

## Shoreham Academy Design and Technology: 7 year curriculum map

<b>Year 7</b>	<p><b>Project: Children’s wooden puzzle</b></p> <p>Health and safety in the workshop  <b>Materials:</b> timber.  <b>Skills:</b> Basic wood cutting and finishing, the design process basics.</p> <p><i>Links to:</i> GCSE DT knowledge and understanding of natural and manufactured timbers including how to shape, form and finish. GCSE Graphic Communication - design idea production, rendering skills, applying paint.</p>
<b>Year 8</b>	<p><b>Project: Mechanical toy</b></p> <p>Health and safety in the workshop.  <b>Materials:</b> timber.  <b>Skills:</b> Advanced wood cutting and shaping, the design process in more detail.</p> <p><i>Links to:</i> GCSE DT knowledge and understanding of natural and manufactured timbers including how to shape, form and finish. GCSE Graphic Communication – drawing styles, orthographic projection.</p>
<b>Year 9</b>	<p><b>Project: Clock design and make</b>  <b>FPT: Note holder</b></p> <p>Health and safety in the workshop.  <b>Materials:</b> timber and plastics.  <b>Skills:</b> Application of basic and advanced cutting and shaping of materials, full design process.</p> <p><i>Links to:</i> GCSE DT knowledge and understanding of materials, the design process and using and working with materials. GCSE Graphic Communication – knowledge of design styles, how to analyse design styles, using design styles to influence ideas</p>

### KS4 GCSE Design and Technology

KS4	Autumn term	Spring term	Summer term
<b>Year 10</b>	<b>Unit 1</b> Knowledge and understanding of natural and manufactured timbers including how to shape, form and finish.	<b>Unit 3</b> Knowledge and understanding of modern materials and plastics including how to shape, form and finish. Using and working with plastics.	Continuation of students independent project following the design process through these additional stages:

	<p>Using and working with timbers. Practical outcome – wooden box.</p> <p><b>Unit 2</b> Knowledge and understanding of metals and alloys including how to shape, form and finish. Using and working with metals. Practical outcome – Jewellery.</p> <p><b>Links to:</b> A Level Product Design - technical principles.</p>	<p>Knowledge and understanding of the use of prototypes and models in the design process. Practical outcome – phone holder.</p> <p><b>Unit 4</b> Knowledge and understanding of systems approach to designing and mechanical devices. Practical outcome –bridge making group activity.</p> <p><b>Unit 5</b> Knowledge and understanding of pliant materials – paper, board and Textiles.</p> <p>Students use designing and making principles learnt to complete an independent project from start to finish focused on three areas</p> <ul style="list-style-type: none"> <li>• Section A Identifying and investigating design possibilities</li> <li>• Section B Producing a design brief and specification</li> <li>• Section C Generating design ideas.</li> </ul> <p><b>Links to:</b> A Level Product Design - technical principles and designing and making principles. A Level Graphic Communication - A02 exploration of media and A03 recording.</p>	<ul style="list-style-type: none"> <li>• Section D Developing design ideas.</li> <li>• Section E Realising design ideas.</li> </ul> <p>Alongside their project students will learn about CAD/CAM, metal working, systems and control application.</p> <p><b>Non-exam Assessment (NEA)</b> This term students will start their NEA, based on a choice of contexts given by the exam board:</p> <ul style="list-style-type: none"> <li>• Section A Identifying and investigating design possibilities.</li> <li>• Section B Producing a design brief and specification.</li> </ul> <p><b>Links to:</b> A Level Product Design - technical principles and designing and making principles. A Level Graphic Communication – A01 research, A02 exploration of media and A03 recording.</p>
<p><b>Year 11</b></p>	<p><b>Non-exam Assessment (NEA)</b> Continuation of independent NEA project with a focus on:</p> <ul style="list-style-type: none"> <li>• Section C generating design ideas.</li> <li>• Section D developing design ideas.</li> <li>• Section E realising design ideas.</li> </ul> <p>Students will continue with learning of materials and processes through practical application.</p> <p><b>Links to:</b> A Level Product Design - designing and making principles. A Level Graphic Communication - A02 exploration of media and A03 recording.</p>	<p><b>Non-exam Assessment (NEA)</b> Continuation of independent NEA project with a focus on:</p> <ul style="list-style-type: none"> <li>• Section E Realising design ideas.</li> <li>• Section F Analysing and evaluating.</li> </ul> <p>Students will continue with learning of materials and processes through practical application.</p> <p><b>Links to:</b> A Level Product Design - designing and making principles. A Level Graphic Communication - A03 recording.</p>	

## KS4 Graphic Communication

KS4	Autumn term	Spring term	Summer term
<b>Year 10</b>	Establishing drawing skills. Exploration of media. Introduction to typography. Use of photography and visual reference material. Logos and symbols.  <u><b>Links to:</b></u> A Level Graphic Communication – A02, A03	Media exploration including CAD/CAM. Introduction to Photoshop. 7 elements of art. Creation of backgrounds/mixed media. Responding to a design brief. Logos and brand identity. Start rebranding project  <u><b>Links to:</b></u> A Level Graphic Communication – A01, A02, A03, A04	Complete rebranding project. Art and design styles and movements. Graphics in different cultures. Critical analysis. Students start the personal investigation (Unit1) Students write introduction for related study essay  <u><b>Links to:</b></u> A Level Graphic Communication – A01, A02, A03
<b>Year 11</b>	Personal Investigation  <u><b>Links to:</b></u> A Level Graphic Communication - Personal Investigation and related study essay	Personal Investigation completed Start externally set task (Unit 2)  <u><b>Links to:</b></u> A Level Graphic Communication - Personal Investigation and related study essay. Externally set task (Unit 2)	Complete the externally set task (Unit2)  <u><b>Links to:</b></u> A Level Graphic Communication - Externally set task (Unit 2)

## A Level Product Design

	Autumn term	Spring term	Summer term
<b>Year 12</b>	Design theory including design influences; styles and movements and designers and their work. Performance characteristics of woods and manufactured boards. Practical outcome: Jewellery stand	Performance characteristics of plastics and modern materials CAD/CAM Practical outcome: Playing card stand	Performance characteristics of metals, paper and boards. Industrial processes, scales of production and international standards Practical outcome: Lighting project  Start of actual NEA, students choose own context. Section A identifying and investigating design possibilities.

			Section B producing a design brief and specification.
<b>Year 13</b>	Continuation of NEA  Section C development of design proposals. Section D development of design prototype.	Continuation of NEA.  Section D development of design prototype. Section E analysing and evaluating.	Recap and preparation for written exam papers. Paper 1 technical principles. Paper 2 design and making principles.

### A Level Graphic Communication

	Autumn term	Spring term	Summer term
<b>Year 12</b>	Extended Typography Analysis of artists and designers Presentation techniques Multi-media approach Photoshop tutorials CAD/CAM and laser cutting Album cover project - focus on generating ideas (Links to Unit 1 and Unit 2)	Printing techniques Design styles timeline Poster project - focus on development of ideas (Links to Unit 1 and Unit 2)	Students start the personal investigation (Unit1) Students write introduction for related study essay
<b>Year 13</b>	Personal Investigation Mock exam Related study essay	Personal Investigation completed Related study essay completed Start externally set task (Unit 2)	Complete the externally set task (Unit2)