Year 9 Design and Technology 'Embed' 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 9	Exploring specialist technical principles.	Manufacturing for many – Jewellery Project.	Mechanisms and electronics – Lamp Project
Knowledge	Wider influences on Design and Technology including historical, social, cultural, environmental and economic factors. Core and technical principles. Designing and making principles, including a broad range of design processes, materials, techniques and equipment. Designers and Design Movements. Embed knowledge of materials their properties and uses. Investigate mechanical systems (cams, levers, linkages). Social issues and ethics. Jigs, templates and manufacturing production.	<u>Design and Make challenge</u> This challenge covers three aspects and provides a good basis for understanding of GCSE requirements. The project has three parts: creative design and use of CAD, pewter casting and development and manufacture of a presentation case. Working with a client. Research techniques. Writing a deign brief and specification based on analysis of research. Creative design based on natural forms and biomimicry. Embed and further develop techniques using 2D design. Developing 3D moulds. Industrial processes – Pewter casting. Manufacturing techniques – timber box joints. Finishing techniques – filing, sanding, polishing, varnishing. Evaluation and recommendation for improvements – presentation to others.	<u>Focused practical task.</u> Mechanical systems – changes in force and types of motion. Iconic design – angle poise lamp, origins and development. Creating movement through linkages. Key design movements – Pop Art and Art deco. Product assembly – use of supplied components. Creative design to enhance the appearance of the light generated from an ultra-bright LED. Testing and evaluating.
Skills	• Evaluative comments regarding the wider influences on product development. • How things work. • Socially responsible design.	• Using research to inspire design development. • Creative thinking and risk taking. • Casting. • Designing for others. • Finishing techniques. • Presentation skills – written and oral.	• Types of motion. • Levers and linkages. • Iconic designs and their influence – why have they be successful. • Working to given drawings to assemble component parts.

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.