



SUNNYDOWN SCHOOL

DT CURRICULUM PLAN

Subject	DT	Year group	Y10
Subject Intent	<p>Year 10 sees the students begin to focus on their GCSE work. To begin KS4, Sunnydown students will work on a larger scale project with emphasis on creating a detailed portfolio of work to help understand the structure of the NEA (non-examined assessment) project that will begin towards the end of the year. Each project after this is designed to help students refine their practical and theory skills in preparation for the demands of the NEA. Students follow AQA Design and Technology (8552) GCSE specification.</p>		

Term	Topic	Core learning	Key concepts	Sequencing
Autumn 1	Game storage project	<p>Technical knowledge: Portfolio of evidence. Investigating, designing, making, analysis and evaluation.</p>	<ul style="list-style-type: none"> ● Needs and wants of consumer ● Research ● Creativity ● Customer profile ● Creating a Brief ● Detailed specification ● Design evaluation ● Design development ● Manufacturing ● Router ● Testing ● Evaluating 	<p>Building on..... Skills learnt throughout KS3. Summer 1 and 2 of year 9 gave students an idea of how to lay out a portfolio of work in a GCSE style. Creativity and independence learnt through a variety of previous projects.</p> <p>Building towards... Understanding the needs and wants of the consumer. Students will be better understand the demands of the written part of the GCSE NEA.</p>
Autumn 2		<p>Design: Design evaluation and development. Creating a design for a specific user.</p> <p>Making: Using a variety of materials and specialist equipment, including laser cutter and 3d printer to create a themed product.</p> <p>Evaluation: evaluate their product against a specification, reflect on improvement. Review of work with students setting themselves a target.</p>		

Spring 1	Finger jointed pine box	Specialist technical skill. Students to know how materials are cut shaped and formed to a tolerance to know the preparation and application of surface treatments and finishes. Students will create a digital brand logo for their product that will be applied using the laser cutter (CAM)	<ul style="list-style-type: none"> ● Tolerances ● Material properties ● Accuracy ● Problem solving ● Surface finishes ● Branding ● CAM ● CAD ● Beeswax ● Varnish ● Oil ● Stain 	<p>Building on..... Wood joint work from KS3. Accuracy of measuring and marking. Tool knowledge to help choose the correct tools for each stage of the process.</p> <p>Building towards... a greater understanding of computer aided manufacture and an in-depth knowledge of different surface finishes.</p>	
Spring 2	FM radio project	<p>Technical knowledge: Design movements: Art Nouveau, Bahaus, Deco Accuracy when soldering.</p> <p>Design: Identify and apply style elements and features to own ideas. Advance CAD skills, CAM components.</p> <p>Making: Use specialist processes and machinery. Soldering, laser cutting and 3d printing. Apply electrical components to power products</p> <p>Evaluation: evaluate their product against a specification, reflect and show on improvement. Review of work</p>	<ul style="list-style-type: none"> ● Soldering ● Components ● Resistors ● Capacitors ● Potentiometers ● Tuning crystal ● Design movement ● Art deco ● Art Nouveau ● Bahaus 	<p>Building on..... Year 8 spring 2 and year 9 spring 2 electronic work. Using inspirational designs. Practical work draws on a variety of skills learnt up to this point to create an individual, independent product.</p> <p>Building towards... being able to recognise well known design movements. Confidence when using CAD and CAM to create components for a project. A greater independence when creating a design.</p>	
Summer 1					Summer 2

	(NEA)	<p>Introduction to the contexts and start of the investigation. Choice of context. Focus on real world problems and potential solutions.</p>	<p>Questionnaire</p> <ul style="list-style-type: none"> • Survey • Market research <p>Product analysis</p> <ul style="list-style-type: none"> • Target market • Design problem/opportunity 	<p>through KS3 and 4 to begin to layout a portfolio of research for their NEA.</p> <p>Building towards... by completing initial research in year 10 students will have a solid base to use at the start of year 11 so they can start exploring their design solutions and concepts.</p>
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