

KS4 DT –Yr 10
Half term 6

What? When? Why?	Lesson one Learning intentions (what can a student do at the end of the lesson)	Lesson two Learning intentions (what can a student do at the end of the lesson)	Lesson Three Learning intentions (what can a student do at the end of the lesson)
Week One	Designing and making principles Understand and describe how the following techniques are used and applied: <ul style="list-style-type: none"> • market research, interviews and human factors including ergonomics • focus groups and product analysis and evaluation • the use of anthropometric data and percentiles. 	NEA Preparation work Investigate and record possible design approaches and feasible products related to the theme – Climate Change	Practical realisation phase Produce initial ideas for a small product using more than one material with ACCESSFM annotations
Week Two	Designing and making principles Understand and describe the environment, social and economic challenges that influence design and making. How the following might present opportunities and constraints that influence the processes of designing and making: <ul style="list-style-type: none"> • deforestation • possible increase in carbon dioxide levels leading to potential global warming 	NEA Preparation work Investigate and record possible design approaches and feasible products related to the theme – Playing games	Practical realisation phase Identify a final design and produce an orthographic drawing and a cutting list

	<ul style="list-style-type: none"> the need for fair trade. 		
Week Three	<p>Designing and making principles The work of others</p> <p>Students should investigate, analyse, and evaluate the work of past and present designers and companies to inform their own designing.</p>	<p>Designing and making principles</p> <p>Students should investigate the work of a minimum of two of the following companies:</p> <ul style="list-style-type: none"> Braun Dyson Apple Alessi Under Armour Zara Gap Primark. 	<p>Practical realisation phase</p> <p>Produce a card prototype of the product and evaluate the product before commencing production.</p>
Week Four	<p>Designing and making principles</p> <p>Describe and explain how different strategies can be applied when generating ideas, including:</p> <ul style="list-style-type: none"> collaboration user centred design a systems approach iterative design avoiding design fixation. 	<p>Designing and making principles</p> <p>How ideas can be explored and developed using an iterative process including:</p> <ul style="list-style-type: none"> sketching modelling testing evaluation of their work to improve outcomes 	<p>Practical realisation phase</p> <p>Mark out and cut the different pieces required selecting the correct tools and processes and demonstrating appropriate health and safety knowledge</p>

Week Five	<p>Designing and making principles</p> <p>How to develop, communicate, record and justify design ideas using a range of appropriate techniques such as:</p> <ul style="list-style-type: none"> • freehand sketching, isometric and perspective • 2D and 3D drawings • system and schematic diagrams • annotated drawings that explain detailed development or the conceptual stages of designing • exploded diagrams to show constructional detail or assembly 	<p>Designing and making principles</p> <p>How to develop, communicate, record and justify design ideas using a range of appropriate techniques such as:</p> <ul style="list-style-type: none"> • working drawings: 3rd angle orthographic, using conventions, dimensions and drawn to scale • audio and visual recordings in support of aspects of designing: e.g. interviews with client or users • computer based tools • modelling: working directly with materials and components, e.g. card modelling 	<p>Practical realisation phase</p> <p>Assemble the different pieces required selecting the correct tools and processes and demonstrating appropriate health and safety knowledge</p>
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Week Six	<p>Designing and making principles</p> <p>Design and develop prototypes in response to client wants and needs.</p> <p>How the development of prototypes:</p> <ul style="list-style-type: none"> • satisfy the requirements of the brief • respond to client wants and needs • demonstrate innovation • are functional • consider aesthetics • are potentially marketable. 	<p>NEA Preparation work</p> <p>Investigate and record possible design approaches and feasible products related to the theme – Securing or storing personal possessions</p>	<p>Practical realisation phase</p> <p>Assemble the different pieces required selecting the correct tools and processes and demonstrating appropriate health and safety knowledge</p>
Week Seven	<p>Designing and making principles</p> <p>Students should know and understand how to evaluate prototypes and be able to:</p> <ul style="list-style-type: none"> • reflect critically, responding to feedback when evaluating their own prototypes • suggest modifications to improve them through inception and manufacture • assess if prototypes are fit for purpose. 	<p>NEA Preparation work</p> <p>Identify one of the 3 themes you have investigated and choose one which you think will offer the best potential for an NEA project. Justify your answer.</p>	<p>Practical realisation phase</p> <p>Finish and evaluate your product with specific reference to your intended target market. Suggest modifications based on your customer feedback</p>