



Year 10 (Design Technology)

Term	Topic	Knowledge	Skills
Autumn T1 New and Emerging Technologies	Introducing Technology Industry and Enterprise Sustainability and the Environment People , Culture and Society Production Techniques and Systems Informing Design Decisions Recap and Retrieval Assessment	Understanding the impact of new and emerging technology on industry and enterprise Understand the effect that industry can have on the environment. Develop and understanding of the influence that people, culture and society have on product development Explore contemporary production techniques Understand the impact of planned obsolescence Informing design decisions.	Complex activity: Writing genre: Source comprehension / analysis / evaluation/debate Developing empathy and understanding Writing genres - Technical style essay (analysis) Evaluating impact Iterative problem solving
Autumn T2 Energy, Materials, Systems and Devices	Energy generation & Storage Modern & Smart materials Composite and Technical Textiles Systems approach to designing Electronic systems processing Mechanical devices Recap, Retrieval & Assessment	Energy generation from finite and non-finite sources is argued Exploring energy storage Developments in modern and smart materials, and their properties Exploring composite materials and technical textiles including GRP, CRP and Kevlar. Discovering Electronic systems The application of mechanical devices	Source comprehension / analysis / evaluation/debate Iterative problem solving Planning and Scheduling Applied mechanics and mathematics
Spring T1 Materials	Papers and boards Timbers Metals and alloys Polymers & Textiles Recap, Retrieval & Assessment	Exploring the properties of core materials. Examining practical applications Analysing physical and working properties	Source comprehension / analysis / evaluation/debate Deciphering processes
Spring T2 Common specialist technical principles	Forces and stresses Materials Testing Improving Functionality The six R's Scales of production Recap, Retrieval & Assessment	The effect of forces and stresses on materials and objects How to enhance materials to improve their functionality. Ecological issues including product mileage and the six Rs The effect of scale in production and production methods.	Developing methods of testing Source comprehension / analysis / evaluation/debate Deciphering processes
Summer T1 Specialist Unit- Paper and Boards	Sources, origins and properties Working with paper and board Commercial manufacturing, surface treatments and finishes Surface treatments Surface finishes Recap, Retrieval & Assessment	Exploring the sources, origins and properties of paper and boards, Developing a knowledge of working with papers and board Understanding commercial manufacturing, surface treatments and finishes	Source comprehension / analysis / evaluation/debate Deciphering processes
Summer T2 Specialist Unit- Polymers	Sources, origins and properties Working with polymers Commercial manufacturing, surface treatments and finishes Surface treatments Surface finishes Recap, Retrieval & Assessment	Exploring the sources, origins and properties of paper and boards, Developing a knowledge of working with papers and board Understanding commercial manufacturing, surface treatments and finishes	Source comprehension / analysis / evaluation/debate Deciphering processes

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