



Intent for *Design and Technology* Curriculum 2026-2027

'All children will experience an ambitious, well-balanced and comprehensive curriculum that develops intellectual and moral character. As a result, this will improve life chances, inter-personal relationships, social mobility and preparedness for employment. Our curriculum will encourage everyone to have a positive impact on society.'

Term	1a	1b:	2a	2b	3a	3b
Year 7 Skills –Pizza packaging Project Engineering – Sweet dispenser Project Food Prep and Nutrition – Keeping yourself safe	<i>The curriculum is carried out as a carousel with students spending approximately 1 lesson a week for 12 weeks on each project per term.</i> Focus Skills – DEC Awards program • Learn how to work with a range of contexts • Find out through research techniques about different roles and responsibilities within the construction industry and how they play a part in design • To develop a greater understanding of how sustainability plays a role in designing • Develop bubble diagrams to identify spaces within a building and describe their use • Develop skills in prototyping / scale modelling, floor plans and testing. • Learn about the physical properties of materials specifically modelling and sustainable materials • Evaluate their project through a short presentation to highlight key features of the design		Focus Engineering – Sweet dispenser Project • Work with a context • Learn about the factors affecting Ergonomics and Anthropometrics • Learn how to produce a plan for manufacture • Select and use a range of hand tools and equipment safely. • Learn about risk assessments and safety within a workshop • Select and use correct techniques to apply a suitable finish to materials • Learn how to Test and Evaluate their work against a given design specification • Look at the wider world of Design and Technology		Focus Food Prep and Nutrition - Keeping yourself safe • Learn how to make and prepare a range of predominately savoury healthy dishes • To identify different utensils and equipment and how to use them including knives correctly and safely, using the bridge and claw grips • How to prevent to contamination of food and to keep food safe to eat • What nutrients each of the commodity groups provide the body with and why these nutrients are important in the diet and what types of food they are found in	
Year 8 Skills – Casting key ring project Engineering – Bike Light Project Food Prep and Nutrition - Food Detectives	<i>The curriculum is carried out as a carousel with students spending approximately 1 lesson a week for 12 weeks on each project per term.</i> Focus Skills - Casting Project • Work with a design context • Analyse the work of other designers to support ideas • Design products using 2D CAD • Develop and communicate design ideas • Learn how to cast pewter • Produce a planning specification • Apply a range of finishing techniques for pewter casting		Focus Engineering – Bike light • Work with understanding design context, users and purpose. • Understanding how product disassembly can support design decisions. • Continue to work with a range of equipment and machinery with more accuracy, confidence and independence. • Develop knowledge of 555 timer circuits • Learn about the physical properties of materials specifically plastics- Vacuum forming • Use a variety of joining methods in the assembly of products		Focus Food Prep and Nutrition -Food Detectives • Learn how to make and prepare a more skilful range of predominately savoury healthy dishes • To gain an understanding of a range of different preparation and cooking methods • Gain an understanding of the impact of poor diets can have on health • The role of macronutrients • To understand the source and seasonality of a broad range of ingredients.	



Year 9 Skills – Electronic Dice Project Engineering – Clock Project Food Prep and Nutrition - Building skills	<i>The curriculum is carried out as a carousel with students spending approximately 1 lesson a week for 12 weeks on each project per term.</i> Focus Skills – Electronic Programmable Dice Project - Engage with Design Context to stimulate design ideas. - Work with a wide range of research, analysis and evaluation technique to critique products effectively - Produce a 3 D model of their chosen game - Match and select suitable components, materials and finishes fitness fit for purpose - Use CAD/CAM - Understand new and emerging tech and how more advanced electrical systems can be powered and used within products - Understand how electrical circuits incorporate inputs, outputs and feedback	Focus Engineering – Clock Project - Use a range of product analysis techniques to understand how products work - Use CAD to design and model their clock - To understand engineering drawings, symbols and conventions used in the world of engineering - Produce schedules to support their planning and manufacturing of the parts - Select, match and justify the reasons for using materials, tools, equipment and machinery to perform a range of suitable tasks when manufacturing - To safely use a range of tools, equipment and machinery will skill and accuracy. - Test and Evaluate work produced against design specification	Focus Food Prep and Nutrition – Building skills - Learn how to develop a wider range of skills to support with preparation and making. - To gain an understanding of different cake, pastry and bread making methods - To gain understanding of the functions of different ingredients in cakes, pastry and bread	
Year 10 WJEC Engineering (New Spec)	Introduction to engineering manufacturing -Students should be able to understand engineering drawings, and identify parts and/or components that will enable them to plan a final manufactured product: Engineering drawing skills, Isometric, hidden detail, CAD and Sectional views Identify tools and equipment, select materials and plan work, review outcomes Engineering making skills tasks	Exam NEA Unit 1 <u>Manufacture engineering products:</u> Interpret and identify engineering information Plan and sequence activities Risk assess their work Manufacture from engineering drawings Work independently Review and evaluate their work. NEA Unit 1 Submitted	Preparation for Unit 2 CAD, analysis, sketching, manufacturing specifications, model making NEA Unit 2 Briefs Released NEA Unit 1- completed	
	Preparation for Unit 3 Solving engineering problems		Unit 3 Focus – Materials and properties of materials in products (mobile phones, security alarms, bicycles & children's play areas).	
Year 11 WJEC Engineering (New Spec)	Exam NEA Unit 2 <u>Design Engineering Products</u> Explain the primary and secondary functions of a product Design using CAD/models Evaluate Create Engineering Drawings for final solutions in 3rd angle orthographic projection	NEA Unit 2 Submitted Continued Unit 3 Focus	Unit 3 External Exam <u>Solving Engineering Problems</u>	