



The curriculum for this stage of students' education has been designed to be inclusive for all and build on the knowledge gained in KS2 where students should have produced creative work becoming increasingly proficient in designing, analysing and the using a variety of tools, cards, papers and board. 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: Laminated Picture Holder (R&D)**  
Students will develop skills in researching existing products to progress their design ideas. This will progress into students producing a design for their picture frame and wire holder.

**STUDENTS MUST KNOW:**

- How to use a brief to analyse existing picture holders in regards of materials, client needs and VFM.
- How to use research and client needs to develop an idea.
- The difference adhesives and how they work on different materials.

**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 of the picture holder.  
Self and peer assessment opportunities and informal verbal feedback.

**HALF TERM 2: Laminated Picture Holder (Manufacture)**  
Students will develop their skills in manufacturing when laminating different materials together and bending brazing wire. They will also learn which adhesives work with which materials and why. They also evaluate the final product

**STUDENTS MUST KNOW:**

- The basic characteristics of acrylic, soft and hard wood when filing and bending.
- Safe and effective use of different adhesives.
- How to test and evaluate their final product against a specification.

**HOW THIS WILL BE ASSESSED:**  
Formal assessment based on the final picture holder and evaluation skills.  
Self and peer assessment opportunities and informal verbal feedback.

**HALF TERM 3: Laser cut headphone wrap/keyring**  
Students will develop their skills in CAD and laser cutting by designing and planning a headphone wrap using skills such as importing and bitmapping images.

**STUDENTS MUST KNOW:**

- How to search for and understand what constitutes a suitable image that will bitmap, and laser cut well.
- How to import and bitmap an image into 2D rather than copy and paste.
- Understand the different lines on CAD designs and how to set the laser to cut and engrave lines.

**HOW THIS WILL BE ASSESSED:**  
Formal assessment based on creativity and functionality of the headphone wrap/keyring.  
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.