

2021 / 2022	AUTUMN		SPRING		SUMMER	
	HT1	HT2	HT3	HT4	HT5	HT6
Y7	<p><b>Area of study</b> D&amp;T- Materials and their working properties <b>Key concepts</b> Papers and Boards, Timbers, Metals and Alloys, Polymers &amp; Textiles <b>Assessment method</b> Written Assessment</p>	<p><b>Area of study</b> D&amp;T- Core Practical Skills <b>Key concepts</b> H&amp;S, 2D CAD and CAM, Wasting, Abrading, Electronic Components, Inspiration, Function &amp; Aesthetics <b>Assessment method</b> Evaluation of Final Product</p>	<p><b>Area of study</b> Engineering- Materials <b>Key concepts</b> Material Properties, Metals and Alloys, Changing Material Properties, Polymers, Composites, Material Cost and Supply <b>Assessment method</b> Written Assessment</p>	<p><b>Area of study</b> Engineering- Core Practical Skills <b>Key concepts</b> Cutting Tools, Equipment and Processes, H&amp;S, Abrading Equipment, Adhesives and Glues, Automation, Mechanical Engineering <b>Assessment method</b> Evaluation of Final Product</p>	<p><b>Area of study</b> Food Technology- Core Skills <b>Key concepts</b> Hazards and Safety, Bacteria, Diets and Usage of Equipment <b>Assessment method</b> Demonstration of Skills &amp; Knowledge</p>	<p><b>Area of study</b> 3D CAD- Solidworks Basics <b>Key concepts</b> Planes, Extrusion, Sketches, Tools, Entities, Dimensions, Sketch Tools, 3D Tools <b>Assessment method</b> Demonstration of Skills &amp; Knowledge</p>
Y8	<p><b>Area of study</b> D&amp;T- Design &amp; Manufacture <b>Key concepts</b> Communication of Design Ideas, Manufacturing Preparation, 2D CAD &amp; CAM, Wasting, Abrading, Assembly and Evaluation <b>Assessment method</b> Evaluation of Final Product</p>	<p><b>Area of study</b> Systems &amp; Control <b>Key concepts</b> Soldering H&amp;S, Components, Inputs, Outputs, Processes, Soldering Techniques, Electronics Integration <b>Assessment method</b> Skills Assessment</p>	<p><b>Area of study</b> Engineering- Cargo Drop <b>Key concepts</b> Forces and Motion, Scientific Thinking, Application of Mathematics and Science for Engineering, Practical Enquiry, Designing, Interpretation and Evaluation <b>Assessment method</b> Evaluation of Final Product</p>	<p><b>Area of study</b> Engineering- Team Challenge <b>Key concepts</b> Engineering Techniques and Thinking, Problem Solving, Mathematical and Scientific Thinking, Visualisation and Construction <b>Assessment method</b> Challenge Results</p>	<p><b>Area of study</b> Food Technology- Balanced Eating <b>Key concepts</b> Health and Safety, GM Foods, Equipment, Healthy Eating, Cooker Usage and Following Methods <b>Assessment method</b> Demonstration of Skills &amp; Knowledge</p>	<p><b>Area of study</b> Music <b>Key concepts</b> Musical Elements Rhythm Improvisation Musical Styles Lyrical Structure Musical Structure <b>Assessment method</b> Peer/Teacher assessed performance</p>
Y9	<p><b>Area of study</b> D&amp;T- NEA Project <b>Key concepts</b> Mindmap, Task Analysis, Target Market Profile, Primary Research, Product Evaluation, SMSCE Impacts, Design Possibilities, Research Findings, Design Brief, Design Specification, Ideation, Logo/Branding Packaging <b>Assessment method</b> RAG Data Sheet</p>	<p><b>Area of study</b> D&amp;T- Manufacture <b>Key concepts</b> Prototyping, Development, Prototyping Analysis, On-going Research, Fixtures/Fixings, CAD Model, Materials Investigation, Materials and Cutting List, Manufacturing and Diary, Evaluation, Testing, Feedback <b>Assessment method</b> Evaluation of Final Product</p>	<p><b>Area of study</b> Engineering- NEA Project <b>Key concepts</b> Engineering Brief, Context Analysis, Mechanical Analysis, Electronics Research, Primary Research, Research Analysis, Specification, Ideas, Development and Final Idea <b>Assessment method</b> RAG Data Sheet</p>	<p><b>Area of study</b> Engineering- Manufacture <b>Key concepts</b> Manufacture, Programming/ Mechanism, Casing, Assembly, Testing, Improvements, Evaluation and Reflection Against Specification <b>Assessment method</b> Evaluation of Final Product</p>	<p><b>Area of study</b> Food Technology- Creating Chefs <b>Key concepts</b> Health and Safety, Food Poisoning, Meat Storage, Cooking Safety, Food Labelling, Cooker and Hob <b>Assessment method</b> Demonstration of Skills &amp; Knowledge</p>	<p><b>Area of study</b> 3D CAD- Solidworks Mastery <b>Key concepts</b> Assemblies, References, Patterns, Simulations, File Conversion and Surface Modelling <b>Assessment method</b> Demonstration of Skills &amp; Knowledge</p>
Y10	<p><b>Area of study</b> Unit 6-Identifying, Investigating Design Possibilities &amp; Design Brief/Specification <b>Key concepts</b> Mindmap, Task Analysis, Target Market Profile, Primary Research, Product Evaluation, SMSCE Impacts, Design Possibilities, Design Brief/Specification <b>Assessment method</b> RAG data sheet against Specification</p>	<p><b>Area of study</b> Unit 1- New and Emerging Technologies Generating Design Ideas <b>Key concepts</b> Industry &amp; Enterprise, Sustainability &amp; the Environment, People, Culture &amp; Society, Production Techniques/ Systems Informing Design decisions Effective Generation of Design Ideas <b>Assessment method</b> RAG data sheet against Specification &amp; Written Assessment</p>	<p><b>Area of study</b> Unit 2- Energy, Materials, Systems &amp; Devices Generating/Developing Design Ideas <b>Key concepts</b> Energy Generation/Storage, Modern Materials, Smart Materials, Composite Materials, Systems/Electronic Approach to Designing/Processing, Mechanical Devices Developmental Designs and Prototypes <b>Assessment method</b> RAG data sheet against Specification &amp; Written Assessment</p>	<p><b>Area of study</b> Unit 3- Materials &amp; Working Properties Realising Design Ideas <b>Key concepts</b> Papers and Boards, Timbers, Metals and Alloys, Polymers, Textiles Material Preparation Material Cutting (Including CAM) Enhancing Aesthetics <b>Assessment method</b> RAG data sheet against Specification &amp; Written Assessment</p>	<p><b>Area of study</b> Unit 4- Common Specialist Principles Realising Design Ideas <b>Key concepts</b> Forces and Stresses, Improving Functionality, Ecological and Social Footprint, The Six 6's, Scales of Production Effective Assembly of Parts Finishing Methods <b>Assessment method</b> RAG data sheet against Specification &amp; Written Assessment</p>	<p><b>Area of study</b> Unit 5B- Timber Based Materials Analysing and Evaluating <b>Key concepts</b> Sources and Origins, Working with Timbers, Commercial Manufacturing Evaluation against Brief/Specification Product Testing and Client/User Feedback Future Improvements <b>Assessment method</b> RAG data sheet against Specification &amp; Written Assessment</p>
Y11	<p><b>Area of study</b> Unit 5D- Polymers Identifying, Investigating Design Possibilities &amp; Design Brief/Specification <b>Key concepts</b> Mindmap, Task Analysis, Target Market Profile, Primary Research, Product Evaluation, SMSCE Impacts, Design Possibilities, Design Brief/Specification <b>Assessment method</b> RAG data sheet against Specification &amp; Written Assessment</p>	<p><b>Area of study</b> Generating Design Ideas Developing Design Ideas <b>Key concepts</b> Ideation, Logo/Brand, Packaging Prototyping, Development, Prototyping Analysis, Ongoing Research, CAD Model, Materials Investigation <b>Assessment method</b> RAG data sheet against Specification</p>	<p><b>Area of study</b> Realising Design Ideas <b>Key concepts</b> Materials and Cutting Lists Manufacturing Diary Manufacturing Development <b>Assessment method</b> RAG data sheet against Specification</p>	<p><b>Area of study</b> Realising Design Ideas Analysing and Evaluating <b>Key concepts</b> Quality Control Tolerances Commercial Viability Assembly Finishing <b>Assessment method</b> RAG data sheet against Specification</p>	<p><b>Area of study</b> Revisiting all theory Units <b>Key concepts</b> Complete and reflect on past papers <b>Assessment method</b> Self-reflection and teacher feedback on specific topic areas to develop fill gaps in knowledge</p>	

NOTES	AREAS OF STUDY	KEY CONCEPTS	ASSESSMENT METHOD
	Design Technology Engineering Food and Nutrition Music	Investigation, Research, Designing, Developing, Manufacturing, Engineering, Evaluation and Testing, Performing	Unit Assessments Practical Skills Assignments Case Studies

