Curriculum Summary Document

Year 9 - Engineering

Module/Unit of Learning	Taught During	What will students learn?	What enriching opportunities will students engage in?	Links to other Subjects
Oblique sketching & CAD basics	Autumn 1	Students will learn what oblique drawings are, and how to produce an oblique drawing. This will include freehand sketching with arcs and circles and crating in oblique and isometric. Students will learn how to apply these design approaches to a range of designs, as well as how to produce orthographic drawings.	Students get the chance to communicate their thoughts through the design process.	Art Maths (angles)
Perspective Sketching and CAD Assembly	Autumn Term 2	Students will learn how to apply their design to a making process, using basic workshop materials and reading their design. They will then look at how to produce a 2-point perspective drawing on paper, and how to transfer sketches to CAD to model designs.	Students get to produce chance to design and make their own product in the workshop.	Art
Isometric Sketching and CAD Assembly	Spring Term 1	Students will learn how to use a drawing aid, the IsoSketch, and use this drawing aid to produce basic sketched shapes. When applying this to a designed product, students will be taught how to render in a sketch, producing the appearance of stone, metal and wood.	Student are challenged to bring their designs to life through some basic design practises.	Art
Aesthetic Design	Spring Term 2	Students will continue with their CAD work, producing sketches in perspective and isometric. Students will become familiar with the CAD software so that they can navigate the software and apply different design features.	Students enhance their CAD skills and increase their confidence using CAD as part of the design process.	Art
Prototyping in Card and Plastic	Summer Term	Students will learn what a prototype is and how to produce a prototype as part of the iterative design process. They will learn how to select appropriate materials, and how to test and evaluate the success of a prototype.	Students get the opportunity to be curious about designing for sustainability.	Art Physics (electronics)