Curriculum Map: DESIGN TECHNOLOGY

In DT during KS3 students will develop an understanding using machinery and tools safely so they can work practically to create handmade outcomes. They will learn to think about the suitability of designs from the world we live in and how designing to solve problems can have real impact in improving the life of the consumer. They will have an opportunity to reflect on a wide range of materials and their uses and applications. Develop technical drawing skills to communicate design ideas and functions. Learn how sometimes designing and making things takes time and needs us to be resilient so that the quality or problem we are solving is successful. Recognise the feelings we gain from making and how it can apply to areas of our life. Students will be challenged to 'be inventive' and make models that work! They will develop an awareness that design surrounds us and it can be used to make a difference.

KS2 NC	Time	7	8	9	TIME	10	11	KS5	Careers
Design 1 use research and develop design criteria 2 generate, develop, model and communicate their ideas **Make** 1 select from and use a wider range of tools and equipment 2 select from and use a wider range of materials and components **Evaluate** 1 investigate and analyse a range of existing products 2 evaluate their ideas 3 understand how key events and individuals in design and technology have helped shape the world **Technical knowledge** 1 apply their understanding 2 understand and use mechanical systems in their products 3 understand and use electrical systems 4 apply their understanding of computing to program, monitor and control their products	**20 Week time frame for Y7 - Y9** **------** **Sept to Feb** **0R** **Feb to July**	**Health and Safety in the workshop** **Dyson project – spaghetti tower** **Introduction to basic circuits – squeezy torch** **Introduction to material - plastics** **Make Key ring** **Introduction to wood** **Make glasses holder** **Graphics – Infographics/ product development/ analysis** **Textiles – Make do and Mend** **Repair a garment/hole** **Microbit Programming** **Test/ Assessment**	**Re-cap Health and Safety - Mind map** **Graphics – Iconic Designer Factfile** Impact of a designer on the field of Design Technology. **Design in the Natural world** **Biomimicry** **Smart materials - Modern materials** **Design to solve a problem – Fashion item for the dark?** **Re-cap materials – wood /plastics** **Flat pack animal for a child to be sold in a zoo gift shop** **Test/ Assessment** Recap of knowledge learnt during the module. Evaluate the successfulness of their individual learning and identify their next steps.	**Recap H&S – Create an info sheet with QR code** **Sustainability – 6R's** **Isometric drawing** **One-point perspective** **2 point perspective** **Architecture – Project 3d card modelling** **Environmentally friendly housing/shipping container** **Modelling – Hatch Project** **'Crazy Contraptions' Problem solving to meet the needs of a consumer – Richard Hammond TV Programme** Create a novel way to solve a problem – wacky creations in the style of Richard Hammond or Wallace and Gromit **Test/ Assessment** Recap of knowledge learnt during the module. Evaluate the successfulness of their individual learning and identify their next steps.	Autumn 1 Autumn 2 & Spring 1 Spring 2 until end of Summer Term	H&S, Use of tools, equipment, quality of finished products Workshop knowledge & practice developing confidence and knowledge of workshop equipment including hand tools, power tools and cutting tools available to the pupils. Knowledge building - Sampling: Measuring, cutting and finishing of shapes, investigating paints and dyes, comb joint, mitre joint, ½ lap joint, use of the vacuum former, line bending of acrylic, looking at textures and experimentation. Mini 5 hour assessment – Feb DT Brief – 2 design problems to choose from to design and make a finished product AO1 Research	Continuation of Design project AO2 Exploring materials, testing and investigating AO3 Hand drawn plans, elevations, cross sections & 3D digital plans. Digital designing to support laser cutting AO4 Creating a final outcome & based on chosen theme & investigations Prep for controlled assessment Students select from exam briefs provided by the board and pursue investigations to meet objects AO1,2,3,4 final outcomes over a 10 hr controlled exam period	Students have the opportunity to extend their studies into 3D Design at Loreto college. Salford City Skills, Bury College & Manchester College offer trades-based learning	Product Designer Engineer Architect Construction site manager Bricklayer Carpenter Bim Technician Trade based roles

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