

Design Technology Year 10

Learning Intentions Spring Term 1

2024-2025

	LESSON 1	LESSON 2	LESSON 3
WEEK 16 wc 6 th January	Students should be able to understand and describe the role of robotics and automation in industry production.	Students should be able to understand and describe production systems and techniques such as: <ul style="list-style-type: none"> • Computer Aided Design • Computer Aided Manufacturing. 	
WEEK 17 wc 13 th January	Students should be able to understand and describe production systems such as: <ul style="list-style-type: none"> • flexible manufacturing (FMS), • lean manufacturing and • just in time manufacturing (JIT). 	Students should be able to understand and describe key concepts linked to enterprise such as: <ul style="list-style-type: none"> • crowdfunding, • virtual marketing and retail, • cooperatives and fair trade. 	Practical learning Resistant materials - Pewter Students will begin their initial sketches for a two part pewter casting mould to be developed into a CAD ready working drawing.
WEEK 18 wc 20 th January	Students should be able to understand and describe the concept of technology push and market pull with reference to specific products such as the iPhone or Dyson vacuum cleaner	Students should be able to understand and describe key design issues related to people, culture, and society such as: <ul style="list-style-type: none"> • faith and beliefs • designing for minority groups. • Designing for the disabled and the elderly 	
WEEK 19 wc 27 th January	Students should be able to understand and describe key concepts linked to sustainability and the environment such as: <ul style="list-style-type: none"> • planned obsolescence • design for maintenance 	Students should be able to understand and describe key concepts linked to sustainability and the environment such as: <ul style="list-style-type: none"> • finite and non-finite resources • disposal of waste 	Practical learning Resistant materials - Pewter Students will utilise the CAD/CAM facilities to produce an accurate two part mould ready for casting.

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WEEK 20 wc 3 rd February	Students should be able to understand and describe key concepts linked to sustainability and the environment such as: <ul style="list-style-type: none"> • life cycle assessments • global warming 	Students should be able to understand and describe key concepts linked to ethics and design such as: <ul style="list-style-type: none"> • production methods • use of labour • sourcing of materials 	
WEEK 21 wc 10 th February	Students should be able to understand and describe key concepts linked to renewable and non-renewable resources such as : <ul style="list-style-type: none"> • the use of fossil fuels • the production of renewable energy such as sun, wind and tidal power 	Students should be able to understand and describe key concepts linked to renewable and non-renewable resources such as: <ul style="list-style-type: none"> • nuclear energy • energy storage • alkaline and rechargeable batteries 	<p style="text-align: center;">Practical learning</p> <p>Resistant materials - Pewter Students will cast, clean and polish their pewter design using appropriate techniques and demonstrating Health and safety awareness at all times in the workshop.</p>