

# Product Design

**“Creativity is allowing yourself to make mistakes, Design is knowing which ones to keep” - Scott Adams**

All Product Design staff will strive to enthuse, facilitate and shape our Byrchall students to be creative problem solvers who are confident, resilient and most importantly passionate about the products they design & make.

Autumn	Spring	Summer
Headphone wrap & packaging	Pendant Box	Jewellery making

Homework will be set in the following formats to support independent learning in our subject.

Keywords followed by a spelling test in lesson.

Watching a video to learn a specific skill or to support a research activity.

Reading an article online with regards to product evolution – new materials /processes and products.

Practising a particular skill just as:

- Sketching (2D & 3D)
- Producing a working drawing with measurements
- Generating design ideas
- Developing ideas
- Simple card modelling

CAD (Corel Draw / google sketch up/ AutoCAD)

Collecting research information.

- Measurements to ensure a product in ergonomic
- Imagery / inspiration
- Customer interviews / feedback
- Visits to shops to look at existing products
- Product Analysis
- Exploring a design movement
- Looking at the work of famous designers
- Finding out about careers related to Product Design
- Investigating possible pathways with local colleges & universities
- Finding out local industries & jobs including apprenticeships

Improving theory knowledge & understanding at GCSE.

- Reading & answering GCSE student work booklets (Y10 & Y11)
- Practising exam questions

Unit	Duration (lessons)	Learning Objectives/Outcomes
Headphone wrap	15	<ul style="list-style-type: none"> <li>• Develop core communication skills in a variety of drawing techniques and 2D / 3D Computer Aided design (CAD)</li> <li>• Create design criteria and select inspiration to develop realistic design proposals</li> <li>• Explore and experiment with ideas through the use of basic modelling techniques and CAD</li> <li>• Gain technical knowledge in order to make effective design choice in relation to material choice – card &amp; paper, natural &amp; manufactured timber and plastics. Understand where raw material comes from and how they are processed into standard forms &amp; sizes. Analyse and appreciate why products change over time, in relation to innovation, materials, new technologies and manufacturing techniques</li> <li>• Develop practical and computer aided manufacturing skills to produce imaginative &amp; functional prototypes</li> </ul>
Pendant Box	15	<ul style="list-style-type: none"> <li>• Analyse real existing products to explore different ways in which designers solve problems</li> <li>• Explore biomimicry and a variety of design strategies to generate creative ideas</li> <li>• Create design briefs and design criteria to inform the design of innovative, functional and appealing products</li> <li>• Develop 3D modelling skills to test ideas</li> <li>• Gain technical knowledge in selecting materials, standard components, joining materials and green design</li> <li>•</li> </ul>
Jewellery	10	<ul style="list-style-type: none"> <li>• Gain technical knowledge in casting techniques and scale of production</li> <li>• Create and manufacture moulds using CAD / CAM</li> <li>• Explore how to create different textures &amp; finishes with materials</li> <li>• Identify risks &amp; learn how to manage health &amp; safety using risk assessments &amp; procedures</li> </ul>