

2022/ 2023	AUTUMN		SPRING		SUMMER	
	HT1	HT2	HT3	HT4	HT5	HT6
Y 7	<p><a href="#">Area of study</a> D&amp;T- Materials and their working properties <a href="#">Key concepts/ Knowledge</a> Papers and Boards, Timbers, Metals and Alloys, Polymers &amp; Textiles <a href="#">Assessment method</a> Written Assessment</p>	<p><a href="#">Area of study</a> D&amp;T- Core Programming <a href="#">Key concepts/ Knowledge</a> Computing, Electronics, Intelligence, Inputs, Sensors, Outputs, Components, Programmable, Microcontrollers <a href="#">Assessment method</a> Evaluation of Final Program</p>	<p><a href="#">Area of study</a> Engineering- Materials <a href="#">Key concepts/ Knowledge</a> Material Properties, Metals and Alloys, Changing Material Properties, Polymers, Composites, Material Cost and Supply <a href="#">Assessment method</a> Written Assessment</p>	<p><a href="#">Area of study</a> Engineering- Core Practical Skills <a href="#">Key concepts/ Knowledge</a> Cutting Tools, Equipment and Processes, H&amp;S, Abrading Equipment, Adhesives and Glues, Automation, Mechanical Engineering <a href="#">Assessment method</a> Evaluation of Final Product</p>	<p><a href="#">Area of study</a> Food Technology- Core Skills <a href="#">Key concepts/ Knowledge</a> Hazards and Safety, Bacteria, Diets and Usage of Equipment <a href="#">Assessment method</a> Demonstration of Skills &amp; Knowledge</p>	<p><a href="#">Area of study</a> 2D CAD- Techsoft V3 <a href="#">Key concepts/ Knowledge</a> Layout, Lines, Shapes, Contours, Bitmaps, Text, Grid, Attach and Clip/Crop <a href="#">Assessment method</a> Demonstration of Skills &amp; Knowledge</p>
Y 8	<p><a href="#">Area of study</a> D&amp;T- Design &amp; Manufacture <a href="#">Key concepts/ Knowledge</a> Communication of Design Ideas. Manufacturing Preparation, 2D CAD &amp; CAM, Wasting, Abrading, Assembly and Evaluation <a href="#">Assessment method</a> Evaluation of Final Product</p>	<p><a href="#">Area of study</a> D&amp;T- Developing Practical Skills <a href="#">Key concepts/ Knowledge</a> Communication of Design Ideas. Manufacturing Preparation, 2D CAD &amp; CAM, Wasting, Abrading, Assembly and Evaluation <a href="#">Assessment method</a> Evaluation of Final Product</p>	<p><a href="#">Area of study</a> Engineering- Manufacturing Processes <a href="#">Key concepts/ Knowledge</a> Additive Manufacturing, Material Removal, Shaping, Forming, and Manipulation, Casting and Moulding, Joining and Assembly, Heat and Chemical Treatment and Surface Finishing <a href="#">Assessment method</a> Written Assessment</p>	<p><a href="#">Area of study</a> Engineering- Developing Practical Skills (programming) <a href="#">Key concepts/ Knowledge</a> Forces and Motion, Scientific Thinking, Application of Mathematics and Science for Engineering, Practical Enquiry, Designing, Interpretation and Programming <a href="#">Assessment method</a> Evaluation of Final Product</p>	<p><a href="#">Area of study</a> Food Technology- Balanced Eating <a href="#">Key concepts/ Knowledge</a> Health and Safety, GM Foods, Equipment, Healthy Eating, Cooker Usage and Following Methods <a href="#">Assessment method</a> Demonstration of Skills &amp; Knowledge</p>	<p><a href="#">Area of study</a> Music <a href="#">Key concepts/ Knowledge</a> Musical Elements Rhythm Improvisation Musical Styles Lyrical Structure Musical Structure <a href="#">Assessment method</a> Peer/Teacher assessed performance</p>
Y 9	<p><a href="#">Area of study</a> D&amp;T- New and Emerging Technologies <a href="#">Key concepts/ Knowledge</a> Emerging technology, robotics, crowd funding, virtual marketing, retail, co-operatives, fair trade, technology push, market pull, pollution, global warming, automation, CAD, CAM, FMS, JIT, lean manufacturing, planned obsolescence <a href="#">Assessment method</a> Written Assessment</p>	<p><a href="#">Area of study</a> D&amp;T- Manufacture <a href="#">Key concepts/ Knowledge</a> Prototyping, Development, Prototyping Analysis, On-going Research, Fixtures/Fixings, CAD Model, Materials Investigation, Materials and Cutting List, Manufacturing and Diary, Evaluation, Testing, Feedback <a href="#">Assessment method</a> Evaluation of Final Product</p>	<p><a href="#">Area of study</a> Engineering- Impact of Modern Technologies <a href="#">Key concepts/ Knowledge</a> New and Emerging Technologies, Impact on Society, Impact on the Environment, Engineering Industries <a href="#">Assessment method</a> Written Assessment</p>	<p><a href="#">Area of study</a> Engineering- NEA Project <a href="#">Key concepts/ Knowledge</a> Engineering Brief, Context Analysis, Mechanical Analysis, Electronics Research, Primary Research, Research Analysis, Specification, Ideas, Development and Final Idea <a href="#">Assessment method</a> RAG Data Sheet</p>	<p><a href="#">Area of study</a> Food Technology- Creating Chefs <a href="#">Key concepts/ Knowledge</a> Health and Safety, Food Poisoning, Meat Storage, Cooking Safety, Food Labelling, Cooker and Hob <a href="#">Assessment method</a> Demonstration of Skills &amp; Knowledge</p>	<p><a href="#">Area of study</a> 3D CAD- Solidworks <a href="#">Key concepts/ Knowledge</a> Assemblies, References. Patterns, Simulations, File Conversion and Surface Modelling <a href="#">Assessment method</a> Demonstration of Skills &amp; Knowledge</p>
NOTES	SKILLS FOR LIFE/ FUTURE LEARNING AND EMPLOYMENT					
	Skills for Life: Creativity, Problem Solving, Critical Analysis, Iterative Development, Thinking Skills, Collaborative Approaches, Self-awareness, Critical Thinking, Decision Making, Effective Communication, Empathy, Resilience, Time Management, Working Under Pressure, Digital Literacy, Technological Skills, Health and Safety, Focus, Methodical Thinking, Presentation, Leadership, Flexibility and Adaptability					
	<p>Future Learning- A Level Product Design/3D Design, T Level STEM, Apprenticeships in all Product, Engineering, Architecture fields,</p> <p>Employment Opportunities- Product Design, Engineering (all categories), Architecture, Fashion Design, Chef, CAD (all related career paths)</p>					

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Y10	<p><a href="#">Area of study</a> Unit 6-Identifying, Investigating Design Possibilities &amp; Design Brief/Specification <a href="#">Key concepts/ Knowledge</a> Mindmap, Task Analysis, Target Market Profile, Primary Research, Product Evaluation, SMSC Impacts, Design Possibilities, Design Brief/Specification <a href="#">Assessment method</a> RAG data sheet against Specification</p>	<p><a href="#">Area of study</a> Unit 1- New and Emerging Technologies Generating Design Ideas <a href="#">Key concepts/ Knowledge</a> Industry &amp; Enterprise, Sustainability &amp; the Environment, People, Culture &amp; Society, Production Techniques/ Systems Informing Design decisions Effective Generation of Design Ideas <a href="#">Assessment method</a> RAG data sheet against Specification &amp; Written Assessment</p>	<p><a href="#">Area of study</a> Unit 2- Energy, Materials, Systems &amp; Devices Generating/Developing Design Ideas <a href="#">Key concepts/ Knowledge</a> Energy Generation/Storage, Modern Materials, Smart Materials, Composite Materials, Systems/Electronic Approach to Designing/Processing, Mechanical Devices Developmental Designs and Prototypes <a href="#">Assessment method</a> RAG data sheet against Specification &amp; Written Assessment</p>	<p><a href="#">Area of study</a> Unit 3- Materials &amp; Working Properties Realising Design Ideas <a href="#">Key concepts/ Knowledge</a> Papers and Boards, Timbers. Metals and Alloys, Polymers, Textiles Material Preparation Material Cutting (Including CAM) Enhancing Aesthetics <a href="#">Assessment method</a> RAG data sheet against Specification &amp; Written Assessment</p>	<p><a href="#">Area of study</a> Unit 4- Common Specialist Principles Realising Design Ideas <a href="#">Key concepts/ Knowledge</a> Forces and Stresses, Improving Functionality, Ecological and Social Footprint, The Six 6's, Scales of Production Effective Assembly of Parts Finishing Methods <a href="#">Assessment method</a> RAG data sheet against Specification &amp; Written Assessment</p>	<p><a href="#">Area of study</a> Unit 5B- Timber Based Materials Analysing and Evaluating <a href="#">Key concepts/ Knowledge</a> Sources and Origins, Working with Timbers, Commercial Manufacturing Evaluation against Brief/Specification Product Testing and Client/User Feedback Future Improvements <a href="#">Assessment method</a> RAG data sheet against Specification &amp; Written Assessment</p>
	<p><a href="#">Area of study</a> Unit 5D- Polymers Identifying, Investigating Design Possibilities &amp; Design Brief/Specification <a href="#">Key concepts/ Knowledge</a> Mindmap, Task Analysis, Target Market Profile, Primary Research, Product Evaluation, SMSC Impacts, Design Possibilities, Design Brief/Specification <a href="#">Assessment method</a> RAG data sheet against Specification &amp; Written Assessment</p>	<p><a href="#">Area of study</a> Generating Design Ideas Developing Design Ideas <a href="#">Key concepts/ Knowledge</a> Ideation, Logo/Brand, Packaging Prototyping, Development, Prototyping Analysis, Ongoing Research, CAD Model, Materials Investigation <a href="#">Assessment method</a> RAG data sheet against Specification</p>	<p><a href="#">Area of study</a> Realising Design Ideas <a href="#">Key concepts/ Knowledge</a> Materials and Cutting Lists Manufacturing Diary Manufacturing Development <a href="#">Assessment method</a> RAG data sheet against Specification</p>	<p><a href="#">Area of study</a> Realising Design Ideas Analysing and Evaluating <a href="#">Key concepts/ Knowledge</a> Quality Control Tolerances Commercial Viability Assembly Finishing <a href="#">Assessment method</a> RAG data sheet against Specification</p>	<p><a href="#">Area of study</a> Revisiting all theory Units <a href="#">Key concepts/ Knowledge</a> Complete and reflect on past papers <a href="#">Assessment method</a> Self-reflection and teacher feedback on specific topic areas to develop fill gaps in knowledge</p>	
NOTES	SKILLS FOR LIFE/ FUTURE LEARNING AND EMPLOYMENT					
	Skills for Life: Creativity, Problem Solving, Critical Analysis, Iterative Development, Thinking Skills, Collaborative Approaches, Self-awareness, Critical Thinking, Decision Making, Effective Communication, Empathy, Resilience, Time Management, Working Under Pressure, Digital Literacy, Technological Skills, Health and Safety, Focus, Methodical Thinking, Presentation, Leadership, Flexibility and Adaptability					
	<p>Future Learning- Degrees and Apprenticeships within Product, Engineering, Architecture fields</p> <p>Employment Opportunities- Product Design, Engineering (all categories), Architecture, Fashion Design, Chef, CAD (all related career paths)</p>					