

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 and make. Students will build on previous experiences and will develop key skills in each specialist area.

- Resistant Materials: Children’s Toy Train
- New technologies: Using Micro bits to create a robot
- More Resistant Materials: Glass fusing and pewter casting

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 and 3D)
- Producing a working drawing with measurements
- Generating design ideas
- Developing ideas
- Simple card modelling
- CAD (Corel Draw/Google sketch up)
- Collecting research information.
- Measurements to ensure a product in ergonomic
- Imagery/inspiration to help with design ideas
- Customer interviews/feedback to help with evaluation.
- Visits to shops to look at existing products
- Product Analysis to see how a product works or is made.
- 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 and universities
- Finding out local industries and jobs including apprenticeships



Unit	Duration (lessons)	Learning Objectives/Outcomes
3D Card Bauhaus Teapot	8	<p>Key Knowledge:</p> <ul style="list-style-type: none"> • Understand the purpose of modelling • Be able select and give examples of the different ways cardboard can be used • Be able to explain how designers have influenced their work • Be able to explain key elements about the Bauhaus Design Movement • Show knowledge and skills when creating a 3D outcome <p>Key Skills</p> <ul style="list-style-type: none"> • Be able to mark out, score, reinforce, join and produce curved surfaces using corrugated cardboard • Be able to work safely and accurately to produce a model in corrugated cardboard • Be able to select relevant research when analysing work of others • Be able to evaluate work to help them improve
Unit	Duration (lessons)	Learning Objectives/Outcomes
Glass fusing and pewter casting	8	<ul style="list-style-type: none"> • Use the work of others to inspire your design ideas • Create your own design briefs and design specifications • Understand what glass is made from and how it is fused together • Be able to produce simplified design ideas in the style of your chosen designer • Be able to evaluate and improve your work using feedback from others • Be able to work safely when using the equipment and explain what risks are involved • Learn where metals come from and how they are made • Be able to name different types of metals and

		<p>know how they are categorised, ferrous, non ferrous and alloys.</p> <ul style="list-style-type: none"> • Understand the differences between one-off's, batch and mass production
Microbit robot	8	<ul style="list-style-type: none"> • Be able to build and create your own robot using a microbit • Be able to explain what a servo motor is and does • Learn how to set up a separate microbit so you can control your robot remotely • Learn how to program your robot to complete different tasks • Be able to test, evaluate and improve your robot's performance

