Year 10 DT Curriculum Map			
	Autumn Term	Spring Term	Summer Term
Unit Length	15 weeks	12 weeks	13 weeks
Links to the National curriculum/Assessment Objectives	• AO1: Identify, investigate & outline design • AO2: Design and make prototypes • AO3: Analyse and evaluate: • AO4: Apply knowledge of technical principles	• AO1: Identify, investigate & outline design • AO2: Design and make prototypes • AO3: Analyse and evaluate: • AO4: Apply knowledge of technical principles	• AO1: Identify, investigate & outline design • AO2: Design and make prototypes • AO3: Analyse and evaluate: • AO4: Apply knowledge of technical principles
Description of the topic and key learning outcomes (key knowledge and understanding)	**Module 1: Bottle opener** **Theme: Investigate & outline design, design & make using man-made materials** The topics areas covered are: 1. Identify & investigate research areas 2. Analyse & evaluate 3. Materials and their working properties 4. Identify & understand user needs 5. Outline design possibilities 6. Communicating design ideas 7. Using specialist tools, techniques & machinery	**Module 2: Aluminium Toolbox** **Theme: CADCAM, manufacturing using specialist equipment, design & make using metals & woods** The topic areas covered are: 1. CADCAM 2. Specialist equipment/machinery 3. Using wider range of complex materials 4. Properties of materials and material finishes 5. Communicating design ideas 6. Using specialist tools, techniques & machinery	**Module 3 Structures & Mechanisms** **Theme: using a wider range of materials & developing knowledge of material properties** The topic areas covered are: 1. CADCAM 2. Design & make prototypes 3. Demonstrate knowledge & understanding of technical principles 4. Demonstrate knowledge & understanding of designing & making principles 5. Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture (CAM) 6. Select from and use a wider range of materials, taking into account their properties
Related Concepts (that are revisited)	The Design process / knowledge of man-made materials and their properties / practical skills with an emphasis on marking out skills / use of specialist tools/ use of specialist machinery/ development of design skills (sketching)/ material finishes/ evaluation of final product	The Design process / knowledge of natural woods and their properties / practical skills with an emphasis on marking out skills / use of specialist tools/ use of specialist machinery including CAM/ development of design skills (CAD)/ material finishes/ evaluation of final product, ,	The Design process / practical skills with an emphasis on structures & mechanisms / use of specialist machinery including CAM/ development of design skills (CAD)/ material finishes/ evaluation of final product, knowledge of man-made & natural woods and their properties
Skills being taught	Investigation, outline of design, design & make, analyse & evaluate, apply technical knowledge, technical skills with hand-tools & machinery, Literacy – keywords, Numeracy – measurement in millimetres, use of radii, limits & fits	Investigation, outline of design, design & make, analyse & evaluate, apply technical knowledge, technical skills with hand-tools & machinery, CAD & CAM, Literacy – keywords, Numeracy – measurement in millimetres, marking out radii and diameters, limits & fits	Investigation, outline of design, design & make, analyse & evaluate, apply technical knowledge, technical skills with hand-tools & machinery, Literacy – keywords, fiction writing. Numeracy – measurement and marking out in millimetres, forces, loads
Milestone assessments	• AO1: Identify, investigate & outline design	• AO2: Design and make prototypes	• AO1: Identify, investigate & outline design

	• AO2: Design and make prototypes	• AO4: Apply knowledge of technical principles	• AO3: Analyse and evaluate
Wider reading	www.technologystudent.com www.design-technology.info/home.htm https://www.bbc.co.uk/bitesize/examspecs/zby2bdm		
Literacy programme	• Increase vocabulary with emphasis on keywords within DT. • Use of exam command words within lessons/questioning to assist/improve responses. • Written tasks responses to be modelled to demonstrate effective writing and also the reviewing of this writing – emphasis on different written tasks within design process.	• Increase vocabulary with emphasis on keywords within DT. • Use of exam command words within lessons/questioning to assist/improve responses. • Written tasks responses to be modelled to demonstrate effective writing and also the reviewing of this writing – emphasis on different written tasks within design process.	• Increase vocabulary with emphasis on keywords within DT. • Use of exam command words within lessons/questioning to assist/improve responses. • Written tasks responses to be modelled to demonstrate effective writing and also the reviewing of this writing – emphasis on different written tasks within design process.
Homework / Independent Learning Tasks	1. Manufacturing task activity – linked to GCSE exam questions	2. Design activity (both hand sketch and CAD) – linked to GCSE exam question	3. Material selection and material properties – linked to GCSE exam question
Oak Academy Links			