

**Long  
Term Plan**

To further develop skills and knowledge that was embedded in Year 7. They will work towards being more creative and innovative, be introduced to more technical knowledge and have the opportunity to work with more mediums, materials and complex techniques. Students may then continue to further development at GCSE level, after experiencing a range of different disciplines.

**Year 8: Technology**

Learning Cycle	Key Concepts and Themes	Vocabulary
Food	<ul style="list-style-type: none"> <li>Nutrients- macro and micro</li> <li>Alternative Proteins- the technological developments, range and advantages of these.</li> <li>Energy Balance- the balance between energy consumed and expended and the consequences of poor energy balance</li> <li>Different Dietary Needs</li> <li>Food Science</li> </ul>	Macronutrients and Micronutrients, Alternative protein, Calories, Dietary requirements, Coeliac disease, Gluten and Lactose intolerance, Allergies
Textiles	<ul style="list-style-type: none"> <li>Development of Textiles practical knowledge, with more focus on using the sewing machines to manufacture their product.</li> <li>Introduction to the use of pattern pieces, and how these should be designed.</li> <li>Working with more complex components, being able to insert a zip into their pencil case.</li> </ul>	Scales of Production, Printing processes, Pattern pieces, Sustainability, Composite fabrics
Graphics: Eco-Dwelling	<ul style="list-style-type: none"> <li>Architects and Architectural Design – Baroque, Victorian</li> <li>2D and 3D drawing, including more complex oblique and isometric drawing, leading into perspective and orthographic drawing</li> <li>Developing a pitch, similar to industry, which would be used by the client to help understand the concept.</li> </ul>	Sustainable design, Renewable energy, Finite and Non-finite resources, Orthographic drawing, Prototyping
Resistant Materials	<ul style="list-style-type: none"> <li>Properties and characteristics of hardwoods, softwoods and manufactured boards.</li> <li>Mechanisms and Types of Motion – Linear and Rotary</li> <li>Types of Cam –(pear, drop, eccentric) to create movement</li> <li>Working with Tools and Equipment to create a refined and complex end product, such as the hegner/fret saw, coping saw, belt sander.</li> </ul>	Innovate, Refine, Levers, Oscillating, Reciprocating
Electronics: Road Safety Light	<ul style="list-style-type: none"> <li>Developing and creating an electronic product in relation to a brief and context</li> <li>Understanding of Electronic Components, what they do within a circuit, then programming a microcontroller</li> <li>Working to create an innovative solution to the problem set out</li> </ul>	Push to Make Switch (PTM), Microcontroller, Light Emitting Diode (LED), Thermoplastics and Plastic Memory, Printed Circuit Board (PCB)
<b>Students will complete three of the five projects above over the course of the year, with each project lasting one term in length.</b>		

<b>Skill Development</b>	<ul style="list-style-type: none"> <li>To successfully use a range of different tools and more complex techniques to manufacture a more sophisticated end product</li> <li>To be able to analyse a specification and use this to aid in the development of ideas</li> <li>To be able to reflect upon and summarise the effectiveness of a product</li> <li>To respond to feedback from peers and teachers in order to further make progress</li> <li>To develop independent design skills by using a plan of making or systems based approach</li> </ul>
--------------------------	--