



The curriculum for this stage of students' education has been designed to be inclusive for all and build on the knowledge gained in Yr. 7, where students should have produced creative work becoming increasingly proficient in designing, analysing and the using a variety of tools, timbers, acrylic, brazing wire and CAD. The aim is to increase their proficiency in designing with the needs of a client in mind and to increase their confidence working with polymers; to extend their range subject specific vocabulary and enable them to competently analyse and evaluate their own work, and that of others, in order to observe closely, think critically and discuss respectfully. Students will also acquire skills that can be applied to cross-curricular topics, allowing them to reflect on and explore topics in greater depth. This should foster a love of Design and Technology and its application across the whole curriculum.

**HALF TERM 1: Timber and Acrylic Bookends (R&D) DMA**

Students will develop skills in research and analyse existing bookends to progress their design ideas and understand why designers use other products when they design. This will sequence into students designing their own bookend and using a template to accurately mark their design out on timber.

**STUDENTS MUST KNOW:**

- How to use existing products and images to drive their design ideas.
- How to analyse existing products to make their designs better, but to also make them better consumers.
- How to sketch ideas in 2D – orthographic.

**HOW THIS WILL BE ASSESSED:**

Formal assessment based on research skills (analysis of existing products, learning from work from other designers and detailing improvements of existing products) and a final design idea of their bookend.  
Self and peer assessment opportunities and informal verbal feedback.

**HALF TERM 2: Bookends (Manufacturing)**

Students will revisit and develop their skills in CAD and learn the advantages of using a laser cutter to improve speed and accuracy of manufacturing. This will progress into students using workshop machines and tools to produce a pine bookend with a laser engraved acrylic base. The laser work will build on the headphone wrap/keyring from Yr.7.

**STUDENTS MUST KNOW:**

- How to use a template to increase accuracy in production.
- The benefits of modelling an idea before manufacture.
- How to construction dowel, simple butt and screw joints between different materials.
- To use the laser cutter to manufacture their bookend base.

**HOW THIS WILL BE ASSESSED:**

Formal assessment based on 2D CAD design work and a final 3D bookend.  
Self and peer assessment opportunities and informal verbal feedback.

**HALF TERM 3: Acrylic egg and toast holder FPT**

Students will develop their skills in reading working drawings, how to use bending jigs and formers to accurately produce identical final products. All students produce a final product which will link into D&T healthy food and importance of breakfast.

**STUDENTS MUST KNOW:**

- How to read a working drawing and accurately product a final product.
- How to work in mm.
- Accurately mark out and cut the acrylic by hand.
- How to use jigs and formers and how these increase accuracy and consistence in manufacture. This is building on the Yr. 7 project.

**HOW THIS WILL BE ASSESSED:**

Formal assessment based on accuracy of manufacture of the egg holder.  
Self and peer assessment opportunities and informal verbal feedback.

**Embedding this knowledge can be supported at home by** encouraging them to be creative –, take photographs of interesting designs and products and practise the skills we are learning in class, visiting design museums, exhibits, festivals, and free public events to encourage saturation in the creative aspect of the course. Watch programs such as 'How it's made', 'Inside the factory' and 'Scrapheap challenge'. In addition going online to enjoy technology creativity via websites such as 'Technology Student' , BBC Ks3 bitesize and trying the quizzes on 'Education Quizzes'.

As students rotate D&T Multi-Materials with D&T Food they will spend half of the year in food and half of the year in the multi-materials areas, so therefore the order of the skills may change depending on which area of the subject the student starts in.