

CURRICULUM OVERVIEW FOR YEAR 11 D&T: PRODUCT DESIGN

Phase	1	2	3	4	5	6
Topic	Non-exam assessment	Textiles and fabrics	Non-exam assessment	Thermosetting/thermoforming plastics (in-depth)	Non-exam assessment	Thermosetting/thermoforming plastics (in-depth)
Knowledge	Generating and developing design ideas, 2D & 3D visual presentation, physical and virtual modelling, working drawing, final drawings	Natural polymers, synthetic polymers, blended and mixed fibres, microfibres, yarns, fabric	Manufacturing a prototype, flow diagram, sequence of making, quality control	Sources, origins and working properties of plastics, sustainability, life cycle analysis, new polymers, laminating, stock forms, material costs	Analysing and evaluating design decisions and prototypes, testing of prototypes, client feedback, expert feedback, modifications	Manufacturing processes, production methods, high volume production, wastage, addition, deforming and reforming, finishes
Skills	Visual communication, practical activities, interpretation of diagrams and symbols, verbal feedback, health and safety precautions, quality control during manufacture, CAD designing for CAM, verbal communication, mathematic formulas and calculations					
Key Marked Piece (Summative Assessments in bold)	Hand drawn ideas, modelling sheets, final drawing, working drawing	End of phase assessment	Flow diagram, sequence of making, final prototype	End of phase assessment	Evaluation against specification, third party feedback, modifications	End of phase assessment
Vocabulary	<ul style="list-style-type: none"> ● Design ideas ● Function ● Aesthetics ● Ergonomics ● Client ● User ● Computer Aided Design (CAD) ● Computer Aided Manufacture (CAM) ● Laser cutter ● Testing ● Working drawing ● Final drawing 	<ul style="list-style-type: none"> ● Natural polymer ● Animal polymer ● Wool ● Insect polymer ● Silk ● Plant polymer ● Cotton ● Viscose ● Synthetic polymer ● Polyester ● Nylon ● Elastane ● Microfibres 	<ul style="list-style-type: none"> ● Quality control ● Specification ● Development ● Modifications ● Evaluate ● Third party testing ● Input ● Output ● Decision ● Feedback loop 	<ul style="list-style-type: none"> ● Acrylic ● ABS ● Polypropylene ● Urea formeldahyde ● Phenol formeldahyde ● Melamine formeldahyde ● Polymers ● Fibres ● Laminating ● Expanded foam ● Open cell ● Closed cell ● Powder ● Granules ● Extruded 	<ul style="list-style-type: none"> ● Critical ● Suggestion ● Constructive ● Feedback ● Modifications ● Client ● User ● Third party ● Judgement ● Decisions ● Views ● Iterative 	<ul style="list-style-type: none"> ● One-off ● Batch ● Mass ● Continuous ● Just-in-time production (JIT) ● High volume ● Blow moulding ● Injection moulding ● Vacuum forming ● Compression moulding