



# Key Stage 3 – Years 7&8

## Product Design

### Year 7 Outline

Year 7 is given an introduction to Product Design, the Workshop Environment, Health and Safety and different hand tools used.

Lessons are a combination of theory and practical work and all lessons are double lessons enabling students to maximise the time made available to them in the workshop. There are two main practical projects and the core topic covered during theory lessons relates to different types of metals. Students are also introduced to different sketching and drawing techniques.

Identifying and investigating, developing a design, realising design ideas, sketching and shading, using appropriate wood working and marking out tools, learning about joining skills and how to use machines safely, learning about different types of wood, wood joints, manufactured board and their different construction techniques. Learning about plastics, metal and metal finishing.

- Understand the need and use of wood working joints.
- Understand the need for accuracy in marking out and cutting.
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- Understand the need for accuracy in marking out and cutting.
- Understand the basic advantages and disadvantages of CAD CAM.
- Consider what this has meant for Product Design.

### Year 8 Outline

Students should now be familiar with the workshop environment, health and safety rules and most of the different tools within the workshop. Two different practical projects are undertaken in Year 8 using a different selection of tools and materials and with a slightly more complex nature. The main theory topic covered in Year 8 is different types of wood: identifying and investigating, developing a design, realising design ideas, sketching and shading, using appropriate wood working and marking out, use tools and machines safely, learning about wood and manufactured board and different construction techniques. We also learn about basic electronics and how to populate a circuit board and soldering techniques safely. Ferrous, non-ferrous and alloy metals and the physical and chemical properties of metal are also covered.

During lessons;

- Students consider the possible themes they could explore.
- Students conduct a keyword search based on the list given, around the word “cube”. Cut and paste several pages of images that might be useful.
- Develop research and all review as a group to widen individual design possibilities and thinking.
- Students should title, border and ensure a good standard of presentation on the “Analysis and Research” page. 3rd party feedback should be recorded, along with prominent design features and how they will be developed further.

## Group/Class structure

Classes are typically made up of either 22 or 23 Students who are of mixed ability and taken from different Tutor Groups at the beginning of Year 7. Students stay in the same class for the duration of Years 7 and 8 and spend a whole term enjoying each of the Technologies (Product Design/Art & 3D Design, Food and Textiles). The students make individual projects but are encouraged to work in teams of four to support and learn from each other (this is how many students fit onto each workbench).

## Teaching & Learning Style

Students are taught as a whole class and all learn from the same curriculum. Students also all make the same basic projects and are encouraged to show their natural ability and academic prowess in the quality of their design work and their design ideas and also by the technical construction and quality of finish of their practical work.

## Assesment

The theory side of Product Design is assessed via regular, specially created online tests and by the design folder content.

The practical side of Product Design is assessed by the students’ finished projects, taking into account accuracy, level of complexity, attention to detail, innovative and unusual design ideas and quality of finish.

## Opportunities beyond the classroom

Where possible, lunchtime and after school clubs are run for a limited number of students keen to pursue and investigate different design and practical techniques.