Curriculum Map 2022 onwards

Year view Subject: Design and Technology				For further information, please see the KS3 Curriculum Booklet
Year 7	**Knowledge/Content**	**Skills**	**Assessments/Checkpoints**	**Comments**
Autumn Term 1	Bag Tag – practical A	Health and Safety Research, specification and design criteria. Practical: shaping, smoothing, drilling, and polishing. Evaluating	H&S homework Design ideas homework Practical skills test Shape and finish assessment.	Note: Year 7 split with half studying Food and Nutrition and D&T for 9 week blocks. Therefore the projects are taught twice, but to two separate groups A and B.
Autumn Term 2	Bag Tag – practical B	Health and Safety Research, specification and design criteria. Practical: shaping, smoothing, drilling and polishing. Evaluating	H&S homework Design ideas homework Practical skills test Shape and finish assessment.	
Spring Term 1	Bag Tag – laser cutting A	Computer Aided Design – introduction to software Computer Aided Manufacture – using the Laser Cutter	Evaluation and Peer Assessment	
Spring Term 2	Sketching and graphics A	Perspective Drawing Isometric Drawing Orthographic Drawing Modelling with Card and Foam.	Isometric drawing challenge. Modelling project evaluation and peer assessment.	
Summer Term 1	Bag Tag – laser cutting B	Computer Aided Design – introduction to software Computer Aided Manufacture – using the Laser Cutter	Evaluation and Peer Assessment	
Summer Term 2	Sketching and graphics B	Perspective Drawing Isometric Drawing Orthographic Drawing Modelling with Card and Foam.	Isometric drawing challenge. Modelling project evaluation and peer assessment.	

Year view Subject: Design and Technology			For further information, please see the KS3 Curriculum Booklet	
Year 8	**Knowledge/Content**	**Skills**	**Assessments/Checkpoints**	**Comments**
Autumn Term 1	Flashing Decoration A	Soldering, component identification and understanding. Circuit symbols, circuit diagrams and systems	Resistors and capacitors homework. End of project test Evaluation and peer assessment	Note: Year 8 split with half studying Food and Nutrition and D&T for 9 week blocks. Therefore the projects are taught twice, but to two separate groups A and B.
Autumn Term 2	Flashing Decoration B	Soldering, component identification and understanding. Circuit symbols, circuit diagrams and systems	Transistors homework. End of project test Evaluation and peer assessment	
Spring Term 1	Automaton A	Tolerances and CAM mechanisms Iterative Design	Functional testing; evaluation.	
Spring Term 2	Automaton A			
Summer Term 1	Automaton B	Tolerances and CAM mechanisms Iterative Design	Functional testing; evaluation.	
Summer Term 2	Automaton B			

Year view Subject: Design and Technology				For further information, please see the KS4 Curriculum Booklet
Year 9	**Knowledge/Content**	**Skills**	**Assessments/Checkpoints**	**Comments**
Autumn Term 1	Bottle Opener Unit 1 New and Emerging Technologies (Theory)	Metal work: heat treatment; marking out; shaping; drilling; tapping and threading. Understanding industry, sustainability and people in design	Unit 1 homework sheets.	Year 9 – will study the two initial projects one after the other, but not necessarily in the order shown as this is workshop dependent.
Autumn Term 2	Bottle Opener Unit 1/2 Theory	Shaping, drilling and finishing wood. Understanding production techniques; design decisions, energy storage and distribution; modern and smart materials.	Unit 1 homework sheets and end of unit test. Project evaluation. Unit 2 homework sheets	
Spring Term 1	Pewter Casting - Design Unit 2 Energy, materials, systems and devices (Theory) Unit 3 materials	The Design Process: Understanding context and client needs. Research and Ideas. Working with a digital design folder Composites, Systems, Electronics and Mechanical Devices (theory)	Unit 2 homework sheets & End of Unit Test Digital Design folder	
Spring Term 2	Pewter Casting - Practical Unit 3 materials	Computer Aided design ideas Laser Cutting, Pewter Casting, abrading, smoothing and polishing metals. Understanding metal sources, working and commercial manufacturing.	Unit 5C homework sheets & End of Unit Test Practical work assessment Evaluation and testing in folder.	
Summer Term 1	Repurposing Project Unit 5b Woods (Theory)	Researching the process of repurposing materials and wood joints. Measuring, marking out and cutting wood. Cutting using hand tools Understanding Timber sources, working and commercial manufacturing.	Unit 5B homework sheets & End of Unit Test. Digital design folder.	
Summer Term 2	Repurposing Project	Adhesives and dry assembly testing. Wood joints and pinning/gluing. Smoothing and finishing	Practical work assessment Evaluation and testing in folder.	

Curriculum Map 2022 onwards

Year view Subject: Design and Technology				For further information, please see the KS4 Curriculum Booklet
Year 10	**Knowledge/Content**	**Skills**	**Assessments/Checkpoints**	**Comments**
Autumn Term 1	Device Stand Unit 4 Common specialist technical principles (Theory)	Work of others research and the design process. Understanding forces, functionality, and ecological/ social footprints.	Unit 4 homework sheets. Digital design folder.	
Autumn Term 2	Device Stand Unit 4 Common specialist technical principles (Theory)	Modelling, manufacturing (wood) and evaluation.	Unit 4 homework sheets & End of unit test. Practical work assessment. Evaluation and testing in folder.	
Spring Term 1	Electronics Modelling Unit 5F Electronic systems (Theory)	Computer simulation/ modelling of circuits. Breadboarding test circuits. Understanding Electronics principles.	Unit 5F homework sheet. Circuit modelling progression and practical modelling,	
Spring Term 2	Electronics Modelling Unit 5F Electronic systems (Theory)	Building a circuit, testing, and incorporating into a product. Understanding electronics working and commercial manufacturing.	Unit 5F homework sheets & End of unit test. Digital design folder, testing and evaluation.	
Summer Term 1	Complete spring 1 and 2 units Unit 6 Designing Principles (Theory)	Introduction to new workshop equipment; its abilities and how to use it. Understanding types of research; works of others; design strategies and communication skills.	Unit 6 homework sheets & End of unit test.	
Summer Term 2	NEA	Identify & investigate design possibilities and producing a design brief & specification.	Digital folder Section A and B milestones.	AQA release the context topics on 1st June.

Curriculum Map 2022 onwards

Year view Subject: Design and Technology				For further information, please see the KS4 Curriculum Booklet
Year 11	**Knowledge/Content**	**Skills**	**Assessments/Checkpoints**	**Comments**
Autumn Term 1	NEA	Understanding materials and their working properties: papers and boards, timber and metals. Generating design ideas.	Unit 7 homework sheets. Digital folder Section C milestone.	
Autumn Term 2	NEA Unit 7 Making principles	Understanding materials and their working properties: polymers and textiles. Developing and realising design ideas.	Unit 7 homework sheets & End of unit test. Digital folder Section D and E milestones.	
Spring Term 1	NEA Revision	Analysing and evaluating. Review Units 1 and 3 Developing and realising design ideas.	Digital folder Section F milestone. Completion and final assessment of NEA folder. Practice exam questions.	
Spring Term 2	Revision	Review units 4, 5, 6 and 7	Practice exam questions.	
Summer Term 1	Revision	Exam technique and answering long question for GCSE DT.	Practice exam questions.	
Summer Term 2	External exams			

Curriculum Map 2022 onwards

Year view Subject: Design and Technology			For further information, please see the KS5 Curriculum Booklet	
Year 12	**Knowledge/Content**	**Skills**	**Assessments/Checkpoints**	**Comments**
Autumn Term 1	Coat Hook 1. Identifying requirements (Theory) 2. Learning from existing products and practice (Theory)	Metal work: heat treatment; marking out; shaping; drilling; countersinking and joining dissimilar materials. Understanding of contexts, stakeholders, prototyping, product analysis and lifecycle assessment.	Project practical and evaluation. Case study homework tasks.	
Autumn Term 2	Electronics Project 6. Technical understanding (Theory) Redesign Project 3. Implications of wider issues (Theory)	Computer simulation/ modelling of circuits and programming microcontrollers. Breadboarding test circuits. Building a circuit, testing, and incorporating into a product. Understanding of structure, function, smart materials, mechanisms, forces, electronic systems and factors affecting new designs.	Project modelling, prototyping, presentation and evaluation, including digital project folder. Case study homework tasks.	
Spring Term 1	Practical Practices 5. Material and component consideration (Theory)	Circuit etching; tapping and threading; brazing; welding; turning; riveting and screwing. Understanding of materials selection, properties and components.	Practical process presentations. Case study homework tasks.	
Spring Term 2	Modelling Project 4. Design thinking and communication (Theory)	Building quality models and selecting modelling materials appropriately. Understanding of design tools: sketching and CAD, including their use in industry.	Project practical and evaluation. Case study homework tasks.	
Summer Term 1	NEA 7. Manufacturing processes and techniques (Theory)	Understanding of how materials and processes are used for modelling prototyping and in industry, with reference to scales of production. Identify & investigate design possibilities and producing a design brief & specification.	Digital folder strand 1 milestone. Case study homework tasks.	
Summer Term 2	NEA 8. Viability of design solutions (Theory)	Design thinking with regards to design idea creation and selection. Investigate materials and processes, creating multiple design ideas and objectively testing.	Digital folder strand 2 milestone.	

Curriculum Map 2022 onwards

Year view Subject: Design and Technology				For further information, please see the KS5 Curriculum Booklet
Year 13	**Knowledge/Content**	**Skills**	**Assessments/Checkpoints**	**Comments**
Autumn Term 1	NEA	Design communication with regards to design development, modelling and a final solution.	Digital folder strand 3 milestone.	
Autumn Term 2	NEA 9. Health and safety (Theory)	Final prototype manufacturing with the use of specialist tools and equipment. Understanding of risk assessments and applying them.	Digital folder strand 4 milestone.	
Spring Term 1	NEA Revision	Evaluation and analysis, including a feasibility study and critical overview. Review Units 1, 2, 3 and 4.	Digital folder strand 5 milestone. Practice exam questions	
Spring Term 2	Revision	Review Units 5, 6 and 7.	Practice exam questions	
Summer Term 1	Revision	Review Unit 8. Exam technique and answering long question for GCSE DT.	Practice exam questions	
Summer Term 2	External exams			