Product Design

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

All PD 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
Controlled Assessment - design & development of ideas	Controlled assessment – Final practical	Exam Revision & preparation

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 @GCSE

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

Unit	Duration (lessons)	Learning Objectives/Outcomes
Controlled Assessment Research & Design and development of ideas	14	• Research design brief and select a variety of sources to help research the task. Analyse findings and produce a design criteria suitable for their chosen client • Analyse existing products to gain knowledge on how other designers have solved the problem • Using a planned design strategy and inspiration, create imaginative ideas using a variety of communication & modelling skills, including CAD CAM. Continue to test, experiment & develop ideas to make improvements on your prototype • Select appropriate materials & components based on their properties. Demonstrate technical knowledge with regards to how materials are processed, worked & finished. Consider how different materials impact on the world's natural resources and justify why your final idea is the most suitable • Continue to recap on theory covered in Y10 to improve exam performance. All Y11 student have been issued with theory & work booklets
Controlled Assessment Final Practical	14	• Finalise plans (2D &3D CAD drawings) and produce manufacturing specification. Consider quality checkpoints to ensure work is made to high standard • Use appropriate marking out methods and specialist tools & equipment to create final prototype, including CAD CAM • Work efficiently, safely and with precision to produce a high quality outcome • Involve the client to test final prototype and analyse how well your final idea meets their needs. Discuss possible improvements and complete final evaluation
Exam revision & preparation	8	• Research exam "theme" and practise possible responses to design section • Develop confidence in answering "long" questions • Develop exam technique in order to maximise marks on the paper • Be able to manage "time" in order to complete all questions effectively