Year 8 Design and Technology 'Develop' Curriculum Map – 2022-23

In the Design and Technology department, we aim to keep our curriculum fluid and open to change. This enables an open dialogue and continual reflection on content to ensure we deliver a valuable programme of study.

The actual sequence of delivery will vary due to resourcing and or timetabling. By the year end all planned activities will have been covered.

Year 8	Introduction to the World of Designers	Future Engineers – Amplifier Project	Product design – Torch Project	Designing for a Sustainable Future – Architectural Design
Knowledge	The world of Design and Technology. Investigating the work of others and their influence. Development of core knowledge of materials: • Wood • Metal • Polymers • Textiles • Papers and boards Analysis of famous products and how these can be a rich source of information.	<u>Design and Make challenge</u> Develop knowledge and skills in working with electronics. Lear about product evolution. Developing a design brief and specification. Creating clear and creative design ideas. Systems and control – input-process-output. Testing, fault finding and evaluating. Sustainability and environmental considerations.	<u>Design and Make Challenge</u> Using CAD to create a desirable product. Working within constraints to time and budget. Making a product for a client. Exploring modern and smart materials, their applications and uses. Material management. Industrial processes – laser cutting.	<u>Design and Make Challenge</u> Environmental issues throughout the World. Impact of design on society and the environment. Sustainability - re purpose and reuse. 6 Rs – Rethink, Refuse, Reduce, Reuse, Repair, Recycle. Biomimicry. The Iterative design process and development of ideas. Designing for others. Designing a home for the future in a 'third world country.'
Skills	• Evaluative comments regarding the work of others. • Able to assign materials to products. • Understanding why products have been successful or not.	• Design techniques. • Creating good quality design ideas. • Creative thinking. • Working with others. • Identifying faults and recommending solutions.	• Development of the use of 2D design. • Drawing shapes, vectorizing an image.	• Designing sustainable products. • Modelling using a range of low-cost materials. • 3D drawing styles – isometric, perspective. • Rendering techniques. • Identifying and using sustainable materials.

Outside of lessons we also encourage pupils to attend our *'making club'* which provides further opportunities to develop their making skills and knowledge of materials, processes, tools and equipment.