

Yr11 DT Learning Intentions – Term 2

	Lesson 1	Lesson 2	Lesson 3
Week 1	<p>Energy, materials, systems and devices Energy generation Students should know and understand:</p> <ul style="list-style-type: none"> • How power is generated from fossil and nuclear fuels • How power is generated from renewable energy • The arguments for and against fossil fuels and renewables 	<p>Investigation using Primary and Secondary data. How to effectively use:</p> <ul style="list-style-type: none"> • market research and interviews • focus groups, product analysis and evaluations. 	<p>Non-Exam Assessment - NEA</p> <ul style="list-style-type: none"> • Define a design problem and complete the relevant section of the design folder.
Important events	HW – Complete the worksheet provided –Fossil fuels - https://technologystudent.com/pdf14/oilgas1.pdf		
Week 2	<p>Energy, materials, systems and devices Energy storage Students should know and understand:</p> <ul style="list-style-type: none"> • Mechanical power and how it can be stored • Pneumatics and hydraulics as examples of pumped storage systems • The functional properties of alkaline and rechargeable batteries 	<p>Investigation using Primary and Secondary data. How to effectively use:</p> <ul style="list-style-type: none"> • anthropometric data and percentiles. • responses to user questionnaires • relevant presentation techniques to clearly display client survey responses. 	<p>Non-Exam Assessment - NEA</p> <ul style="list-style-type: none"> • Define a design brief and complete the relevant section of the design folder.
Important events	HW - Complete the worksheet provided – Energy storage https://technologystudent.com/pdf14/ENSTORE5.pdf		

Week 3	<p>Energy, materials, systems and devices Modern materials Students should know and understand:</p> <ul style="list-style-type: none"> • How to identify a range of modern materials • How to describe new processes involving modern materials • How modern materials can be used to alter functionality 	<p>Investigation using Primary and Secondary data. How to effectively use:</p> <ul style="list-style-type: none"> • market research and interviews to identify and investigate a target market for your product. 	<p>Non-Exam Assessment - NEA</p> <ul style="list-style-type: none"> • Define a target market and complete the relevant page in the design folder. • Use ACCESSFM to develop a relevant product specification
Important events	<p>HW - Complete the worksheet provided – Modern materials https://technologystudent.com/pdf15/titanium1.pdf</p>		
Week 4	<p>Energy, materials, systems and devices Smart materials Students should know and understand:</p> <ul style="list-style-type: none"> • How to identify a range of smart materials • That smart materials have a range of functional properties that can be changed by external stimuli 	<p>Investigating the work of others. Students should:</p> <ul style="list-style-type: none"> • investigate, analyse, and evaluate the work of past and present designers and companies to inform their own designing. • Students should investigate the work of a minimum of two designers from the list given. 	<p>Non-Exam Assessment - NEA</p> <ul style="list-style-type: none"> • Research relevant existing products and undertake a product analysis. • complete the appropriate pages in the folder.
Important events	<p>HW – Complete the worksheet provided - https://technologystudent.com/pdfs/smarm3.pdf</p>		

Week 5	<p>Energy, materials, systems and devices Composite materials and technical textiles</p> <p>Students should know and understand:</p> <ul style="list-style-type: none"> • How material properties can be enhanced by combining two or more materials • How to recognise a range of composite materials • How fibres can be manipulated to create technical textiles 	<p>Design strategies</p> <p>Students should understand how different strategies can be applied, including:</p> <ul style="list-style-type: none"> • collaboration • user centred design • systems approach • iterative design 	<p>Non-Exam Assessment – NEA</p> <ul style="list-style-type: none"> • Produce a varied range of initial ideas with reference to the specification and with appropriate annotations throughout.
Important events	<p>HW – Complete the worksheet provided - https://technologystudent.com/PDF3/fibre2.pdf</p>		
Week 6	<p>Energy, materials, systems and devices Systems approach to design</p> <p>Students should know and understand:</p> <ul style="list-style-type: none"> • The principles of electronic systems • How to use system diagrams and flowcharts • The characteristics of open and closed loop systems • Common input and output components 	<p>Design strategies - continued</p> <p>Students should understand how different strategies can be applied, including:</p> <ul style="list-style-type: none"> • collaboration • user centred design • systems approach • iterative design • avoiding design fixation. 	<p>Non-Exam Assessment – NEA</p> <ul style="list-style-type: none"> • Continue to produce a varied range of initial ideas with reference to the specification and with appropriate annotations throughout.
Important events	<p>HW – Complete the worksheet provided – https://technologystudent.com/pdfs/closdsys1.pdf</p>		

<p>Week 7</p>	<p>Energy, materials, systems and devices Systems processing</p> <p>Students should know and understand:</p> <ul style="list-style-type: none"> • The difference between analogue and digital systems • The use of microcontrollers in signal processing • The use of output devices to provide functionality to products and devices 	<p>Design strategies - continued</p> <p>Students should understand how different strategies can be applied, including:</p> <ul style="list-style-type: none"> • collaboration • user centred design • systems approach • iterative design • avoiding design fixation. 	<p>Non-Exam Assessment – NEA</p> <ul style="list-style-type: none"> • Continue to produce a varied range of initial ideas with reference to the specification and with appropriate annotations throughout.
<p>Important events</p>	<p>HW – Complete the worksheet provided – https://technologystudent.com/pdfs/ANALOG1.pdf</p>		