

Subject: Design Technology

Year group
Year 10

Term	Composite <i>Topic</i>	Components (declarative) <i>To know that</i>	Components (procedural) <i>To know how to</i>	Key vocab Tier 3	CEIAG <i>Careers</i>
Autumn 1	<p>Practical:</p> <p>Workshop safety</p> <p>Design Ideas and Presentation Skills</p> <p>Penguin Kettle</p> <p>Lamp Design</p> <p>Theory:</p> <p>Stakeholders</p> <p>Primary Users</p> <p>Principles of Design</p>	<p>To know Health & Safety rules and workshop expectations</p> <p>To know that design ideas are a key process in communication</p> <p>To know what an isometric drawing is</p> <p>To know what a two-point perspective drawing is</p> <p>To know what fundamental design principles are</p> <p>To know what a stakeholder is</p> <p>To know what a primary user is</p>	<p>To know how to generate high quality design ideas</p> <p>To know how to follow the design presentation rules</p> <p>To know how to create an isometric drawing</p> <p>To know how to create a two-point perspective drawing</p> <p>To know how to analyse a design brief and identify stakeholders and potential users</p> <p>To know how to identify improvements for existing products</p>	<p>Design</p> <p>Creativity</p> <p>Innovation</p> <p>Client</p> <p>Stakeholder</p> <p>Rendering</p> <p>Development</p> <p>Perspective</p> <p>Isometric</p>	<p>Games designer,</p> <p>Programmer,</p> <p>Interior Designer,</p> <p>Joiner,</p> <p>Architect,</p> <p>Graphic Designer,</p> <p>Illustrator,</p> <p>Animator,</p> <p>Engineer,</p>
Autumn 2	<p>Practical:</p> <p>Mini NEA – Storage Solution</p> <p>Identifying Stakeholders and Potential Users</p> <p>Generating a range of design ideas</p>	<p>To know that design ideas should be solution focused</p> <p>To know what design requirements are</p> <p>To know what empirical modelling is</p> <p>To know that health & safety rules should be followed</p>	<p>To know how to work safely within a workshop to prevent hazards and injury</p> <p>To know how to use tools and equipment safely and independently</p> <p>To know how to behave in a workshop and identify hazards</p> <p>To know how to annotate and present design ideas</p>	<p>Crating</p> <p>Reflection</p> <p>Empirical</p> <p>Oblique</p> <p>Requirements</p> <p>Annotations</p>	

	<p>Empirical Modelling (card)</p> <p>Theory: Design Considerations</p> <p>Analysing a Design Brief</p> <p>Product Analysis</p>	<p>To know what the iterative design process is</p> <p>To know what users require based on wants/ needs</p> <p>To know that a design brief is intrinsically linked to possible outcomes</p> <p>To know that existing products inform potential improvements</p>	<p>To know how to develop and improve design ideas through modelling</p> <p>To know how to identify potential needs to inform solutions</p> <p>To know how to identify potential improvements</p> <p>To know how to analyse existing products and identify potential improvements using FEMMS</p>	<p>Hazards</p> <p>Improvements</p> <p>Features</p> <p>Solutions</p> <p>Manufacture</p> <p>Analysis</p> <p>Function</p>	
Spring 1	<p>Practical: Mini NEA – Pizza Cutter</p> <p>Recognising and understand design styles/ movements</p> <p>Generating a range of design ideas in response to a design brief</p> <p>Empirical Modelling (Clay)</p> <p>Design Development</p> <p>Design Presentation Skills</p>	<p>To know that design styles influence design ideas and outcomes</p> <p>To know that design ideas are informed by the design brief</p> <p>To know that empirical modelling is a method of communication</p> <p>To know that design development should be informed by user feedback</p> <p>To know that user feedback links directly to the iterative design process</p> <p>To know that anthropometrics and ergonomics has an impact on the potential user</p> <p>To know that the presentation of design ideas, including annotations, is a vital element of communication and explanation</p>	<p>To know how to identify key features of design styles and use this as design inspiration</p> <p>To know how to analyse a design brief</p> <p>To know how to create empirical models</p> <p>To know how to gather user feedback and implement this when developing design ideas</p> <p>To know how the iterative design process works</p> <p>To know how to adapt and change an outcome according to feedback</p> <p>To know how to use different materials to create an empirical model</p> <p>To know how to present design ideas using fundamental presentation skills</p>	<p>Inspiration</p> <p>Communication</p> <p>Empirical</p> <p>Development</p> <p>Orthographic Projection</p> <p>Iteration</p> <p>Adapt</p> <p>Anthropometrics</p> <p>Ergonomics</p> <p>Annotations</p> <p>Aesthetics</p>	

	<p>Theory:</p> <p>Anthropometrics</p> <p>Ergonomics</p> <p>Aesthetics</p> <p>Timber Categories</p> <p>Standard Components</p>	<p>To know that anthropometrics refers to human measurements</p> <p>To know that ergonomics links to comfort and usability</p> <p>To know that aesthetics links to the visual appeal of a product</p> <p>To know what the categories of timber are</p> <p>To know what standard components are and how they are used</p>	<p>To know how to use anthropometric data</p> <p>To know how to consider ergonomics</p> <p>To know how to identify key aesthetics qualities</p> <p>To know how timbers are categorised, softwood, hardwood, manufactured boards</p> <p>To know how standard components are used and the benefits</p>	<p>Qualities</p> <p>Softwood</p> <p>Hardwood</p> <p>Manufactured Board</p> <p>Categories</p> <p>Components</p> <p>Production</p>	
Spring 2	<p>Practical:</p> <p>Mini NEA – Pizza Cutter</p> <p>Empirical Modelling</p> <p>Technical drawing skills</p> <p>Prototyping (timber)</p> <p>Theory:</p> <p>Energy Sources</p> <p>Non-renewable energy</p> <p>Renewable Energy</p>	<p>To know what materials can be used to create empirical models</p> <p>To know that different tools have different uses for specific materials</p> <p>To know that technical drawings are a method of manufacture</p> <p>To know that specific tools and equipment have specific uses</p> <p>To know where energy sources come from</p> <p>To know the types of non-renewable energy</p> <p>To know the types of renewable energy</p>	<p>To know how the stages of empirical modelling can inform a 3D understanding of potential designs</p> <p>To know how to use the hot wire cutter effectively</p> <p>To know how to create an orthographic drawing</p> <p>To know how to use tools and equipment safely and successfully</p> <p>To know how to identify types of energy sources</p> <p>To know how non-renewable energy impacts the environment</p> <p>To know how renewable energy can be generated</p>	<p>Orthographic Projection</p> <p>Empirical</p> <p>Prototyping</p> <p>Anthropometrics</p> <p>Ergonomics</p> <p>Aesthetics</p> <p>Finite</p> <p>Sustainability</p> <p>Impact</p> <p>Generation</p>	

Summer 1	Practical: Mini NEA – Pizza Cutter	To know that evaluations can highlight further improvements To know that user feedback influences improvements	To know how to effectively evaluate a final outcome To know how to gather feedback to inform evaluations	Evaluate Reflect Improve	
Summer 2	Practical: Official NEA Release				