

## 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></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>	<p><b>Unit 1</b> Knowledge and understanding of natural and manufactured timbers including how to shape, form and finish. Using and working with timbers.</p>	<p><b>Unit 3</b> Knowledge and understanding of modern materials and plastics including how to shape, form and finish. Using and working with plastics.</p>	<p>Continuation of students independent project following the design process through these additional stages:</p> <ul style="list-style-type: none"> <li>• Section D Developing design ideas.</li> </ul>

	<p>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 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)