

SUBJECT: Engineering



KS4 CURRICULUM PLAN

KS3 Knowledge and key skills

YEAR 10	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
TOPIC						
Knowledge	Learners will explore the links between the various engineering sectors and the role of design in the production of engineered products. Understand engineering sectors, products and organisations, and how they interrelate	Learners will explore the links between the various engineering sectors and the role of design in the production of engineered products. Understand engineering sectors, products and organisations, and how they interrelate	Explore engineering skills through the design process.	Explore engineering skills through the design process.	Understand materials, components and processes for a given engineered product	Investigate a given engineered product using disassembly techniques
Skills	Appropriately able to compare, contrast, evaluate, analyse existing engineering products, processes and sectors.	Appropriately able to compare, contrast, evaluate, analyse existing engineering products, processes and sectors.	Interpreting a design Brief, Producing initial sketches through 2D drawing, CAD/CAM digital drawing skills, Evaluating and Analysing Designs	Interpreting a design Brief, Producing initial sketches through 2D drawing, CAD/CAM digital drawing skills, Evaluating and Analysing Designs	Observing and recording skills, such as an examination of: visual features surface features mass, colour, degradation, Measurement skills, such as: measuring diameter, measuring linear dimensions use of comparative techniques knowledge of component values, e.g. resistors. Appraisal/interpretation skills, such as justifications and reasoning.	Safe use of disassembly techniques, to include: removal of semi-permanent fixings parts removal and layout replacement of non-reusable consumables or fixings. Safe use of tools and equipment – disassembly/reassembly tools with settings.
Key Vocab						

YEAR 11	SUMMER 2	SUMMER 1	SPRING 2	SPRING 1	AUTUMN 2	AUTUMN 1
TOPIC						
Knowledge		exam	Learners will investigate and create solutions to problems in response to given engineering briefs.	Learners will investigate and create solutions to problems in response to given engineering briefs.	Investigate a given engineered product using disassembly techniques	Investigate a given engineered product using disassembly techniques
Skills		exam	AO1 Understand how to respond to an engineering brief AO2 Select skills and techniques in response to an engineering brief AO3 Apply skills and techniques in response to an engineering brief AO4 Evaluate and review the outcomes of the application of skills and techniques in response to an engineering brief	AO1 Understand how to respond to an engineering brief AO2 Select skills and techniques in response to an engineering brief AO3 Apply skills and techniques in response to an engineering brief AO4 Evaluate and review the outcomes of the application of skills and techniques in response to an engineering brief	Requirements in terms of: • size and mass • product life and reliability • performance/function/service requirements • economic and making considerations • implications of standards and legislation.	Safe use of disassembly techniques, to include: removal of semi-permanent fixings parts removal and layout replacement of non-reusable consumables or fixings. Safe use of tools and equipment – disassembly/reassembly tools with settings.
Key Vocab						

Key Knowledge Transfer