

Design Technology Specification Content Audit

Core Technical Principles (CTP) 3.1.1 New and emerging technologies	Industry
	Enterprise
	Sustainability
	People
	Culture
	Society
	Environment
	Production Techniques and systems
	Critical evaluation of new and emerging technologies
CTP 3.1.2 Energy generation and storage	Fossil Fuels
	Nuclear Power
	Renewable Energy
	Energy storage system including batteries
CTP 3.1.3 Developments in New Materials	Modern materials
	Smart Materials
	Composite Materials
	Technical Textiles
CTP 3.1.4 Systems Approach to Designing	Inputs
	Processes
	Outputs
CTP 3.1.5 Mechanical Devices	Different Types of Movement
	Changing Magnitude and Directions of Force (Levers, Linkages and Rotary Systems)
CTP 3.1.6 Material Categories	Papers and Boards
	TIMBERS: Natural and manufactured
	Metals and Alloys
	Polymers
	Textiles
Specialist Technical Principles (STP)	3.2.1 Selection of Materials or Components
	3.2.2 Forces and Stresses
	3.2.3 Ecological and social Footprint
	3.2.4 Sources and Origins
	3.2.5 Using and working with materials
	3.2.6 Stock forms, types and sizes
	3.2.7 Scales of production
	3.2.8 Specialist techniques and processes
	3.2.9 Surface treatments and finishes
Designing and Making Principles (DMP)	3.3.1 Investigation, primary and secondary data
	3.3.2 Environmental, social and economic challenge
	3.3.3 The work of others
	3.3.4 Design Strategies
	3.3.5 Communication of design ideas
	3.3.6 Prototype development
	3.3.7 Selection of materials and components
	3.3.8 Tolerances
	3.3.9 Material management
	3.3.10 Specialist tools and Equipment
	3.3.11 Specialist techniques and processes

Wk	Topic/Content	Objectives/Skills	Homework	Assessment	Success Criteria	Stretch & Challenge (Thirst for Learning)
1	Theory: CTP 3.1.1 New and emerging technologies	Learn about industry and enterprise	Theory topic	Short tests and quizzes will be carried out in lessons alongside online tests using my dynamic learning	Designing Assessment: <ul style="list-style-type: none"> Drawings showing how to product could be made Details of materials and their properties Details of tools and equipment to be used Annotations about how the product could be mass produced. 	Designing: Practising isometric drawings of higher complexity Theory: Using Technologystudent.com to learn about topic in more depth
	Designing and Making Principles (DMP)	Context analysis for the toy plane				
2	Theory: CTP 3.1.1	Learn about sustainability and environmental issues	Theory topic			
	DMP	Isometric drawing of the toy plane				
3	Theory: CTP 3.1.1	Learn about people culture and society	Theory topic			
	DMP	Orthographic drawing of the toy plane				
4	Theory: CTP 3.1.1	Production techniques and systems Critical evaluation and new and emerging technologies	Theory topic			
	DMP	Design development				
5	Theory: CTP 3.1.2 Energy generation & storage	Fossil fuels, renewables and nuclear power	Theory topic	Short tests and quizzes will be carried out in lessons alongside online tests using my dynamic learning		
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				
6	Theory: CTP 3.1.2	Energy storage systems – umped storage systems	Theory topic and revision			
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				
7	Theory: CTP 3.1.2	Energy storage systems - batteries	Revision		Core Technical Principles Short Test 3.1.1 3.1.2	
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				

Wk	Topic/Content	Objectives/Skills	Homework	Assessment	Success Criteria	Stretch & Challenge (Thirst for Learning)
1	Theory: CTP 3.1.6 Material Categories	Learn about timbers (natural and manmade)	Theory topic	Short tests and quizzes will be carried out in lessons alongside online tests using my dynamic learning	Practical Assessment: 1. Product manufactured with precision <ul style="list-style-type: none"> • Marking out • Wastage • Quality of finish • Use of tools and equipment 	Theory: Using Technologystudent.com to learn about the theory topics in more depth
	Designing and Making Principles (DMP)	PRACTICAL: Following a plan of manufacture for the toy plane				
2	Theory: CTP 3.1.6	Learn about plastics	Theory topic			
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				
3	Theory: CTP 3.1.6	Learn about metals	Theory topic			
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				
4	Theory: CTP 3.1.6	Learn about papers and boards	Theory topic			
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				
5	Theory: CTP 3.1.6	Learn about textiles	Theory topic			
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				
6	Theory: CTP 3.1.6	Revision and recap of materials	Theory topic and revision	Making assessment Teacher and Self assessment using success criteria for the practical.		
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				
7	Theory: CTP	Revision 3.1.1, 3.1.2, 3.1.6	Revision	Core Technical Principles Short Test 3.1.6		
	DMP	PRACTICAL: Following a plan of manufacture for the toy plane				

Wk	Topic/Content	Objectives/Skills	Homework	Assessment	Success Criteria	Stretch & Challenge (Thirst for Learning)
1	Theory: 3.1.4 Systems approach to designing	3.1.3 Developments in new materials Modern materials	Theory topic	Short tests and quizzes will be carried out in lessons alongside online tests using my dynamic learning	Designing Assessment:	Theory: Using Technologystudent.com to learn about topics in more depth
	Designing and Making Principles (DMP)					
2	Theory:	3.1.3 Developments in new materials Smart materials	Theory topic			
	DMP					
3	Theory:3.1.5	3.1.3 Developments in new materials Composite materials	Theory topic			
	DMP					
4	Theory:	3.1.3 Developments in new materials Technical textiles	Theory topic	Designing assessment		
	DMP					
5	Theory:	3.1.4 Systems approach to designing inputs, processes and outputs	Theory topic	Short tests and quizzes will be carried out in lessons alongside online tests using my dynamic learning		
	DMP					
6	Theory:	3.1.5 Mechanical devices Different types of movement	Theory topic and revision			
	DMP					
7	Theory:	3.1.5 Mechanical devices Linkages, levers and types of movement	Revision	Core Technical Principles Progress Exam		
	DMP					