

## 1c. Curriculum Overview: Design and Technology



SAINTS PETER AND PAUL  
CATHOLIC HIGH SCHOOL

Year 7 Design and Technology Product Design	
Refer to	Term 1 – September to December Term 2 – January to March Term 3 – April to July
	<p><b>Introduction to workshop skills – Photograph frame (approx. 20 lessons)</b></p> <p><b><u>What are the students learning?</u></b></p> <ul style="list-style-type: none"><li>• Health &amp; Safety in the workshop.</li><li>• Sources, categories and properties of materials.</li><li>• Select and use tools to combine a range of materials into a usable prototype.</li><li>• Test and evaluate a completed product against a range of success criteria.</li><li>• How to evaluate their own designs.</li></ul> <p><b><u>What are the key standardised assessments?</u></b></p> <ul style="list-style-type: none"><li>• Practical health &amp; safety - Using the pillar drill.</li><li>• Practical skills – focus on using woods, metals and polymers.</li><li>• Formative assessment – Conversion of timbers.</li><li>• Formative assessment – Environmental impact of polymers.</li><li>• End of unit summative assessment.</li></ul> <p><b><u>What are the standardised homework's?</u></b></p> <ul style="list-style-type: none"><li>• Health &amp; Safety</li><li>• Product Analysis</li><li>• Joining woods</li><li>• How to finish materials</li></ul>

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### Year 8 Design and Technology

Refer to

Term 1 – September to December  
Term 2 – January to March  
Term 3 – April to July

**Material Area: Product Design**  
**Developing independent workshop skills – Lighting project (approx. 14 lessons)**

**What are the students learning?**

- Health & Safety in the workshop.
- Analyse the work of past and present designer.
- Biomimicry
- How electronic systems can be used in products.
- Developing design specifications.
- Generate 'user-centred' creative design ideas.
- Produce orthographic projections.
- Select and use tools, with more independence, to combine a range of materials into a usable prototype.
- Test and evaluate a completed product against own success criteria / specification.

**What are the key standardised assessments?**

- Design specification (Formative)
- Generation of design ideas (Formative) (Peer)
- Development of Ideas (Peer) (Summative)
- Practical outcome (Summative - Electronics, Enclosure, Final Outcome)
- Evaluation (Self & Peer)

**What are the standardised homework's?**

- Research of Designers

**Material Area: Product Design**  
**Introductions to textiles technology – Tie dye bucket hat. (approx. 14 lessons)**

**What are the students learning?**

- Health & Safety in the workshop.
- Sources & Origins of materials.
- Types of material construction methods.
- Analysis of the design brief and design specification.
- Environmental impact of fast fashion and sportswear.
- How materials can be enhanced and developed; tie dye and hand embroidery.
- Lay planning and pattern cutting.
- Introduction to the sewing machine. Students worked independently to manufacture the seams of their product.
- Test and evaluate the manufactured outcome compared to the design brief and design specification.

**What are the key standardised assessments?**

- Knowledge of Health & Safety (Summative)
- Sewing Machine driving test (Formative)
- Research: Are your clothes wrecking the planet (Formative)
- Practical outcome (Self & Peer)

**What are the standardised homework's?**

- Match the fibres to the comments
- Moodboard

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	<ul style="list-style-type: none"><li>• Properties of Materials</li><li>• Finishes</li><li>• Generation of design</li></ul>	<ul style="list-style-type: none"><li>• Fabric analysis</li></ul>
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Year 9 Design and Technology Product Design	
Refer to	Term 1 – September to December Term 2 – January to March Term 3 – April to July
	<p><b>Designing and making – Clock project</b></p> <p><b><u>What are the students learning?</u></b></p> <ul style="list-style-type: none"><li>• Forces and Structures – Spaghetti bridge building</li><li>• Sustainable design – The 6 R's</li><li>• CAD/CAM - Using CAD software</li><li>• Ergonomics &amp; Anthropometrics</li><li>• Smart materials</li><li>• Iterative design challenge</li><li>• Mechanisms</li><li>• Design and make assignment – Passive speaker</li></ul> <p><b><u>What are the key standardised assessments?</u></b></p> <ul style="list-style-type: none"><li>• Peer assessment – Sustainable design task / Mechanism questions</li><li>• Self-assessment – CAD task / Tools and equipment</li><li>• Teacher assessment – Ergonomics design task / Iterative design task / Passive speaker</li><li>• End of unit Aspire assessment</li></ul> <p><b><u>What are the standardised homework's?</u></b></p> <ul style="list-style-type: none"><li>• The 6R's</li><li>• Sustainable resources</li><li>• Ergonomic design task</li><li>• Iterative design – specification</li><li>• Passive speaker – design task</li></ul>