision for Mock Exam	Exam question practise
	3	Designers and Design Movements	Marianne Brandt Student presentations and consolidation of previous learning on designers and design movements	3.2.2 Design theory	40		Unit 5: composite materials Topic 1: composite materials	Self assess answers on worksheets
	4	NEA	Section A—ongoing Section C & D—developing design concepts and creating prototypes			Meeting mini deadlines for NEA	Unit 5: composite materials Topic 2: smart materials	Self assess answers on worksheets NEA tracking
	5						Unit 5: composite materials Topic 3: modern materials	Self assess answers on worksheets
	6	Unit 5: composite materials	Consolidation quiz—end of Unit 5 Test	3.1.1 Materials and their applications	2			Test
	7	Exam topic: technological advancements Environmental issues & energy conservation	Starter—no go gauges	3.2.3 How technology and cultural changes can impact on the work of designers 3.2.8 Responsible design	41 46	International standards	Modelling materials	
	8	NEA	Section A—ongoing Section C & D—developing design concepts and creating prototypes			Revision—TEAMS pre-mock practice	Revision for Mock Exam	NEA tracking
	9	Multi— FULL mock Paper 1 & 2	Multi— Mock Exam					Mock papers

My Expected Grade				
Teacher Assessed Grade (circle)				
SBE	BE	E	AE	SAE
Comment:				

Student Self Evaluation

WWW	EBI
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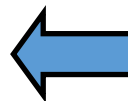
LEARNING TOOLS

Tick when you think you are able to define the meaning of the keyword

KEYWORDS	Forming	Redistribution	Wastage	Die cutter
3D printing	Recycling	Addition	Finishing	Applications
Blister pack	Tapered	Composites	Smart materials	Modern

Challenge!

Add more keywords/terms to the table



Why are we exploring forming, redistribution and addition processes

You are researching different processes so that you:

- ◆ Can begin to form an understanding of how manufactures produce a range of products in industry
- ◆ Can explain why different processes are selected
- ◆ Can reference and use this information to help you answer questions in the your examinations and also enhance your design portfolio for the NEA

Why are we researching material properties (papers & boards focus) & their suitability?

- If you can demonstrate understanding of material properties you will be able to apply this knowledge to both your NEA and the examinations.
- Understanding characteristics of material helps us make appropriate choices for our product concepts.

Why should I have a full understanding of the influence of iconic designers?

You must have an understanding of how product design is influenced by previous design movements. This is for examination and application of knowledge for your NEA folder.