THE BROMFORDS SCHOOL

ACHIEVE ENRICH PREPARE

The Bromfords School

Technology Department.

Intent of Curriculum

	The Bromfords School	Technology Department

Intent

To encourage students to recognise that the world around them is made of designed and created products that solve problems. To motivate students to become creative thinkers and innovators of tomorrow. Through DT students will acquire both practical and theoretical knowledge that helps in all aspects of life including their education, homes, and future careers.

Achieve

Develop skills that prepare them to become life-long learners. Students will independently make products in a variety of materials. They will learn to prepare food and about good nutrition. Through a variety of activities students will be learning to stay safe as well as take appropriate risks. They will learn to be confident using a range of tools and equipment. Students will understand research, product analysis, planning, designing, and evaluating. These skills support the wider school curriculum.

Enrich

We want to enthuse young people to recognise the links that DT has to all other areas of the curriculum and their everyday lives. That students will learn the world is an amazing place with many opportunities for them. That these range across many areas including engineering, architecture, hospitality, and catering trough to space innovation, food technology and & textiles design. That humans are continuing to explore and solve problems to make our world better. That through DT education students can improve their own lives, opportunities, the wider environment, and their community.

Prepare

DT will help prepare students for the world of work and further education. Students will need ever-changing skills set across their lifetime. Through Design and Technology, students can be taught to be independent thinkers, team players, adaptive and resilient. In DT students will have opportunities to work creatively, take risks, problem solve and explore the future developments in Engineering, DT, Textiles and Food.

Curriculum Map
What Technology at Bromfords look like?

Year 7	Year 8	Year 9	Year 10	Year 11
• Food 13 weeks • Technology 13 weeks • Textiles 13 weeks	• Food 13 weeks • Technology 13 weeks • Textiles 13 weeks	Students may choose to study one or more areas for the full year. This is an enrichment year that continues to build a balanced curriculum. Students explore projects while experiencing opportunities that build cultural capital alongside learning.	Students are preparing to take examinations in GCSE Food and Nutrition or GCSE Design technology. (GCSE DT can be taken with a Product design or textiles focus)	Students are preparing to take examinations in GCSE Food and Nutrition or GCSE Design technology. (GCSE DT can be taken with a Product design or textiles focus)
Food – Healthy eating Theory & Practical Learning planning, measuring, cooking, adapting and evaluation skills. Working with foods and nutrients to understand their impact on the human body. Use safely kitchen equipment. DT– Frames & Forces Theory & Practical Learning design, planning, make and evaluation skills. Working with timbers and polymers to understand properties. Use and understand CAD, CAM and laser cutters. Investigate forces and mechanisms. Textiles– Celebration Decorations Theory & Practical Learning design, organisation, make and evaluation skills. Working with textiles and embellishments to understand properties of materials including construction of fibres natural and synthetic. .Understand production of decorative textiles. Practice fine motor skills though hand stitching.	Food – Culture Theory & Practical Reinforcing planning, measuring and cooking techniques. Utilise hob and oven to create nutritious food that explores a range of cultures. Recognise ethical and staple food production methods. DT– PEWTER CASTING) Theory & Practical (2023-24 Recycled lights, CAD & circuits) Reinforcing design, planning, make and evaluation skills. Working with metals and electronics to understand properties. Use and CAD, CAM and laser cutters. Investigate the impact of materials on the environment. Textiles– Smart Materials and Technical textiles Bag project Theory & Practical Reinforcing design, research, make and evaluation skills. Working with sewing machines and smart materials including textiles to understand properties. Learn about designers and product development. Use machines safely.	Food –Theory & Practical • HEALTHY EATING • INGREDIENTS &METHODS • BAKE OFF • FAIRTRADE • FESTIVALS • BRITISH CLASSICS DT– Theory & Practical • STEM SPACE/ENVIROMENTAL HOUSE/ ENERGY GENERATION/SMART MATERIALS • PEWTER CASTING • RECYCLED LIGHTS (2023-24 NEW ELECTRONICS PROJECT) • DESIGNER INSPIRED CLOCKS Textiles– Theory & Practical • DENIM & ENVIROMENT • MODERN, SMART MATERIALS & FUTURE TECHNOLOGY • BAG & /3d PRINTING • DEISGNER WAISTCOAT • JEWLERY & ELECTRONIC TEXTILES	GCSE – DT Theory: • Materials – wood/metal/polymers • Smart Materials/Textiles • Electronics • Papers &Boards • Manufacturing • Energy & Environment • CAD & CAM • Embedding learning • Independent working • Developing answers to questions NEA Practice: • "Investing in me" • Personalised products and logo design – laser cutter/sublimation printing/pewter casting/traditional wooden box/mugs/bags • 30-35hours practice controlled assessment • Drawing skills • Modelling Skills • Computer and CAD development GCSE – Food & Nutrition Theory: • Food, nutrition and health • Food science • Food safety • Food choice • Food provenance • Embedding learning • Independent working • Developing answers to questions NEA Practice: • Task 1 Food Investigation • Task 2 Food Preparation • Online project &portfolio • Skills building and practice • Written & photographic evidence (1500 to 2000 words)	GCSE – DT Theory: • Core Technical Principals • Specialist Technical Principals • Designing & Make Principles NEA: • 30-35hours written controlled assessment • 1 student practical for NEA based on exam boards contextual challenge • 100 Marks 50% Revision • Preparation 2 hour written exam 100 marks 50% • Walking talking mocks • Long Questions • Full revision • Identifying personal targets GCSE – Food & Nutrition Theory: • Food, nutrition and health • Food science • Food safety • Food choice • Food provenance. NEA: • Task 1 Food Investigation • Task 2 Food Preparation • Written & photographic evidence • 100 Marks 50% Revision • Preparation 1 hour 45 min written exam 100 marks 50% • Walking talking mocks • Long Questions • Full revision • Identifying personal targets

Enrichment, Careers, Real-world Experience.

Enrichment: Technology covers a breadth of subject areas and through each of these students are offered opportunities to enrich their lives. Experiences offered include access to STEM based experiences and competitions from external providers run through the year. Through DT club students can access additional projects from electronics to marble runs. Homework projects have been designed to encourage students to develop independence and explore of personal interest across all disciplines. All year groups are offered an enrichment-based experience this may include trips or access to in school competitions and challenges. The curriculum content is designed to help students explore their world and understand how products and food are an important, exciting and integral part of our lives.

Careers: the food industry provides a considerable proportion of jobs in the UK. Engineering and technology-based careers are currently experiencing severe short of applicants. Within our curriculum there are explicit links made to work and the opportunities linked to DT, textiles, and food. Students are encouraged to think about careers beyond those they have experienced. Basildon borough is particularly short of skilled workers in these categories. The Department are introducing opportunities that link to careers through partnerships with industry. For example, Army catering core events and IET Faraday challenge. From these course students can access career through apprenticeships and university. Students can enter the workplace in practical jobs, technical, civil and software engineering, creative industries, architecture. Students are encouraged to realise that the skills they are acquiring relate to many jobs and support their wider education. The Department has invested in modern equipment that reflects the world of work that they are entering. This includes 3D printers, sublimation printers and an uptown date 3D CAD package. Students are able to progress to enter food science, retail food production or hospitality-based roles.

Real World Experiences: Through Technology lessons, Food and Textiles we focus on developing practical skills and theoretical knowledge. These areas together support students enter many different professions. The skills acquired go beyond practical measuring and use of equipment and provide foundations for continued learning. For example, through improving fine motor skills, problem solving, communication and teamwork. The Practical skills and theoretical knowledge provide foundations for an extensive range of careers. The curriculum in the technology curriculum supports students to engage with several real-world issues such as the environment, ethics and ecological impacts of products and food. The development of products in relation to history and major events. Students are encouraged to think about designing for the individual and think about users who are different from them; this helps them explore contexts around culture, people's differences, and individual needs. The food curriculum is designed to support our students gain a key life skill that allows them to continue to cook and plan nutritious food outside of school. This can also provide a basis for entry into a food and nutrition-based profession. The Technology department offer a range of visits and experiences to widen our students understanding of the world. The projects are designed to help students explore the world across many subject areas

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Year 7 Technology/Food/Textiles – Intent: **To secure an understanding of Technology, Textiles or Food. To expose students to a range of technology, equipment, skills and theoretical knowledge that can enrich a student's life either into future study, careers or their everyday life. Note: Each project is taught in carousel and dependent on rooms and equipment. Therefore, each project can be taught in any sequence the sequence of practical lessons is designed to ensure knowledge is scaffolded appropriately within each distinct project. The department also covers recall activities/ robotics/ biomimicry/innovation/design and creativity through supplementary lessons that can be utilised to complete learning throughout ks3. These ensure there are consistent and available curriculum to support learning in all situations.**

Technology	Technology	Food	Food	Textiles	Textiles
Scheme of Work: Frames & Forces theory **Learning Intent:** • To introduce students to material properties of timbers and polymers. • Learn about forces and structures to introduce engineering-based concepts. • To explore 2D drawing & Computer Aided Design methods. Understand laser cutting and CAM. • Learn research, planning, and evaluation skills	**Scheme of Work: Frames and Forces Practical** **Learning Intent:** • To learn to be independent and safe in workrooms • To develop maths skills such as measuring and problems solving • To improve fine motor skills through the use of tools and equipment. • Use basic hand tools, workshop equipment and jigs. • Utilise planning and order to produce products. • Learn about joining materials. • Learn about finishes and treatments	**Scheme of Work: Healthy Eating theory** **Learning Intent:** • To introduce students to nutrition, micro and macro nutrients why our bodies need them and where they are found. • To plan, adapt, analyse and evaluate food dishes • To understand links between food, diet and a healthy lifestyle • Learn research, planning, and evaluation skills	**Scheme of Work: Healthy eating practical** **Learning Intent:** • Learn how to work independently with ovens, hobs and knives. • Work safety and hygienically in a food room. Minimise risk to health within a kitchen including food temperatures and storage. • Learn basic cooking methods including boiling, baking, chopping, slicing, measuring, rubbing in and mixing.	**Scheme of Work: Celebration Decoration theory** **Learning Intent:** • Learn about fibres fabrics and how they are constructed into textiles. What properties they have and what textiles are. • Recognise forms of decoration including printing, dying and embellishments. • Learn about the ethics and environmental impact of product creation. • Utilise design skills and annotation to explain ideas. • Learn research, planning, and evaluation skills	**Scheme of Work: Celebration Decoration practical** **Learning Intent:** • Learn fine motor skills and perseverance through hand stitching, cutting and pinning tasks. • Work safely and risk assess their environment. • To work creatively to explore properties of materials used in textiles. • To use planning to plan and order work to achieve tasks.
Measuring Impact through: Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Practice Examination Paper covering years content.

Year 8 Technology/Food/Textiles – Intent: **To secure an understanding of Technology, Textiles or Food. To expose students to a range of technology, equipment, skills and theoretical knowledge that can enrich a student's life either into future study, careers or their everyday life. Note: Each project is taught in carousel and dependent on rooms and equipment. Therefore, each distinct project can be taught in any sequence. The department also covers recall activities/ robotics/ biomimicry/innovation/design and creativity through supplementary lessons that can be utilised to complete learning throughout the ks3.**

Technology	Technology	Food	Food	Textiles	Textiles
Scheme of Work: Frames & Forces theory (2023 Changes to an electronics project) **Learning Intent:** • To introduce students to material properties of timbers and polymers. • Learn about forces and structures to introduce engineering-based concepts • To explore 2D drawing & Computer Aided Design methods. Understand laser cutting and CAM. • Developing research, planning, and evaluation skills. • To learn to be independent and safe in workrooms • To develop maths skills such as measuring and problems solving • To improve fine motor skills through the use of tools and equipment.	**Scheme of Work: Frames and Forces Practical (2023 Changes to an electronics project "Light and the Environment")** **Learning Intent:** • To introduce students to material properties of timbers and polymers. • Learn about forces and structures to introduce engineering-based concepts • To explore 2D drawing & Computer Aided Design methods. Understand laser cutting and CAM. • Developing research, planning, and evaluation skills. • To learn to be independent and safe in workrooms • To develop maths skills such as measuring and problems solving • To improve fine motor skills through the use of tools and equipment	**Scheme of Work: Cultural food theory** **Learning Intent:** • To solidify students' knowledge of the functions, micro and macro nutrients why our bodies need them and where they are found. • To understand the impact of cross contamination and risks associated with food hygiene and storage. • To understand links between food, diet and our environment. Including its importance geographically/food miles and culturally. • Reinforce research, planning, and evaluation skills.	**Scheme of Work: cultural food practical** **Learning Intent:** • To be independent and safe in workrooms • To develop skills of adaptation and presenting food • To work with residual heat and increase technical proficiency from core cooking learnt in year 7. • To practice solidify fine motor skills through the use of knives and equipment	**Scheme of Work: Smart materials and technical textiles theory** **Learning Intent:** • Learn about modern and smart materials. how they are constructed into textiles and their impact on our world. • Recognise simple forms of electronics and how they can be used in textiles. Investigate innovation in textiles. • Learn about the ethics and environmental impact of product creation. One of, mass and batch production methods are explored • Progress design skills and annotation to explain ideas fully. • Reinforce research, planning, and evaluation skills.	**Scheme of Work: Smart materials and technical textiles practical** **Learning Intent:** • Learn fine motor skills and perseverance through sewing machine use, stitching, cutting and pinning tasks. • Work safely and risk assess their environment. • To work creatively to problem, solve and plan a project. • To design, plan and make a bag using both textiles' skills and modern processes. order work to achieve tasks. • Use CAD and CAM skills to sublimation print and vinyl cut.
Measuring Impact through: Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Practice Examination Paper covering years content.

Year 9 Technology – Intent: **To secure an understanding of Technology, Textiles or Food. To expose students to a range of technology, equipment, skills and theoretical knowledge that can enrich a student's life either into future study, careers or their everyday life. Note: Each project is taught in carousel by the same teacher and dependent on rooms and equipment. Therefore, each distinct project can be taught in any order.**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Work: STEM 4 weeks & 4 weeks Pewter casting & Smart Materials Learning Intent: **Learning Intent:** To learn about manufacturing through modelling in 2D CAD packages and casting metal. SMART MATERIALS • Material properties and uses • Modern and new materials • Application in production and product design SPACE • History and how the society has impacted product development • Space race • Innovation & technological advances. • Creativity and practical problem solving. Model making Learning research, planning, and evaluation skills • To secure knowledge about modern and smart materials and their impact on the modern world. • Recognise the importance of innovation in design. Problem solving. • Use these skills to complete projects from conception to evaluation. • Solidify research, planning, and evaluation skills • Learn about innovation and technological advancements in material technology. • Explore biomimicry and innovation in design	**Scheme of Work: STEM** **Learning Intent:** To secure an understanding of STEM based careers and engineering and how it affects our world. To secure an understanding of STEM based careers and engineering and how it affects our world. Developing research, planning, and evaluation skills to design with a team. Work with smart materials and metals. Investigate the needs of users to produce Through projects including: ENVIROMENTAL HOUSE • Graphic techniques • Energy Saving • Environmental impacts • Designing for a user ENERGY GENERATION Practical action project • Problem solving • Team work • Motion and forces • Ethics and product design • Innovation Learning research, planning, and evaluation skills	**Scheme of Work: Prototyping aftershave & Perfume bottles** **Learning Intent:** To learn and design through modelling in 3D CAD packages. To design using briefs and specifications. To learn about and solidify 2D CAD packages and sublimations printers to improve product design. • To learn about 3D Printers, sublimation printers and CAM to create objects and embellishments for textiles. • To learn about production methods. unique, batch and mass. As well as machinery and there uses. • . To explore working as a team. • To learn about planning and development of projects through modelling and testing.	**Scheme of Work: Recycled Lights and Electronics** **Learning Intent:** To learn and design through drawing and 2D CAD packages. To recognise and utilise design influences to develop. To learn about and solidify 2D CAD packages and sublimations printers to improve product design. • To learn about 3D Printers, sublimation printers and CAM to create objects and embellishments for textiles. • To learn about production methods. unique, batch and mass. As well as machinery and there uses. • . To explore working as a team. To learn about energy production, electronics and utilise them within their work.	**Scheme of Work: Designer Inspired Clock** **Learning Intent:** To learn about 3D Printers and CAM to create their own designer inspired product.. To learn about unique, batch and mass production techniques. To learn to evaluate and plan work. Reinforcing research, planning, and evaluation skills. This project is designed to encourage students to think about their wider world. To be innovative and utilise their own learning to problem solve and design their own outcomes. To reflect on the design work of others and apply their knowledge and skills to their own project. Students use theoretical knowledge of materials to explore design work and brief. . Explore biomimicry and innovation in design	

Measuring Impact through: Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Practice Examination Paper covering years content.

Year 9 Textiles – Intent: To secure an understanding of Technology, Textiles or Food. To expose students to a range of technology, equipment, skills and theoretical knowledge that can enrich a student's life either into future study, careers or their everyday life. Note: Each project is taught in carousel and dependent on rooms and equipment. Therefore, each distinct project can be taught in any order.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Work: Hand stitching decorations/ 50th Celebration quilted square **Learning Intent:** • To secure an understanding of fabric, fibres and construction of textiles. • To learn about designers • Explore the impact of textiles on the environment. • To analyse textiles and polymers and their properties. • Extend this knowledge to timbers, metals and other materials that are use with textiles. • Solidify research, planning, and evaluation skills	**Scheme of Work: Denim and the environment** **Learning Intent:** • To secure skills in making using hand stitching techniques and decorative methods and designing. • To secure knowledge about dying and printing fabric. • Use joining and toiles to adapt and improve designs through modelling. • Organise and plan work. Consider methods of production and how they are used within producing. • Explore user testing and considering the needs of the customer.	**Scheme of Work: Designer inspired Bags** **Learning Intent:** • To secure skills in making using sewing machines and patterns. • Learn about the historical development of fashion and production. • Consider history and social impact on design. The needs and wants of the user. • Complete, evaluate and test products • Utilise CAD and CAM to create accurate and patterns for use.	**Scheme of Work: Acrylic Jewellery** **Learning Intent:** • To learn about and solidify 2D CAD packages and sublimations printers to improve textiles. • To secure knowledge about modern and smart materials and their impact on the modern world. • Recognise the importance of innovation in design. Problem solving. • Use these skills to complete projects from conception to evaluation. • Solidify research, planning, and evaluation skills • Learn about innovation and technological advancements in material technology.	**Scheme of Work: Modern, Smart materials and future technology** **Learning Intent:** • To learn about 3D Printers, sublimation printers and CAM to create objects and embellishments for textiles. • To learn about production methods. unique, batch and mass. As well as machinery and there uses. • Investigate and understand biomimicry, robotics, and the impact on technology.	**Scheme of Work: Designers Waistcoat** **Learning Intent:** To learn to evaluate and plan work. To explore working as a team. To learn about energy production, electronic textiles and utilise them within their work. This project is designed to encourage students to think about their wider world. To be innovative and utilise their own learning to problem solve and design their own outcomes.
Measuring Impact through: Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Practice Examination Paper covering years con tent.

Year 9 Food – Intent: To secure an understanding of Technology, Textiles or Food. To expose students to a range of technology, equipment, skills and theoretical knowledge that can enrich a student's life either into future study, careers or their everyday life.

Note: Each project is taught in carousel and dependent on rooms and equipment. Therefore, each distinct project can be taught in any order.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Work: Healthy Eating Ingredient and Methods **Learning Intent:** Learning practical skills and applying practical knowledge to theory. **Learning Intent:** To learn about macro and micro nutrients and their impact on the human body. Learn about this through theoretical and applied knowledge of preparing food. Contents to include: • Eatwell Guide recap • What is the purpose of the Eatwell Guide • Nutritional Needs Theory • What affects nutritional needs • PRAC Tuna Pasta Or Omelette • What are the nutritional needs of a teenager? • Meat Free Protein Theory • What are alternative sources of protein? • PRAC Vegetable stir fry • What are alternative sources of protein? • Meat Theory • What are the nutritional benefits of meat? • PRAC Bolognaise or Chilli Con Carne • What are the nutritional benefits of meat? • Complex Carbohydrates • What is the function of carbohydrates? • PRAC Fresh Pasta • What are the nutritional benefits of carbohydrates? • Simple Carbohydrates • What is the function of carbohydrates? • PRAC Cinnamon Swirls • What are the nutritional benefits of carbohydrates? • End of Unit Assessment/ Evaluations • How to write a successful recipe • PRAC Improvement choice • How to write a recipe with successful outcomes		**Scheme of Work: Bake Off** **Learning Intent:** To learn about preparation and presentation of food. Learn through theoretical and applied knowledge of preparing food. Contents to include: • Theory - Raising Agents • Theory - What Ingredients do • PRAC - Mini Investigation • PRAC - Tray Bake • Theory -Investigation Evaluation • Theory - Food Styling • PRAC - Tea cake Challenge • PRAC - Savoury - Pastry Pin wheels/twists • Theory – What, how and why is food Packaged? • Theory- Flavours and fillings • PRAC - Sweet's pastry Pies	**Scheme of Work:** **Learning Intent:** To learn about the impact of food production on our world. The ethics and consequences on people and the environment. Learn through theoretical and applied knowledge of preparing food. These include: • What is Fairtrade? (chocolate) • PRAC Chocolate Cupcakes • Banana Journey • PRAC Banana and Pineapple American Pancakes • Food Miles • PRAC Veggie Rice • Locally Grown Food • PRAC Samosa's • seasonal food • PRAC Poached Pear	**Scheme of Work: Festival food:** **Learning Intent:** To learn how to plan prepare, adapt and evaluate food. Understand the nutritional contents of food and how cooking affects this. Apply knowledge and skills from the first two products to this topic. Use the topic to learn through theoretical and applied knowledge of preparing food. Contents to include: • Serving Food • High Risk Foods • PRAC Chips • Food Choice • PRAC Burgers • BANK HOL • PRAC PIZZA • Sweet/Season • PRAC Pancakes • Costing • PRAC Cupcakes • evaluate and plan • PRAC Donuts Final lessons are based around ensuring curriculum has been covered and lessons are based on recalling and consolidating information.	
Measuring Impact through: Assessment of project and written work each half term.		***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Assessment of project and written work each half term.	***Measuring Impact through:*** Practice Examination Paper covering years content.

Year 10 DT – Intent: To develop knowledge about Materials and manufacturing. Utilise practical and theoretical knowledge and skills to practice skills related to an NEA as part of the GCSE course. To apply theoretical and technical content about materials and manufacturing to plan, design and make products. To experience the structure of theory examination and questions and be confident in completing this utilising the knowledge learnt.

Autumn THEORY 1&2	Autumn NEA 1&2	Spring THEORY 1&2	Spring NEA 1&2	Summer 1	Summer 2
Scheme of Work: Investing in me - 50% Theory 50% PROJECT **Learning Intent: THEORY practice recalling and utilising knowledge including:** **MAKE** 1. **LOGO DESIGN** 2. **PIPE LIGHT** 3. **SUBLIMATION PRINTING & VINYL** **THEORY** 1. **PLASTICS** 2. **TIMBERS** 3. **METALS** 4. **PAPERS & BAORDS** 5. **TEXTILES** 6. **CAD -2D DESIGN*** 7. **MATERIAL PROPERTIES**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT** **Learning Intent: Practice applying and utilising knowledge to complete a project:** **INTRODUCTION TO PROJECT WORK** 1. **RESEARCH** 2. **PRODUCT ANNALYSIS** 3. **USERS NEEDS** 4. **DESIGNERS** 5. **BRIEF & SPECIFICATION** 6. **DESIGN IDEAS** 7. **DESIGN IDEAS 2** 8. **FINAL DESIGNS** 9. **MATERIAL DECISIONS** 10. **MODELLING and TESTING**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT** **Learning Intent:** Make and **practice recalling and utilising knowledge including:** 1. **PACKAGING *** 2. **PEWTER CASTING** 3. **VACUUM FORMING** 4. **LASER CUTTING** **THEORY** 1. **INDUSTRY -PEOPLE, CULTURE & SOCIETY** 2. **ENTERPRISE & SUSTAINABILITY** 3. **ENERGY & STORAGE** 4. **MOVEMENT & MECHANISMS** 5. **SYSTEMS** 6. **DEVELOPEMNTS IN NEW MATERIALS**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT** **Learning Intent:** Practice **applying and utilising knowledge to complete a project:** 1. **MODELLING & TESTING papers & boards** 2. **MATERIALS** 3. **PLANNING** 4. **USER TESTING** 5. **MANUFACTURING SPECIFICATION – EQUIPMENT & MATERIALS Lists.** 6. **3D CAD** 7. **H&S risk assessments** 8. **MAKING x 5 hours Documented Additional time sort off timetable**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT/NEA** **Learning Intent: THEORY practice recalling and utilising knowledge including:** **THEORY** 1. **SPECIALIST MATERIAL PLASTIC** 2. **SPECIALIST MATERIAL TIMBERS** 3. **SPECIALIST MATERIAL PAPERS & BOARD** 4. **SPECIALIST MATERIAL ELECTRONICS** 5. **SPECIALIST MATERIAL TEXTILES** 6. **SOCIAL & ECO FOOTPRINT** 7. **JEWLERY OR DESK TIDIES** 8. **3D PRINTING** **Specialist areas cover:** 9. **ORIGINS** 10. **STOCK FORMS** 11. **PROCESSES** 12. **FINISHS**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT/NEA** **Learning Intent:** Practice **applying and utilising knowledge to complete a project:** 1. **SUSTAINABILITY USING 6Rs to make products** 2. **MAKING COMPLETED** 3. **DEVELOPMENTS FROM USER DOCUMENTED** 4. **TESTING** 5. **EVALUATION** **JUNE 1st Students may start NEA LIVE** 1. **RESEARCH** 2. **PRODUCT ANNALYSIS** 3. **USERS NEEDS**
Measuring Impact through: Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines. PPE Examination. Mock examination 2 hours.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines. PPE Examination. Mock examination 2 hours.	***Measuring Impact through:*** Assessment of written theory work. RAG rating Theory knowledge. To determine plan of theory lessons.	***Measuring Impact through:*** Final Examination Paper and submission to board of NEA.

Year 10 DT Textiles– Intent: To develop knowledge about Materials and manufacturing. Utilise practical and theoretical knowledge and skills to practice skills related to an NEA as part of the GCSE course. To apply theoretical and technical content about materials and manufacturing to plan, design and make products. To experience the structure of theory examination and questions and be confident in completing this utilising the knowledge learnt.

Autumn THEORY 1&2	Autumn NEA 1&2	Spring THEORY 1&2	Spring NEA 1&2	Summer 1	Summer 2
Scheme of Work: Investing in me - 50% Theory 50% PROJECT **Learning Intent: THEORY practice recalling and utilising knowledge including:** **MAKE** 1. **5oth Anniversary Blanket** 2. **SUBLIMATION PRINTING & VINYL** 3. **Decorative techniques** **THEORY** 4. **PLASTICS** 5. **TIMBERS** 6. **METALS** 7. **PAPERS & BAORDS** 8. **TEXTILES** 9. **CAD -2D DESIGN*** 10. **MATERIAL PROPERTIES**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT** **Learning Intent: Practice applying and utilising knowledge to complete a project:** **INTRODUCTION TO PROJECT WORK. Investigating the work of designers and fashion influence. Dying and Printing.** 1. **RESEARCH** 2. **PRODUCT ANNALYSIS** 3. **USERS NEEDS** 4. **DESIGNERS** 5. **BRIEF & SPECIFICATION** 6. **DESIGN IDEAS** 7. **DESIGN IDEAS 2** 8. **FINAL DESIGNS** 9. **MATERIAL DECISIONS** 10. **MODELLING and TESTING**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT** **Learning Intent:** Make and **practice recalling and utilising knowledge including:** 1. **PACKAGING 2D Design and Labelling*** 2. **PEWTER CASTING** 3. **VACUUM FORMING** 4. **LASER CUTTING and pattern making A Line Skirts** **THEORY** 5. **INDUSTRY -PEOPLE, CULTURE & SOCIETY** 6. **ENTERPRISE & SUSTAINABILITY** 7. **ENERGY & STORAGE** 8. **MOVEMENT & MECHANISMS** 9. **SYSTEMS** 10. **DEVELOPEMNTS IN NEW MATERIALS** 11. **Using patterns to make A Line skirts and developing patterns.**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT** **Learning Intent:** Practice **applying and utilising knowledge to complete a project:** 1. **MODELLING & TESTING Toiles** 2. **MATERIALS** 3. **PLANNING** 4. **USER TESTING** 5. **MANUFACTURING SPECIFICATION – EQUIPMENT & MATERIALS Lists.** 6. **3D CAD** 7. **H&S risk assessments** 8. **MAKING x 5 hours Documented Additional time sort off timetable** 9. **Completing and Evaluation final designs.**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT/NEA** **Learning Intent: THEORY practice recalling and utilising knowledge including:** **THEORY** 1. **SPECIALIST MATERIAL PLASTIC** 2. **SPECIALIST MATERIAL TIMBERS** 3. **SPECIALIST MATERIAL PAPERS & BOARD** 4. **SPECIALIST MATERIAL ELECTRONICS** 5. **SPECIALIST MATERIAL TEXTILES** 6. **SOCIAL & ECO FOOTPRINT** 7. **JEWLERY OR DESK TIDIES** 8. **3D PRINTING** **Specialist areas cover:** 9. **ORIGINS** 10. **STOCK FORMS** 11. **PROCESSES** 12. **FINISHS**	**Scheme of Work: Investing in me - 50% Theory 50% PROJECT/NEA** **Learning Intent:** Practice **applying and utilising knowledge to complete a project:** 1. **SUSTAINABILITY USING 6Rs to make products** 6. **MAKING COMPLETED** 7. **DEVELOPMENTS FROM USER DOCUMENTED** 8. **TESTING** 9. **EVALUATION** **JUNE 1st Students may start NEA LIVE** 4. **RESEARCH** 5. **PRODUCT ANNALYSIS** 6. **USERS NEEDS**
Measuring Impact through: Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating Theory knowledge. To determine plan of theory lessons.	***Measuring Impact through:*** Final Examination Paper and submission to board of NEA.

	PPE Examination. Mock examination 2 hours.		PPE Examination. Mock examination 2 hours.		

Year 11 DT – Intent: To develop knowledge about Materials and manufacturing. Utilise practical and theoretical knowledge and skills to solidify and apply knowledge. To complete NEA as part of the GCSE course. To apply theoretical and technical content about materials and manufacturing to plan, design and make products. To experience the structure of theory examination and questions and be confident in completing this utilising the knowledge learnt.

Autumn THEORY 1&2	Autumn NEA 1&2	Spring THEORY 1&2	Spring NEA 1&2	Summer 1	Summer 2

Scheme of Work: 50% Theory 50% NEA
Learning Intent: THEORY recalling and utilising knowledge including:
1. SPECIALIST MATERIAL PLASTIC
2. SPECIALIST MATERIAL TIMBERS
3. SPECIALIST MATERIAL PAPERS & BOARD
4. SPECIALIST MATERIAL ELECTRONICS
5. SPECIALIST MATERIAL TEXTILES
6. SOCIAL & ECO FOOTPRINT
 	
Specialist areas cover:
• ORIGINS
• STOCK FORMS
• PROCESSES
• FINISHS
	Scheme of Work: 50% Theory 50% NEA
	Learning Intent: NEA applying and utilising knowledge to complete:
	
	NEA LIVE – contextual challenges as directed by AQA
	1. DESIGNERS
	2. BRIEF & SPECIFICATION
	3. DESIGN IDEAS
	4. DESIGN IDEAS 2
	5. FINAL DESIGNS
	6. MATERIAL DECISIONS
	  1. MODELLING
	  2. MODELLING & TESTING
	  3. MATERIALS
	  4. PLANNING
	  5. USER TESTING
	  6. MANUFACTURING SPECIFICATION – EQUIPMENT & MATERIALS Lists.
		Scheme of Work: 50% Theory 50% NEA
		Learning Intent: THEORY practice recalling and utilising knowledge including:
		1. INDUSTRY -PEOPLE, CULTURE & SOCIETY
		2. ENTERPRISE & SUSTAINABILITY
		3. ENERGY & STORAGE
		4. MOVEMENT & MECHANISMS
		5. SYSTEMS
		6. DEVELOPEMNTS IN NEW MATERIALS
			Scheme of Work: 50% Theory 50% NEA
			Learning Intent: NEA practice applying and utilising knowledge to complete:
			
			NEA LIVE – contextual challenges as directed by AQA
			
			NEA MAKING
			1. 3D & 2D CAD
			2. H&S risk assessments
			3. MAKING x 5 hours Documented Additional time sort off timetable
			4. MAKING COMPLETED
			5. DEVELOPMENTS FROM USER DOCUMENTED
			6. TESTING
			7. EVALUATION
				Scheme of Work: 50% Theory 50% NEA
				NEA Final submission deadline. Students may have lessons after Easter to complete dependent on JCQ guidance and deadlines.
				
				Learning Intent: THEORY - RECALL & RETENTION Tasks are explored to support independent selection and revision or knowledge based on students prior learning.
				
				Revision - provide resources and lessons based on:
				• Weaknesses shown in PPE,
				• RAG rating documents for students.
				• Examination technique planning answers
				
				SESSIONS utilise: Walking talking answers/I WE You/ Retention & Recall activities/AFL techniques at teacher discretion.
				
				Students solidify knowledge for LONG ANSWER QUESTIONS FOR:
				• Applications of materials
				• Problem solving
					Students continue to work towards examinations as planned in Summer 1.

				• 6Rs/LCA/Energy • Specialist Materials and processes	
Measuring Impact through: Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines. PPE Examination. Mock examination 2 hours.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines.	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term within boundaries of JCQ guidelines. PPE Examination. Mock examination 2 hours.	***Measuring Impact through:*** Assessment of written theory work. RAG rating Theory knowledge. To determine plan of theory lessons.	***Measuring Impact through:*** Final Examination Paper and submission to board of NEA.

<u>Year 10 Food– Intent:</u> To be confident in exploring a range of food and cooking techniques and acquire practical skills in preparation for year 11 NEA. To learn theoretical and technical content about food preparation and nutrition and utilise this to plan, design and make food. To explore the structure of theory examination and questions and to apply their knowledge to this.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Scheme of Work: Food Safety **50% Theory 50% PROJECT** **Learning Intent:** To introduce core elements of theory knowledge: • Food spoilage and high risk foods • Bacteria and enzymes • Danger zones and cross contamination • Food Storage & Temperatures • Preservation techniques Practical application of food science through: • Jam • Vegetable crisps • Meatballs • Koftas • Fried Chicken		**Scheme of Work: Food Choice** **50% Theory 50% PROJECT** **Learning Intent:** To introduce core elements of theory knowledge: • Food choice and influencing factors • Allergens and intolerances • Religion • Vegetarianism • Seasonality and economy • Food Labelling and sensory testing • Marketing • Food Hygiene. Practical application of food science through: • Mini pasties and pies • Anzac biscuits • Chocolate fondant • Chicken ballotine • Spring rolls • Cheese sauce		**Scheme of Work: Food Providence** **50% Theory 50% PROJECT** **Learning Intent:** To introduce core elements of the theory knowledge: • Farm Grown- organic and intensive farming • Farm reared and wild gathered food • Caught food • Airmiles and carbon footprint • Manufacturing foods Practical application of food science through: • Mini pasties and pies • Anzac biscuits • Chocolate fondant • Chicken ballotine • Spring rolls • Cheese sauce	**Scheme of Work: Food Science** **50% Theory 50% PROJECT** **Learning Intent:** To introduce core elements of the theory knowledge: • Denaturation • Dry and moist heat • Drying properties and dextrinization/ caramelization/ Evaporation • Aeration and shortening • Plasticity and emulsification • Gelatinisation starch • Coagulation of protein Practical skills and solidification of knowledge through making: • Mayonnaise/hollandaise/coleslaw • Swiss rolls • Bread • Puff tarts • Upside down cake • Burgers and stir-fry
Measuring Impact through: Assessment of written theory work. RAG rating NEA work each half term within	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term	***Measuring Impact through:*** Assessment of written theory work. RAG rating NEA work each half term	***Measuring Impact through:*** Assessment of written theory work. RAG rating Theory knowledge. To determine plan of theory lessons.	***Measuring Impact through:*** Final Examination Paper covering years content.

boundaries of JCQ guidelines.	within boundaries of JCQ guidelines. PPE Examination	within boundaries of JCQ guidelines.	within boundaries of JCQ guidelines. PPE Examination.		

Year 11 Food– Intent: **To solidify knowledge about food, nutrition and cooking techniques. Utilise practical and theoretical knowledge and skills to complete an NEA as part of the GCSE course. To apply theoretical and technical content about food preparation and nutrition to plan, design and make food. To understand the structure of theory examination and questions and be confident in completing this utilising the knowledge learnt.**

<table>
<tr><th>Autumn 1</th><th>Autumn 2</th><th>Spring 1</th><th>Spring 2</th><th>Summer 1</th><th>Summer 2</th></tr>
<tr>
<td colspan="2">Scheme of Work: 50% Theory 50% NEA

Learning Intent: To consolidate core elements of theory knowledge. To complete NEA 1 as part of the GCSE Curriculum. To Beginning working on NEA 2.

The topic and area as determined by examination board requirements and students choice. Knowledge is applied

Knowledge:
• Investigation 1
• Investigation 2
• Summary and hypothesis
• Data collection
• Exploring findings and research
• Analysis
• Evaluation
• Consolidating learning from Yr 10 theory sessions

Skills:
• Practical investigation 1
• Practical investigation 2
• Examination technique planning answers</td>
<td colspan="2">Scheme of Work: 50% Theory 50% NEA

Learning Intent: To consolidate core elements of theory knowledge. To complete NEA 2 as part of the GCSE Curriculum.

The topic and area as determined by examination board requirements and students choice.

Knowledge:
• Planning
• Preparing
• Evaluating
• Consolidating learning from Yr 10 theory sessions

Skills:
• Demonstration of skills learnt in year 10
• Making skills demonstrating consolidation of year 10
• Examination technique and working under examination conditions when cooking.</td>
<td>Scheme of Work: 50% Theory 50% NEA
NEA Final submission deadline. Students may have lessons after Easter to complete dependent on JCQ guidance and deadlines.

Learning Intent: THEORY - RECALL & RETENTION Tasks are explored to support independent selection and revision or knowledge based on students prior learning.

Revision - provide resources and lessons based on:
• Weaknesses shown in PPE,
• RAG rating documents for students.
• Examination technique planning answers

SESSIONS utilise: Walking talking answers/I WE You/ Retention & Recall activities/AFL techniques at teacher discretion.

Students solidify knowledge for LONG ANSWER QUESTIONS FOR: food choice, providence, safety and science</td>
<td>Students continue to work towards examinations as planned in Summer 1.</td>
</tr>
<tr>
<td>Measuring Impact through:
Assessment of written theory work. RAG rating NEA work each half term</td>
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Assessment of written theory work. RAG rating Theory knowledge. To determine plan of theory lessons.</td>
<td>Measuring Impact through:
Final Examination Paper and submission to board of NEA.</td>
</tr>
</table>

within boundaries of JCQ guidelines.	PPE Examination. Mock examination 2 hours.		PPE Examination. Mock examination 2 hours.		