

	Term	Topic	Learning Outcomes	Assessment
Year 10	Term 1	3.1.1 New and emerging technologies	To know about: ✓ INDUSTRY - Impact of new and emerging technologies ✓ ENTERPRISE - Based on the development of an effective business innovation, ✓ SUSTAINABILITY - Impact of resource consumption on the planet, ✓ PEOPLE - How technology push/market pull affects choice, ✓ CULTURE - Changes in fashion and trends in relation to new and emerging technologies, ✓ SOCIETY - How products are designed and made to avoid having a negative impact on others, ✓ ENVIRONMENT - Positive and negative impacts new products have on the environment, ✓ PRODUCTION TECHNIQUES AND SYSTEMS - Contemporary and potential future use of automation, CAD, CAM, FMS, JIT and lean manufacturing.	3.1.1 End of topic test

			To know about:	
		3.1.2 Energy generation and storage	✓ Fossil fuels ✓ Nuclear Power ✓ Renewable energy ✓ Energy storage systems including batteries.	3.1.2 End of topic test
		3.1.3 Developments in new materials	✓ Modern materials ✓ Smart materials ✓ Composite materials ✓ Technical textiles.	3.1.3 End of topic test
		3.1.4 Systems approach to designing	✓ Inputs ✓ Processes ✓ Outputs.	3.1.4 End of topic test
		3.1.5 Mechanical devices	✓ Different types of movement ✓ Changing magnitude and direction of force.	3.1.5 End of topic test
		3.1.6 Material and their working properties	✓ Papers and board ✓ Natural and manufactured timbers ✓ Metal and alloys ✓ Polymers ✓ Textiles	3.1.6 End of topic test

	Term	Topic	Learning Outcomes	Assessment
Year 10	Term 2	3.2 Specialist technical principles	To know about: ✓ 3.2.1 Selection of materials or components ✓ 3.2.2 Forces and stresses ✓ 3.2.3 Ecological and social footprint ✓ 3.2.4 Sources and origins ✓ 3.2.5 Using and working with materials ✓ 3.2.6 Stock forms, types and sizes ✓ 3.2.7 Scales of production ✓ 3.2.8 Specialist techniques and processes ✓ 3.2.9 Surface treatments and finishes	3.2 End of topic test
		3.3 Designing and making principles	To know about: ✓ 3.3.1 Investigation, primary and secondary data ✓ 3.3.2 Environmental, social and economic challenge ✓ 3.3.3 The work of others ✓ 3.3.4 Design strategies ✓ 3.3.5 Communication of design ideas	3.3 (3.3.1 to 3.3.5) End of topic test

	Term	Topic	Learning Outcomes	Assessment
Year 10		3.3 Designing and making principles (Continued)	To know about: ✓ 3.3.6 Prototype development ✓ 3.3.7 Selection of materials and components ✓ 3.3.8 Tolerances ✓ 3.3.9 Material management ✓ 3.3.10 Specialist tools and equipment ✓ 3.3.11 Specialist techniques and processes	3.3 (3.3.6 to 3.3.11) End of topic test End of Year 10 exam.
	Term 3	NEA Non-exam assessment (from the start of June) A01	AO1 Identify, investigate & outline design possibilities.... Identifying & investigating design possibilities, Producing a design brief & specification.	AO1 - Course work (NEA) Teacher assessment.
End of year assessment This will include topics 3.1 to 3.3				

	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 1	Revision for Year 11 mock NEA Non-exam assessment AO2	To know about: Theory based work from 3.1 to 3.3 plus general design knowledge. AO2 Design & make prototypes that are fit for purpose Generating ideas, Developing design ideas	Year 11 Mock exam
	Year 11 Mock exams This will include topics SC1-14 Misconceptions will be addressed as part of the end of year assessment review process			

	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 2	NEA Non-exam assessment AO2 (Continued)	To know about: AO2 Design & make prototypes that are fit for purpose Generating ideas, developing design ideas (Continued) Plus, Realising design ideas	AO2 - Coursework (NEA) Teacher assessment.
		NEA Non-exam assessment AO3.	AO3 Analyse & Evaluate	AO3 - Coursework (NEA) Teacher assessment. FINAL ASSESSMENTS OF NEA.

	Term	Topic	Learning Outcomes	Assessment
Year 11		REVISION	To know about: ✓ Revision activities for final exam based on ✓ Core Technical principles (20 marks) Multiple choice and short answer questions ✓ Specialist technical principles (30 marks) Several short answer and one extended answer questions ✓ Designing and making principles (50 marks) Mixture of short answer and extended answer questions.	Practice exams.
	Term 3	REVISION	To know about: ✓ Revision activities for final exam based on ✓ Core Technical principles (20 marks) Multiple choice and short answer questions ✓ Specialist technical principles (30 marks) Several short answer and one extended answer questions ✓ Designing and making principles (50 marks) Mixture of short answer and extended answer questions.	Practice exams.