A Level Product Design Cycle 5

Week	Lesson	Topic	Task/project	Spec point	Page No.	Homework	Independent study: *5 hours per week*	Assessment
1&2 UNIT 2	1	Exam review	Decoding mark schemes—reviewing mock results and student target setting				Carry out further research to consolidate areas of weakness highlighted in review	Student's understanding of marking criteria
	2	Unit 2: Performance of polymers	Topic 1: characteristics of polymers Worksheet	3.1.1 Materials and their applications 3.1.2 Performance characteristics of materials: Polymers	3 5	Complete homework sheets for topic 1 **Challenge:** link investigations into NEA **Further challenge:** plan workshop testing activities ahead of practical lessons	Meeting mini deadlines for NEA	Answers to unit questions
	3	NEA Sections C;D	NEA: material testing—practical				Meeting mini deadlines for NEA	NEA tracking
	4	NEA Sections C;D	Practical activities: material testing; prototyping				Meeting mini deadlines for NEA	NEA tracking
	5	Unit 2: Performance of polymers	Topic 2: application of polymers Worksheet	3.1.1 Materials and their applications 3.1.2 Performance characteristics of materials: Polymers	2 10	Complete homework sheets for topic 2 **Challenge:** link investigations into NEA **Further challenge:** exam question practice extension	Meeting mini deadlines for NEA	Answers to unit questions
	6	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	7	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	8	Unit 2: Performance of polymers	Topic 3: Stock forms & types Worksheet	3.1.1 Materials and their applications 3.1.2 Performance characteristics of materials: Polymers	2 10	Complete homework sheets for topic 2 **Challenge:** link investigations into NEA **Further challenge:** exam question practice extension	Meeting mini deadlines for NEA	Answers to unit questions
	9	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking

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3&4 UNIT 2 & 7	1	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	2	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	3	Unit 2: Performance of polymers	Topic 4: Elastomers Worksheet	3.1.1 Materials and their applications 3.1.2 Performance characteristics of materials: Polymers	2 10	Complete homework sheets for topic 2 **Challenge:** link investigations into NEA **Further challenge:** exam question practice extension	Meeting mini deadlines for NEA	Answers to unit questions
	4	NEA Sections C;D	NEA: prototyping activities (physical & CAD)			Revision for end of unit test	Topic 5 Bio degradable polymers Worksheet & homework sheet	NEA tracking
	5	NEA Sections C;D	NEA: prototyping activities (physical & CAD)			Revision for end of unit test	Meeting mini deadlines for NEA	NEA tracking
	6	Unit 2: Performance of polymers	**Consolidation quiz—end of Unit 2 Test**	3.1.1 Materials and their applications 3.1.2 Performance characteristics of materials: Polymers	2 10		Meeting mini deadlines for NEA	Test
	7	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	8	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	9	Unit 7: Processing polymers	Topic 1: Working with polymers Worksheet	3.1.4 Forming, redistribution and addition processes 3.1.5 The use of finishes	19 25	Complete homework sheets for topic 1 **Challenge:** link investigations into NEA **Further challenge:** exam question practice extension	Meeting mini deadlines for NEA	Answers to unit questions

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5&6 UNIT 7	1	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	2	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	3	Unit 7: Processing poly-mers	Topic 2: Forming polymers Worksheet	3.1.4 Forming, redistribution and addition processes 3.1.5 The use of finishes	19 25	Complete homework sheets for topic 1 **Challenge:** link investigations into NEA **Further challenge:** exam question practice extension	Meeting mini deadlines for NEA	Answers to unit questions
	4	NEA Sections C;D	NEA: prototyping activities (physical & CAD)	3.1.4 Forming, redistribution and addition processes 3.1.5 The use of finishes	19 25	Revision for end of unit test	Topic 3 Finishing polymers Worksheet & homework sheet	NEA tracking
	5	NEA Sections C;D	NEA: prototyping activities (physical & CAD)			Revision for end of unit test	Meeting mini deadlines for NEA	NEA tracking
	6	NEA Sections C;D	NEA: prototyping activities (physical & CAD)			Revision for end of unit test	Meeting mini deadlines for NEA	NEA tracking
	7	Unit 7: Processing poly-mers	**Consolidation quiz—end of Unit 2 Test**	3.1.4 Forming, redistribution and addition processes 3.1.5 The use of finishes	19 25		Meeting mini deadlines for NEA	Test
	8	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking
	9	NEA Sections C;D	NEA: prototyping activities (physical & CAD)				Meeting mini deadlines for NEA	NEA tracking

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

Student Self Evaluation

WWW	EBI

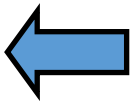
LEARNING TOOLS

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

KEYWORDS	Forming	Redistribution	Biodegradable	Prototyping
Performance	Processing	Addition	Finishing	Applications
Elastomers	Stock forms	Characteristics		

Challenge!

Add more keywords/terms to the table



THE BIG PICTURE

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 (polymers 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 different finishes?

You must have an understanding of how different materials can be finished for both aesthetic & functional reasons. This is for examination and application of knowledge for your NEA folder.