Design & Technology Department Knowledge Sequencing

Core Threads: BY the end of Key Stage three we want all students to know and do the following key things: idea generation, development, use of CAD & CAM, to use a wide range of equipment in each material area, with Health & Safety knowledge in all areas; understanding and application of Food Safety rules, the journey of food, adaptation of recipes; where fabric comes from, product & garment construction, decoration techniques in Textiles.

Prior Knowledge	Students in KS3 entered year 7 with a range of different levels of skill & knowledge from Arts & Crafts, cookery, food & nutrition, mathematical skills such as weighing and measuring, costing and building on any hand sewing skills gained at Key stage 2.
Future Knowledge	The Curriculum in KS3 in Design & Technology will prepare students for future learning in: GCSE Design & Technology, such as dying fabrics, fabric construction and fibre sources; GCSE Food Preparation & Nutrition, including practical food preparation skills, knowledge of food science, food safety, food choice, food provenance and cooking techniques. Students are also prepared for GCSE Graphic Communication where they will learn how to build a portfolio for a graphic design brief, the importance of typography and how to develop their designs using more complicated features of Adobe Illustrator and Photoshop alongside more complex physical material processes like graphic drawing, illustration and printmaking.

	Term	Key Knowledge	Assessment Focus
Year 7	Rotation 1	**Textiles**: Standards and expectations in the classroom. Develop understanding and practice skills related to: Classroom safety, Machine Sewing Skills, Sewing, tie dye techniques, block, and stencil printing use of CAD / CAM through illustrator & laser cutter, producing a plain seam. Fibres & fabrics, their origins & sources. Work with a Brief and Specification, complete Design work, including Research skills including product analysis and cultures around the world, the planning and making of an organiser and Evaluation of their making skills.	Application of Health & Safety knowledge & understanding through classroom activities. Use of sewing machine, research techniques, design work using specification, use of CAD, analysis of information, recording of processes – mid project book review, end of project self-assessment/ teacher assessment and practical outcomes. Evaluation and development.
	Rotation 2	**Food**: Standards and expectations in the classroom. Government Guidelines and the Eatwell Guide; Knife skills & safety including the bridge and claw grip; naming and use of basic kitchen tools and equipment to demonstrate practical skills to make and describe products, Seasonality of fruits & vegetables and making selections to reduce food miles, costing and nutritional analysis, awareness of food labelling. Adaptions of recipes to meet the needs of others. Aesthetics of dishes. Use of the rubbing in technique to describe the coating of flour, application of conduction, convection & radiation. The impact of imported and exported food on the food, the environment, and communities. Food Safety and Health & Safety.	Application of Health & safety, Food safety knowledge, planning for practical outcomes using Government guidelines, seasonality, and justification of choices. Application of key terminology to practical work and book work – lamination, bridge, claw, cross contamination, bacteria. Ability to apply knowledge of Heat transference to methods of cooking. Group presentation covering Food Provenance & Food Miles. Book work for research, planning & evaluation. Mid and end of project assessment, self, peer, and teacher assessment.
	Rotation 3	**Graphic Communications:** Standards and expectations in the classroom. What is a logo, the importance of logos to businesses, typographic, symbolic & combination logos. Work with a Design Brief and develop specification; research skills to include Primary & Secondary techniques, questionnaires, surveys. The impact of extinction and animals at risk. Design work to develop drawing skills using pencil, shading, fine lining, range of colour applications, typography styles. Initial ideas, gathering feedback and review, development; CAD use of Adobe Illustrator, layering and movement, application of colour through paint. Printing techniques, application of heat. Evaluation and development. **Systems & Control:** Standards and expectations in the classroom. Research, component recognition, product disassembly, what is a system, flowchart programming. Application from theory to practice. Capacitor, Light Emitting Diode (LED), Light Dependent Resistors (LDR), Resistor, Buzzer, movement, and force.	Research and analysis skills, use of design brief and specification in the design and make process. Use of peer feedback in development of work. Knowledge and understanding of basic Adobe functions and tools, applying these to the development of design work, Initial ideas into final ideas, peer feedback. Outcome of design onto a T-shirt. (Mid and end of project assessment). Knowledge and understanding of Individual and group work to use Bright Spark & Circuit wizard to replicate successful circuits and problem solve. STEM day to develop application of Forces and Movement in the Eco Factory Roller Load challenge.
Year 8	Term	**Key Knowledge**	
	Rotation 1	**Textiles**: Standards and expectations in the classroom. The Design and make process in greater detail. Develop skills from yr7, Product Analysis, Design Specification, Pattern Cutting, Making Skills, Elastic Casing, Pockets, Applique, Evaluation, Understanding of Sustainability and Environmental issue, concerns regarding Cotton farming, textile manufacture. 6R's. Motions & movement through understanding mechanisms in Toys, development form Stem Day year 7.	Application of Health & Safety knowledge & understanding through classroom activities. Research and design skills, application of knowledge & understanding from product analysis. Detail and use of Specification writing. Developing pattern cutting skills to meet the requirements of the Target market. Application of practical skills in the planning, making and evaluation of a product - Pair of pyjamas shorts or trousers and upcycling a T-shirt with stitched decoration. Evaluation

			and development work in exercise books. (Mid and end of project assessment)
	Rotation 2	**Food**: Standards and expectations in the classroom. Cereal products, classifications of cereal outcomes, raising agents – biological- Fermentation process; chemical- baking powder, bicarbonate of soda, cream of tartar; and physical, creaming, whisking, beating, folding, kneading, knocking back, gluten, equipment; Gelatinisation, gratinating, boiling, simmering, sauces and consistency, presentation skills. Functions of Ingredients. Costing, nutritional analysis & comparisons.	Application of Health & safety and Food safety knowledge through activities in the classroom. Knowledge of Food Provenance in mapping food journeys and traditional dishes. Application and understanding of key terminology through bookwork and practical processes and outcomes. Evaluation skills. (Mid and end of project assessment)
	Rotation 3	**Graphic Communications/ Systems & Control:** Standards and expectations in the classroom. The Design and make process in greater detail. Designing and refining, influence of designers on own creativity. Use of a range of media, drawing range, paper making media, digital software – greater understanding and use of Adobe illustrator. In the creation of a detailed and original book cover.	Application of classroom standards and expectations in the classroom. Analysis of Design Brief and creation of realistic and usable Specification. Analysis of the impact of other designers into design work, use of feedback for development of ideas. Application of a range of media is designing and development. Application of further developed Adobe Illustrator use for CAD work. Practical outcome and bookwork. (Mid and end of project assessment)
Year 9	Term	**Key Knowledge**	
	Rotation 1	**Textiles**: Standards and expectations in the classroom. The Design and make process in greater detail. Fashion History research 1960's (Mary Quant), Justified detailed design specification, product analysis, design work, understanding darts, gathers and pleats. Pattern cutting, adapting from basic blocks. Zip insertion, waistbands, and facings. Sewing Machine further practice & settings. Evaluation and testing.	Application of classroom standards and expectations in the classroom. Research techniques and findings to support initial ideas in line with the theme, use of feedback into developed ideas. Planning for the application of practical skills for the making of skirt or trousers. Evaluation and development work in exercise books. (Mid and end of project assessment).
	Rotation 2	**Food**: Standards and expectations in the classroom. How a range of Portable electrical equipment work, cost, Health and safety and ranges of dishes. Revisit Food Safety. Different nutritional and dietary needs, recipe adaptation, research skills, categories of Vegetarian & Vegans, Dietary needs of Diabetics, categories of Diabetes, impact of diet on health, reasons for choice of food, Coeliacs. Comparisons of recipes. Functions of ingredients. Pastry types and methods of making.	Application of Health & safety and Food safety knowledge through activities in the classroom. Making decisions in the selection of equipment, justification of choices based on research. Being able to adapt and change recipes, produce nutritional analysis to support a range of dietary needs. Application of Food science in the preparation of baked goods. Group report for Food Science investigation. (Mid and end of rotation project assessment).
	Rotation 3	**Graphic Communications/ Systems & Control:** Standards and expectations in the classroom. The Design and make process in greater detail. Draw accurately, observational skills, drawing techniques, 3d media, adobe photoshop, adobe illustrator in detail. The origins of the Olympics, sports included. How 3D printing has developed and its use within design and technology.	Application of classroom standards and expectations in the classroom. Analysis, research, and design using a range of media. Application of knowledge of a range of drawing skills and techniques. The use of research skills to apply historical findings to design work. Using knowledge of 3D printing in planning, designing, making. Evaluation and further development demonstrated. (Mid and end of rotation project assessment).

Opportunities for developing literacy skills and developing learner confidence and enjoyment in reading	Links to British Values	Links to Careers	Links to Other Personal Development
Following written instructions / methods. Written responses throughout work.	• Moral Choices facing designers and manufacturers. • Meeting the needs of the end user, through belief ethics and values.	• The world of design and make – research into influencing designers. • Career pathways identified through presentation Jan / Feb to yr. 9, help with Option choices.	• Healthy Habits • Team work • Energy saving • Apprenticeships • Online safety

Research techniques, application of understanding. Key words / Terminology – understanding, spelling and application. Reading out in the classroom text and findings. Students written feedback.	• Knowledge of the 6R's to conserve the earths resources. Food Miles, Imported / exported. • H&S/ Food Safety in respect for others. • Celebrate diversity in choices e.g. Kosher & Halal foods. • Mutual respect through peer review.	• Use of TV/ You Tube clips to see how products developed / constructed in industry.	• Mental Health & wellbeing • European Languages • Money / Budgeting • Fairtrade
Extra-Curricular and Co-Curricular Opportunities	**Links with other subjects in the curriculum**		
Textiles club open to all Food Club yrs. 8-10 STEM activities	• Science – Structures, Protein, Fats & Carbohydrates, Heat Transference. • Mathematics – weighing, measuring, scaling up and down, budgeting & costing. • Computing – research, presentation, PPT, word, spreadsheets, adobe illustrator, 2D design • Art – Design, creativity, use of different mediums, presentation. • Languages- recipes, food provenance, inspiration from cultures. • History – development of industry, ratioing of food, historic figures • Geography – imports, exports, food miles, sustainability, carbon footprint, food security • PE – activity and nutrition, Eatwell guide.		

Design & Technology Department (Food Preparation & Nutrition) Knowledge Sequencing

By the end of Key Stage Four all students of Food Preparation & Nutrition will know and do the following key things: Secure Knowledge of all aspects of Food Preparation & Nutrition; Practical food preparation skills and cooking techniques; knowledge of Food Science, Food Safety, Food Choice and Food Provenance.

Prior Knowledge	In key stage four, students of Food Preparation & Nutrition will build on the following prior learning: KS3 Food Technology, building on knowledge of Government Guidelines for Healthy Eating, Factors affecting food choice, the functions of a range of ingredients, Food Provenance and the impact of Food Miles, preparation, and cooking techniques.
Future Knowledge	The Curriculum in kS4 Food Preparation & Nutrition will prepare students for the following future learning; further study of food including that covered in KS5 science courses; applied courses and job-related learning both in Food Science, Catering and Hospitality, and degree level food qualifications.

	Term	Key Knowledge	Assessment Focus
Year 10	1	Theory: equipment revisited, knife skills and application. The versatility of Eggs; nutritional, structure and uses. Importance of Protein, structure, functions and science, HBV and LBV, effects of heat on protein / methods of heat transference. Government Healthy Eating Guidelines. Energy requirements Nutritional analysis – Food P6 v Explore, labelling. Practical: Seasonal ingredients, soup, knife cuts (Julienne), Functions of eggs (coagulation/protein), scotch eggs, (methods of cooking – oven/ deep fried / Air Fried), lemon meringue pie, quiche.	Application of food science and nutritional understanding in the planning for practical work, evidenced through photography and development of a portfolio and evaluation skills. End of unit assessments. Practice questions. Peer and family feedback for practical work.
	2	Theory: Fats, Oils and Fat soluble and water-soluble vitamins Dietary needs and choices. Diabetic, Coeliac, Cardia Vascular Disease vegetarians & vegans. Structures of fats and oils. Melting points, rancidity, saturated, unsaturated. Food Storage, buying guides. Sensory Properties, Organoleptic elements. Practical: Reduced fat recipe adaptations, taste testing, catering for dietary needs. Revisit KS3 skills in cake making – Swiss roll, adapting & upskilling to seasonal product (Yule Log). Short crust pastry – mince pies & adaptations.	Application of food science and nutritional understanding in the planning for practical work, evidenced through photography and development of a portfolio and evaluation skills. End of unit assessments. Practice questions. Peer and family feedback for practical work.
	3	. Theory: Food Safety & Food Poisoning Bacteria. Categories of meat, Fish and cereals. Food Processing, Food source & supply. Milk, Yogurt, cheese production. Functions of ingredients in pastry making, categorises of pastry. Lamination Steam as a raising agent. Practical: Ready Made component (puff pastry), making puff pastry, Mille Feuille, Creme Patisserie & Piping, Choux Pastry (sweet or savoury), sweet pastry (lemon tarte) - use of equipment e.g. food processor.	Application of food science and nutritional understanding in the planning for practical work, evidenced through photography and development of a portfolio and evaluation skills. End of unit assessments. Practice questions. Peer and family feedback for practical work.
	4	Theory: Carbohydrates, sugars, starches, monosaccharides, disaccharides, poly saccharides, fibre (soluble and insoluble). Composite dishes. Yeast as a raising agent, chemical biological, and mechanical raising agents. Gluten development / non gluten alternative's (coeliac/ gluten intolerances) Sauces, coating, pouring, binding, all in one, blended, Roux, gelatinisation. Practical: High fibre dish, cereal as a focus (flapjack, oats) bread dough, adapting recipes. Homemade pasta, sauce – roux, ragu. Upskilling to ravioli (filling & shaping). Adaptations to composite dishes.	Application of food science and nutritional understanding in the planning for practical work, evidenced through photography and development of a portfolio and evaluation skills. End of unit assessments. Practice questions. Peer and family feedback for practical work. Yr10 Internal Examination. Written paper 90mins covering curriculum covered so far.
	5	Theory: NEA1 applying Food Science, practice NEA (group work), setting controls and variants. Water. Technological developments. Food Security. Food Science – colloids. Denaturation & enzymic browning. Feedback to NEA1 practice research, plan, hypothesis, fair testing, experimentation, sensory analysis & profiles, analysis & evaluation.	Application of food science and nutritional understanding in the planning for practical work, evidenced through photography and development of a portfolio and evaluation skills. End of unit

		Practical: NEA1 practice- setting of investigation, taste testing and sensory aspects. Filleting of fish and deboning of chicken. Revisiting of portfolio skills and further developments.	assessments. Practice questions. Peer and family feedback for practical work. Practice NEA1 assessed in line with examination marksheet. Practice questions for homework tasks.
	6	Theory: Minerals, complimentary nutrients. Revisit macro & Micronutrients. Environmental issues, food miles. Practical: Judge & manipulate sensory properties- garnish, piping, glazing, icing, colouring. Decorating techniques (Enrobing / Coating). Food Styling.	Application of food science and nutritional understanding in the planning for practical work, evidenced through photography and development of a portfolio and evaluation skills. End of unit assessments. Practice questions. Peer and family feedback for practical work. Practical assessments to apply finishing techniques. Use of the practical sections from NEA2 mark scheme. End of unit assessments to cover all units covered this term.
Year 11	Term	**Key Knowledge**	
	1	Teacher led theory units linked to the tasks presented by examination board (released 1st Sept) Non-Examined Assessment 1: Food Investigation Task (15%) Controlled assessment (lessons 10 hours) within lesson time. Reflect on progress following generic class feedback. Practical work to cover the needs of the NEA.	NEA Application of food science and nutritional understanding in the planning for the Food Science Investigation NEA 1 Submission
	2	Revision of key topics (Macronutrients/ Micronutrients/ Reasons for choice of foods / dietary needs and guidance. Food labelling and marketing) - preparation for mock assessment.	Application of food science and nutritional understanding in the planning for practical work, evidenced through photography and development of a portfolio and evaluation skills. End of unit assessments. Practice questions. NEA1. standardisation Mock Examinations
	3	Introduction of Non-Examined Assessment 2 Practical. (35%) Teacher led theory units linked to the tasks presented by examination board (released 1st Nov). Research skills, choices and justifications food miles, budgeting, nutritional analysis, skill levels, seasonality. Planning, time plans, sensory analysis.	NEA2 Food Preparation Task (35%) including a 3-hour practical task.
	4	Completion of NEA2 task – 3-hour practical task. Analysis and Evaluation stages and submission. Revision for examination (50%) Practice questions long & short. Adapted to requirements of students.	Non-Examined Assessment 2 completion and submission. External standardisation
	5	Revision / examinations with focus on all aspects of the specification/ areas identified within the group. Revision activities / group tasks/ quiz/ kahoot / practice questions.	Non-Examined Assessment 2. Self-marking, peer marking.

Opportunities for developing literacy skills and developing learner confidence and enjoyment in reading	**Links to British Values**	**Links to Careers**	**Links to Other Personal Development**

Research techniques, technology reference books, development of key terminology. Presentation styles, written and verbal responses to assessment both formative & summative.	• Mutual respect of individuals ideas and beliefs when selecting tasks, researching and designing. • Understanding how religions and beliefs can impact users' needs and wants, e.g. religions. Moral Choices when selecting ingredients and dishes. • Meeting the needs of the end user, through belief ethics and values. • Knowledge of the 6R's to conserve the earth's resources. Health & Safety in respect for others. Food Safety • Celebrate diversity in choices. • Mutual respect through peer review.	• Industrial processes • Textbook references. • Use of You Tube – methods, processes and occupations • Work with industry -	• Development of life skills • Use of a range of equipment • Problem solving • Critiquing others and own work • Presentation skills • Portfolio work • Healthy Habits • Teamwork • Energy saving • Apprenticeships • Online safety • Mental Health & wellbeing • European Languages • Money / Budgeting • Fairtrade
Extra-Curricular and Co-Curricular Opportunities	**Links with other subjects in the curriculum**		
Out of lesson practical support sessions to support students learning as they require.	Mathematics – weighing, measuring, portioning, costing, budgeting. Geography – Food Miles, carbon footprint, food security, from around the world, cotton growing, importing, exporting, environment issues. Business – QA / QC, advertising, and promotions. Consumer demand, trends, and influences. Packaging & labelling Physics – forces and movement, environment issues, power generation, kilojoules. Computing – layout, CAD, graphs, charts. Computer manufacturing systems. Ethics & Philosophy- cultures and religions.		

Design & Technology Department Knowledge Sequencing

By the end of key stage four we want all students of Design and Technology to know and do the following key things: Core Design & Technology concepts, such as Core Technical Principles & Designing Principles: practical skills such as modelling and prototyping in textiles; applying the design process, using iterative design processes, and focusing on user centred design; writing skills required for KS4 exam style including core Technical Principles, Specialist Technical Principles and Designing and Making Principles.

Prior Knowledge	In KS4, students of Design & Technology will build on the following learning from KS3: Design skills; Knowledge of Health & Safety. Making skills, prior knowledge of KS3 Computer Aided Design (illustrator / 2D design) and Computer Aided Manufacture – laser cutter and 3D printer.
Future Knowledge	The curriculum in KS4 Design & Technology will prepare students for the following future learning: work confidently with materials and processes in a range of contexts including apprenticeships, specialist practical training; the skills and knowledge required to move forward to courses including A level Fashion & Textiles or Product Design.

	Term	Key Knowledge	Assessment Focus
Year 10	1	Theory – New and Emerging Technologies, the design and organisation of the workplace including automation and the use of robotics, buildings and the place of work, tools, and equipment. Practical skills- user centred E-textiles project – hand and machine skills, research, design, modelling and evaluation. Graphic presentation skills.	Application of knowledge of theory, through research, design, planning, and development. Development of knowledge and use of E textiles into a product suitable for end user.
	2	Theory – New and emerging technologies continued. Sources and origins of materials- metals, woods, textiles, polymers, paper & boards. Developing hand sewing skills using mixed materials.	Unit 1 Test on New and Emerging Technologies. Application of knowledge of materials and components in design work, planning and making. Design folder and Practical work.
	3	Theory- Energy, materials, systems, and devices. Energy generation & storage. Research- design movement and designers. Practical Skills – Fashion top project. Surface treatments & finishes, silk painting, batik, tie dyeing, applique, reverse applique, quilting, chenille work, gathering and frills.	Application of knowledge of materials, surface treatments and finishes in design work, planning and making. Design folder and Practical work. Product in a tin completion.
	4	Theory- Materials, Developments made through the invention of new or improved processes e.g. Metal foams and Titanium, in addition to conventional, modern, and smart materials. Practical skills – Fashion top project, pattern cutting, bodice block, dart manipulation. Design development. Revision.	Application of knowledge of smart & modern materials, developments through invention and processes, through the completion of work sheets and exercise books. Yr10 Internal Examination.
	5	Theory: Systems approach to designing mechanical devices. Practical skills: Fashion top project- making- development of sewing machine skills and surface treatments and finishes.	Application of knowledge to assessment on systems and control. Classroom question & answer.
	6	Theory: Forces and stresses. Tension, compression, bending, torsion and shear. How materials can be reinforced, stiffened or made more flexible e g. lamination, bending, folding, webbing, fabric interfacing. Design strategies. Practical skills: Complete fashion top project – evaluation. NEA introduction to NEA – new release- section A research.	Application of knowledge to assessment on Forces and stresses. Classroom question & answer.
Year 11	Term	**Key Knowledge**	
	1	Theory- selection of materials and components- functionality: application of use, ease of working. Aesthetics: surface finish, texture and colour. Environmental factors: recyclable or reused materials. Practical skills: Non examined assessment. Section B; Design Brief 7 specification- students write their own design brief and specification based upon the context & research they have chosen from the examination board tasks.	Application of research skills and analysis, writing of Specification applied to the context given, and planning Completed NEA section A & B
	2	Practical skills- Non examined Assessment Section C: Design Ideas, for demonstrating Non design fixation, to create a range of ideas to satisfy the design brief. Hand drawn sketched ideas. Theory: Designing Principles, students to investigate, analyse and evaluate the work of past and present designers and companies to inform their own designing.	Application of Theory in CAD /CAM written assessment

			Use of designing principles to aid investigation Completed NEA Section C&D
	3	Non-Examined Assessment Section D: Design Development to develop concept on paper, using CAD, 3D computer modelling skills, orthographic drawings, refine concept. Practical Skills: Non-Examined assessment Section E: Realisation-students test the validity of developed design through modelling and construction. Manufacture a single/range prototype.	Application of knowledge & understanding of development of design work in 3D Completed NEA section D&E
	4	Non-Examined Assessment completion: evaluation of project and submission. Theory: Revision. Planning and composing answers for a range of past paper GCSE question. Structuring mathematical questions and answers.	Completed NEA
	5	Theory: Revision. Planning and composing answers for a range of past paper GCSE question	Revision Past paper questions, quizzes and activities.

Opportunities for developing literacy skills and developing learner confidence and enjoyment in reading	**Links to British Values**	**Links to Careers**	**Links to Other Personal Development**
Research techniques, technology reference books, development of key terminology. Presentation styles, written and verbal responses to assessment both formative & summative.	• Mutual respect of individuals ideas and beliefs when selecting tasks, researching, and designing. • Understanding how religions and beliefs can impact users' needs and wants, e.g. religious dress. Moral Choices facing designers and manufacturers. • Meeting the needs of the end user, through belief ethics and values. • Knowledge of the 6R's to conserve the earth's resources. Health & Safety in respect for others. • Celebrate diversity in choices and design work. • Mutual respect through peer review.	• Industrial processes • Designer inspiration • Use of You Tube clips: processes, roles and manufacturing.	• Development of life skills • Use of a range of equipment • Problem solving • Critiquing others and own work • Presentation skills • Portfolio work • Teamwork • Energy saving • Apprenticeships • Online safety • Mental Health & wellbeing • European Languages • Money / Budgeting

Extra-Curricular and Co-Curricular Opportunities	**Links with other subjects in the curriculum**
Out of lesson practical support sessions to support students learning as they require.	Mathematics – measurement, costing, patten cutting, scaling up and down. Geography – fibres and fabrics from around the world, cotton growing, importing, exporting, environment issues. Business – QA / QC, advertising, and promotions. Consumer demand, trends, and influences. Physics – forces and movement, environment issues, power generation, systems, light. Batteries & circuits. Computing – layout, CAD, CAM, graphs, charts. Inputs, processes & outputs. Robotics and computer manufacturing systems. Ethics & Philosophy- cultures and religions.

Design & Technology Department Knowledge Sequencing

By the end of Key Stage Five all students in Design & Technology will know how to do the following things: Identify and investigate design possibilities; develop design proposals; develop design prototypes; understanding of technical principles; design and making principles.

Prior Knowledge	In KS5 students of Design & Technology will build on the following prior learning: GCSE Design and Presentation skills; Materials and Processes knowledge; Planning and Manufacturing Skills; and Evaluative skills.
Future Knowledge	The Curriculum in KS5 Design & Technology will prepare students for the following future learning: skills required at Higher Education, such as independent learning; practical life skills; communication of ideas, problem solving, generating creative solutions. Fashion design, engineering, textiles, interior and product design, marketing, journalism, retail buying and merchandising and many other areas of the creative industries.

	Term	**Key Knowledge**	**Assessment Focus**
Year 12	1	Practical- Sustainable style project: disassembly and upcycling linked to sustainability and environmental issues. To develop prototyping skills, general tool, equipment, processes, and finishes. Theory – Materials and applications, performance characteristics of fibres. Classification of materials, yarns, smart and technical materials.	Design & Make – sustainable style submitted. Application of Knowledge– Examination questions.
	2	Practical - 'Wool 4 School' competition- Moodbaords, CAD, Design Development, Wool fibre/ materials, and innovations. Research and presentation skills. Theory – Woven, knitted, nonwoven fabrics. Testing materials – fabric finishes, dyeing and printing.	Design & Make- Wool 4 Schools Competition Application of Knowledge- November Assessment
	3	Practical- Complete 'Wool 4 School' competition. Presentation NEA-AO1 A, identify investigate and outline design possibilities. Theory- Marketing & Enterprise, fashion cycles, methods of joining and using components. Design theory 20th & 21st century introduction.	Design & Make – Wool 4 schools submitted. Application of Knowledge – Examination style questions
	4	NEA – AO1 A Identify, investigate, and outline design possibilities. Theory- Design Theory- 1900-2020.	NEA AO1 A Application of Knowledge -Examination style questions
	5	Complete NEA AO1 A. Develop NEA AO1B Producing a design brief and specification. Theory- Revision interfacings, modern and commercial practices, scales of production, use of computers. Quality Assurance and Quality Checking.	NEA AO1 A/B Application of Knowledge – year 12 Internal assessment April
	6	NEA –AO2C Development of design proposals. Theory- Globalisation, Environmental, Social, Moral & Ethical issues. Revision. Responsible design. Copyright.	NEA AO1C Application of Knowledge y – Formal Internal assessment – June
Year 13	Term	**Key Knowledge**	
	1	NEA AO2C Development of design proposals. Theory- Health & Safety revision.	NEA AO2C Application of Knowledge; Examination style questions/ past papers.
	2	NEA AO2C/D Development of design proposals and protype. Theory – Design for manufacture and project management.	NEA Section C – Development of Design Proposal. Application of Knowledge; November Formal Assessment
	3	NEA AO2D Development of prototype. Theory – Revision	NEA section D – Development of prototypes Application of Knowledge Year 13 Internal Mock Examination
	4	NEA AO2D Development of prototype NEA AO3E Analysis and evaluation Theory - Revision	NEA Section E- Analysing & Evaluating. Application of Knowledge Year 13 Internal Mock Examinations
	5	Revision for examination of all previous theory topics.	A range of Examination Style practice Tests, past exam papers. Exemplar questions.

Opportunities for developing literacy skills and developing learner confidence and enjoyment in reading	Links to British Values	Links to Careers	Links to Other Personal Development
Research techniques, technology reference books, development of key terminology. Presentation styles, written and verbal responses to assessment both formative & summative.	Social, Moral and ethical awareness of fabric and fashion construction. Choices made in development to take into consideration individuals' beliefs, likes and dislikes.	• The world of design and make – research into influencing designers. • Career pathways identified through presentation Jan / Feb to yr. 9, help with Option choices. • Use of TV/ You Tube clips to see how products developed / constructed in industry.	Subject prefects. Design work. Development of wider life skills

Extra-Curricular and Co-Curricular Opportunities	Links with other subjects in the curriculum
KS3 D&T club, which KS5 students are involved in setting up and running projects.	Mathematics – measurement, costing, patten cutting, scaling up and down. Geography – fibres and fabrics from around the world, cotton growing, importing, exporting, environment issues. Business – QA / QC, advertising, and promotions. Consumer demand, trends, and influences. Physics – forces and movement, environment issues, power generation, systems, light. Batteries & circuits. Computing – layout, CAD, CAM, graphs, charts. Inputs, processes & outputs. Robotics and computer manufacturing systems. Ethics & Philosophy- cultures and religions.