

# The Quality of Education: **Technology - Curriculum Map**

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**St Christopher's:**  
A Church of England Academy

# Technology - Curriculum Map

**Please note:** Courses are always under constant development as Technology is an ever-evolving subject but were correct at the review date.

## Key Stage 3

- Pupils arrive with minimal or very diverse experiences of Technology.
- Baseline aptitude tests and KS2 data are used to loosely set pupils (reviewed each year).

**Year 7 Induction:** After a baseline assessment period, pupils are loosely set and then move round four specialist rooms with four different specialist teachers working with a wide range of different materials on a diverse range of tasks, designed to develop a broad balanced curriculum. The starting point for each group will be different but the rotation the same. (A fifth module in the rotation has been called STEM and is being used to teach about cross-curricular eco issues). Accurate assessment data is shared each module and each class's first teacher of the year mentors that class to ensure suitable progress is being made and communicates with parents.

Year	Baseline Assessment (4 lessons)	DT Induction Module (13/14 lessons)	Food Induction Module (13/14 lessons)	Graphics Induction Module (13/14 lessons)	Textiles Induction Module (13/14 lessons)
7	<p><b>Baseline assessment</b> Three aptitude tasks, formally set, timed and designed to test different Technology skills. Tour of department facilities and meet the staff.</p> <p>Individual presentations on research homework "Our designed world".</p> <p><b>Homework:</b> "Our designed world" research and presentation.</p>	<p><b>Task 1: Model boat design</b> Health and safety. Practical skills, marking out, sawing, filing, sanding and drilling. The safe use of the sander, drill and scroll saw. Planning the boat build – tools, sequence, H&amp;S and quality controls. Design ideas and development of ideas. Manufactured boards.</p> <p><b>Homework:</b> <i>Timbers and tools.</i></p> <p><b>Task 2: Electronics and Control</b> Pupils create a virtual electronic lighthouse circuit Electricity – key questions Circuits and electronic components Series and parallel Component symbols Sensors and systems Microcontrollers Application of control electronics e.g. lighthouse Programming of microcontroller based circuits Wider use of control</p> <p><b>Homework:</b> <i>Types of switch Applications of light sensors</i></p>	<p><b>Task: Healthy balanced nursery school food</b> Hygiene and safety routines. Practical skills, bridge and claw cutting techniques, peeling, onion preparation, combining, blending, boiling, simmering, grilling, baking, grating, portion control, weighing and measuring. The safe use of the hob, grill &amp; oven. Enzymic browning in fruits and vegetables. The Eatwell Guide &amp; adapting recipes for health (extension – individual nutrients). Planning – Ingredients, Equipment, Order of work, Timing, Health &amp; Safety and Reasons for Choice. Sensory evaluation.</p> <p><b>Homework:</b> <i>Kitchen safety and hygiene Sensory evaluation Planning and preparation for making Revision for test</i></p>	<p><b>Task: Fruity Air freshener</b> Health &amp; safety. Introduction to typography, product analysis, Packaging symbols/logos, design skills, following a design specification &amp; 2D design. Introduction to basic tools, CAD, development of colour/effects, lettering development, basic card modelling with accurate use of tools and equipment. Self-assessment of skills and evaluation.</p> <p><b>Homework:</b> <i>Theme page Typography Descriptive words Planning flow diagram. Advertising Poster</i></p>	<p><b>Task: Clare Youngs inspired Animal Wall hanging.</b> Health and Safety How to use the sewing machine: threading up, safe use, basic stitching, plain seams, hems, applique. Mark- making Block printing. Cutting with fabric scissors. Pining together for simple construction of wall hanging. Designer research and analysis of designer's work. Design idea communication and annotation – this is peer assessed. Evaluation of practical and design work.</p> <p><b>Homework:</b> <i>1. Key words -Wordsearch and spellings and definitions - tested. 2. Mark making work sheet. 3. Create a help sheet to explain one decorative technique. 4. Plan of making for the wall hanging 5. Evaluation of finished product.</i></p>

**Year 8 Progression modules:** Pupils continue to move round four specialist rooms with four different specialist teachers working with different materials on a diverse range of tasks, designed to develop a broad balanced curriculum. The starting point for each group will be different but we aim to repeat the year 7 rotation pattern shown previously above. (A fifth module in the rotation has been called STEM and is being used to teach about cross-curricular eco issues). Accurate assessment data is shared each module and each class's first teacher of the year mentors that class to ensure suitable progress is being made and communicates with parents.

Year	DT 1 Progression Module (13/14 lessons)	Food Progression Module (13/14 lessons)	Graphics Progression Module (13/14 lessons)	Textiles Progression Module (13/14 lessons)
8	<p><b>Task: House of the Future</b>            Setting up and login into Fusion 360.            Navigation of fusion and mouse controls.            3D tasks, sketching, extrusion, revolve, loft, sweep, fillet and chamfer.            Specification for house - building regulations, eco design.            Design skills - orthographic, 2 point-perspective, oblique and isometric            Design ideas based on the chosen designers.            Development of idea and orthographic drawing of final design.            Forces and stresses.            Mechanical movements.            Levers.            Final 3D design of their own house in Fusion 360.            Evaluation of final design against specification.</p> <p><b>Homework:</b>  <i>Designer research</i>  <i>CAD CAM</i>  <i>Planned obsolescence</i>  <i>Drawing styles</i></p>	<p><b>Task: Healthy, balanced, multicultural meals</b>            Recap / review of year 7 food work.            Staple foods &amp; energy balance and nutrient requirements at different ages.            Packaging &amp; nutritional labelling.            Sauce making, reduction sauces and starch-based sauces (all-in-one), investigating the science of gelatinisation.            Hob control, types, cooking and uses of types of rice and pasta (al dente).            Rubbing in and baking revision.            Adapting recipes and balancing healthy family meals.            Comparison of homemade and bought meals.            International food influences, ingredients and traditions (UK, Indian, Italian, Thai, Spanish, Chinese, American etc).            Alternative protein foods.            Safe storage and cooking temperatures.            Measuring and weighing, frying, and grilling.            Sequencing practical work.            Sensory evaluation and suggestions for improvement.</p> <p><b>Homework:</b>  <i>Packaging, labelling and nutrition</i>  <i>Dietary needs of different age groups and balancing a meal</i>  <i>Home-made v Bought comparison</i>  <i>Planning and preparation for practical work</i>  <i>Revision</i></p>	<p><b>Task: Cereal Packaging</b>            Task analysis / target market investigation, product analysis, theme inspiration, design ideas and branding gimmicks logo design and development, net design planning and layout, scale drawing, draft measurement drawing, final design idea, net (cereal box) construction.            Study of Jon Burgerman illustration to inspire designs ideas. Legality of packaging.</p> <p><b>Homework:</b>  <i>Logo analysis</i>  <i>Branding research</i>  <i>Puzzle ideas research</i>  <i>Google design</i>  <i>Evaluation</i></p>	<p><b>Task: Soft Sculpture</b>            Artist (Holly Levell &amp; Kate Talbot) analysis and evaluation.            Detailed design idea communication showing an understanding of fabric properties and appropriate decorative techniques.            Recap of health and safety and the sewing machine.            Trialling ideas practically for decoration and/or shape.            Pattern making 2d to 3D with paper modelling.            Complex construction.            Planning/ time management for practical task.            Sublimation printing and/or computerised embroidery.</p> <p><b>Homework:</b>  <ol style="list-style-type: none"> <li>1. Artist Research</li> <li>2. Final design</li> <li>3. Flowchart (sequencing)</li> <li>4. Evaluation – comparing their product to an existing product</li> </ol></p>

**Year 9 Progression modules:** Pupils select two or three modules from the four on offer, narrowing our wide breadth of study a little, in favour of greater depth of study. Technology teachers, parents and pupils are all involved in these important decisions. Each pupil therefore has their own personal rotation and does not necessarily stay in the same class all year. The two modules most important to the pupils are completed before the GCSE options process begins where possible. (For some pupils the third module in the rotation is called STEM and is being used to teach about cross-curricular eco issues). Accurate assessment data is shared each module and each class's first teacher of the year mentors that class to ensure suitable progress is being made and communicates with parents.

Year	DT 1 Specialism Module (Optional 18 or 0 lessons)	Food Specialism Module (Optional 18 or 0 lessons)	Graphics Specialism Module (Optional 18 or 0 lessons)	Textiles Specialism Module (Optional 18 or 0 lessons)
9	<p><b>Task: Sustainable Lamp design</b>            What is sustainability &amp; Global goals.            How we use power.            Client profile of Kibera Kenya, wages, exports, needs, possible task outcome.            Product analysis of existing lamp movements / joints.            Renewable power source pros / cons.            Temporary / Knockdown fixings.            Inspiration board.            Planned obsolescence.            Detailed specification linked to research and possible further research.            Design ideas.            Energy trumps - embodied energy / water of materials.            Design development using SCAMPER.            Testing and modelling aspects of their design.            Analysis of their testing.            Scaled orthographic drawing of final design using drawing boards.            Practical skills - marking out sawing, drilling, sanding, filing, concrete moulding, soldering, CAD/CAM            Laser cutting, 3D printing            Evaluation of final design against specification</p> <p><b>Homework:</b>  <i>Life cycle of softwood.</i>  <i>Temporary fixings.</i>  <i>Life cycle of steel.</i>  <i>The 6 R's.</i>  <i>Carbon footprint.</i>  <i>Life cycle of aluminium.</i>  <i>Power generation.</i>  <i>Polymers</i></p>	<p><b>Task 1: Healthy teenage fast foods</b>            Recap years 7 and 8 work.            Bread making – dough, gluten development, use of yeast, shaping and ingredient ideas.            Investigating the fermentation of yeast as a biological raising agent.            Bread / scone making – ingredient functions, dough formation, gluten development, use of yeast or chemical raising agent, shaping and ingredient and product ideas.            Generating ideas and time planning with special points and health and safety points.            Sensory profile evaluations.            Shortcrust pastry - ingredient functions, dough formation, shortening with different fats, proportions of fat used, shaping and ingredient and product ideas.            Preparing, combining and shaping foods.            Savoury reformed foods – alternative proteins, types of vegetarian.            Costing a food product.</p> <p><b>Task 2: A Healthy seasonal dessert</b>            Seasonality            Meringue - Coagulation and setting and aeration            Choux pastry and Flaky pastry – mechanical raising agents.            Allergies and intolerances.</p> <p><b>Homework:</b>  <i>Healthy eating for teenagers</i>  <i>Researching design ideas</i>  <i>Time Planning and preparation for making</i>  <i>Wheat research</i>  <i>Seasonality</i>  <i>Conduction, convection and radiation</i>  <i>Allergies and intolerances</i>  <i>Revision</i></p>	<p><b>Task: Perfume &amp; Aftershave Packaging</b>            Health &amp; safety recap, colour theory, isometric drawing, product analysis, monogram designs, &amp; development            2D design development skills, Artist inspired geometric ideas, Geometric shape development and repeat design, Sketching and annotation, packaging designs, Computer generated designs.            Evaluation, Poster promotion</p> <p><b>Homework:</b>  <i>Typography research</i>  <i>Monogram research</i>  <i>Packaging Mood board</i>  <i>Artist research images &amp; background knowledge</i>  <i>Perfume bottle designs</i>  <i>Branding &amp; selling</i>  <i>Target audience review</i></p>	<p><b>Task: Portrait Bag for Life inspired by Edo Morales. Analysis and evaluation of the work of Chilean artist Edo Morales.</b>            Creating a portrait design using a variety of mark making techniques.            Experimenting with hand embroidery, collagraph printing, mono printing, tie-dye and appliqué.            Designing for a client of their choice.            Design work – communication skills. Students work creatively and there is a greater emphasis on effective presentation.            Health and safety and sewing machine recap.            Construction methods and seam suitability testing (plain, French and overlocked).            Bag construction – including making handles, attaching fastenings.            Evaluation of back with customer review/ feedback.            Ext: Sustainability, problems with the textiles and fashion industry.            Watch clips from the 'True cost of Fashion' documentary.</p> <p><b>Homework:</b>            1. <i>Designer analysis– Edo Morales. Find a suitable photograph to base portrait on.</i>            2. <i>Textures – worksheet exploring surface textures.</i>            3. <i>Research collagraph and mono printing.</i>            4. <i>Colour Theory worksheet.</i>            5. <i>Research in Artist: Sue Stone.</i>            6. <i>Research in seams.</i></p>

## Key Stage 4: AQA Design Technology GCSE

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
10	<p><b>Theory: Timbers and related processes</b></p> <ul style="list-style-type: none"> <li>Types and properties of timbers</li> <li>Hand tools</li> <li>Measuring</li> <li>Wasting</li> <li>Abrading</li> <li>Finishing</li> <li>Finger joint</li> <li>Dovetail joints</li> </ul> <p><b>Theory: CAD/CAM</b></p> <ul style="list-style-type: none"> <li>CAD/CAM</li> <li>Laser cutting</li> </ul> <p><b>Project task: Storage box</b> Pupil's design and make a timber storage box using traditional hand tools and processes. The box includes finger joints, dovetail joints and butt joints as appropriate. The basic design can be adapted to suit a variety of purposes and pupils are challenged to improve and modify the design to suit their individual needs. Quality, accuracy and foundational practical skills are the key objectives of this task. Pupils are introduced to the process of laser cutting and all create a 2D design which would be laser cut out of acrylic and then attached to their storage box.</p>	<p>Theory: Polymers and related processes</p> <ul style="list-style-type: none"> <li>Types and properties of polymers</li> <li>3D printing</li> <li>Extrusion</li> <li>Vacuum forming</li> </ul> <p><b>Theory: Design development, 3D modelling and working drawings</b></p> <ul style="list-style-type: none"> <li>Design iteration</li> <li>Fusion 360 3D modelling</li> <li>Rendering</li> <li>Working drawings</li> </ul> <p><b>Project task: Games console</b> Pupil's research and design a new games console from a polymer of their choice. They then go on to 3D model the games console and write about how they could use 3D printing as a means of producing a rapid prototype of their design. They are also introduced to producing manufacturing drawings and ensuring enough detail is included for the product to be manufactured by a third-party.</p>	<p><b>Theory: Metals and related processes</b></p> <ul style="list-style-type: none"> <li>Types and properties of metals</li> <li>Tools and processes</li> <li>Brazing</li> <li>Turning</li> <li>Bending</li> <li>Hardening</li> </ul> <p><b>Project task: Mock NEA</b> Pupils introduced to the format of the NEA and a 'mock' NEA brief is given. Pupils will then sample pieces of work from each section of the NEA to prepare them for the real NEA later in the year.</p> <ul style="list-style-type: none"> <li>Example folders</li> <li>Task analysis</li> <li>Product analysis</li> <li>Specification and Brief writing</li> <li>Design ideas</li> <li>Design development</li> <li>Fusion 360 3D modelling</li> </ul> <p><b>Work experience (2 wks)</b></p>	<p><b>Theory: Industrial manufacturing processes and practises</b></p> <ul style="list-style-type: none"> <li>Scales of production</li> <li>Fixtures and fittings</li> <li>Routing/turning</li> <li>Injection/blow moulding</li> <li>CNC lathes</li> <li>Knock-down fittings &amp; flat-pack furniture</li> <li>Standard components</li> <li>Casting</li> </ul> <p><b>Theory: Modern and Smart materials</b></p> <ul style="list-style-type: none"> <li>Polymorph</li> <li>SMAs</li> <li>Thermochromic/photochromic</li> <li>Bioplastics</li> <li>Flexible MDF</li> <li>Titanium</li> <li>Fibre optics</li> <li>Graphene</li> <li>LCD</li> <li>Nanomaterials</li> <li>Metal foams</li> <li>QTC</li> <li>Piezoelectric</li> <li>Litmus paper</li> </ul> <p><b>Project task: Mock NEA</b></p> <ul style="list-style-type: none"> <li>Manufacturing specification</li> <li>Manufacturing</li> <li>Evaluation</li> </ul>	<p><b>Theory: Design iteration and development</b></p> <ul style="list-style-type: none"> <li>Rapid prototyping</li> <li>Modelling</li> <li>The work of others</li> <li>Analysis</li> <li>Client involvement in design process</li> </ul> <p><b>Theory: Surface treatments and finishes</b></p> <ul style="list-style-type: none"> <li>Types of surface finish and treatment available for each material group</li> <li>Preparation of materials</li> <li>Finishes for timber, metals and polymers</li> </ul> <p><b>Revision: Exam week written assessment</b></p> <p><b>Project task: Foldable seating (modelling project)</b> Pupils will be tasked with developing a design for portable seat for a wildlife photographer (purposefully chosen as an example of a client they will likely have little affinity with – this is to force students to think of what their client wants, not what they want). Pupils will generate designs and spend most of their time modelling a prototype using card, timber and mechanical fixings.</p>	<p><b>Theory: Mechanical devices, electronics and designing for functionality</b></p> <ul style="list-style-type: none"> <li>Forces, stresses and structural integrity</li> <li>Electronic circuits</li> <li>Systems thinking</li> <li>Electronic components</li> <li>Microcontrollers</li> <li>Sensors</li> <li>Making products 'smart'</li> </ul> <p><b>Theory: Quality control</b></p> <ul style="list-style-type: none"> <li>Process time</li> <li>Dimensional accuracy</li> <li>Depth-stops, go/no go fixtures</li> <li>Tolerances</li> <li>Registration marks</li> <li>CAD/CAM settings</li> </ul> <p><b>Introduction to NEA</b></p> <ul style="list-style-type: none"> <li>Example folders</li> <li>The purpose and flow of the NEA</li> <li>Final words of advice and guidance</li> <li>Task analysis</li> <li>Research</li> </ul>

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
10	<b>Theory: Technical drawing module</b> <ul style="list-style-type: none"> <li>• Sketching</li> <li>• Isometric</li> <li>• Perspective</li> <li>• Orthographic</li> <li>• Shading</li> <li>• Rendering</li> </ul>		<b>Theory: Textiles module</b> <ul style="list-style-type: none"> <li>• Types and properties of textiles and fabrics</li> <li>• Processes and tools</li> <li>• Surface treatments and finishes</li> </ul> <b>Theory: Papers and boards module</b> <ul style="list-style-type: none"> <li>• Types and properties of papers and boards</li> <li>• Processes and tools</li> <li>• Surface treatments and finishes</li> </ul>		<b>Theory: Environmental, ethical and social issues module</b> <ul style="list-style-type: none"> <li>• Social impact of design</li> <li>• Ethical considerations</li> <li>• Sustainable design</li> <li>• 6 Rs</li> </ul> <b>Theory: Energy generation and storage module</b> <ul style="list-style-type: none"> <li>• Energy generation</li> <li>• Energy storage</li> <li>• Renewable vs non-renewable</li> </ul>	
11	<b>NEA Section A (cont.)</b> Task analysis & Research  <b>NEA Section B</b> Specification and Brief  <b>NEA Section C</b> Design ideas  <b>HW Revision topics:</b> <ul style="list-style-type: none"> <li>• Common specialist technical principles</li> <li>• Papers and boards</li> <li>• Timber based materials</li> <li>• Metal based materials</li> </ul>	<b>NEA Section C (cont.)</b> Design ideas  <b>NEA Section D</b> Design development  <b>HW Revision topics:</b> <ul style="list-style-type: none"> <li>• Polymers</li> <li>• Textile based materials</li> <li>• Electronic systems</li> <li>• Materials and their working properties</li> </ul>	<b>PPE written examination</b>  <b>NEA Section E</b> Realisation of design  <b>NEA Section F</b> Evaluation  <b>HW Revision topics:</b> <ul style="list-style-type: none"> <li>• New and emerging technologies</li> <li>• Energy, materials, systems and devices</li> <li>• Designing principles</li> <li>• Making principles</li> </ul>	<b>Revision in lessons covering subject knowledge gaps highlighted by analysis of PPE performance and review of NEA content.</b>	<b>Public examinations</b>	

## Key Stage 4: Eduqas Food Preparation and Nutrition GCSE

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
10	<p><b>Topic 1: Fruits &amp; Vegetables</b></p> <ul style="list-style-type: none"> <li>Types / classification</li> <li>Herbs and spices</li> <li>Provenance – production, food miles, seasonality, harvesting, processing, packaging (bagged salad)</li> <li>Preservation – jams, curds, pickles &amp; chutney</li> <li>Nutritional importance / 5-a-day</li> <li>Vitamins and Minerals</li> <li>Oxidation and Enzymic browning</li> <li>Types of potato and cooking methods</li> <li>Storage – ambient, chilling &amp; freezing, stock rotation, use by &amp; best before dates.</li> <li>Cooking methods, effects</li> <li>Key temperatures</li> </ul> <p><b>Practical tasks:</b> Salads dressings and emulsions Soups and accompaniments Stir fries and stir fry technique Stuffed vegetables to use up leftovers Jam chutney curds and pickles Filo pastry – spring rolls, samosas, parcels or strudel</p>	<p><b>Topic 2: Dairy Products</b></p> <ul style="list-style-type: none"> <li>Types / classification</li> <li>Primary &amp; secondary processing</li> <li>Processing of milk, cream, yogurt and cheese – emulsions, bacteria, enzymes and foams</li> <li>Animal rearing – local v national, pricing</li> <li>Preservation of milks and dairy</li> <li>Nutritional values</li> <li>Fats – saturated and unsaturated and energy balance</li> <li>Allergy, intolerance, bone and heart health</li> <li>Storage</li> <li>Effect of cooking</li> <li>Storage – ambient, chilling &amp; freezing, stock rotation, use by &amp; best before dates.</li> <li>Key temperatures</li> </ul> <p><b>Practical tasks:</b> Batters – pancakes, clafoutis, Yorkshire pudding, toad in the hole. Choux pastry – profiteroles, eclairs, choux rings, choux buns Souffles and mousses Custards and Ice cream</p> <p><b>Work experience (2 wks)</b></p>	<p><b>Topic 3: Cereals</b></p> <ul style="list-style-type: none"> <li>Types / differences</li> <li>Staple foods</li> <li>Provenance – grown harvested and used</li> <li>Primary &amp; secondary processing</li> <li>Nutritional values</li> <li>Carbohydrates and energy balance</li> <li>Gluten &amp; intolerance (coeliac)</li> <li>Raising agents – biological, chemical and mechanical</li> <li>Functional properties of wheat flour</li> <li>Storage, prevention of food poisoning</li> </ul> <p><b>Practical tasks:</b> Cake making Bread making Flaky pastry Pasta making Roux sauce - gelatinisation Cooking with other cereal grains</p>	<p><b>Exam week assessment</b></p>	<p><b>Topic 4: Protein foods</b></p> <ul style="list-style-type: none"> <li>Meat, poultry, fish, eggs, pulses, nuts, seeds, alternatives</li> <li>Sustainability</li> <li>Animal rearing – local v national, environmental cost</li> <li>Processing</li> <li>Nutritional values</li> <li>Proteins – HBV &amp; LBV</li> <li>Eating nose to tail</li> <li>Traceability and food quality assurance schemes</li> <li>Functions of eggs and other proteins – aeration, coagulation, emulsification, binding, enriching, etc</li> <li>High risk foods - Food spoilage, Cross contamination and storage</li> <li>Critical temperatures</li> <li>Marinades</li> </ul> <p><b>Practical tasks:</b> Butchering chicken – Kiev’s, Cordon beau, tray bakes, sticky chicken wings, soup and stock Filleting fish – fish cakes, bake Meringues – Lemon meringue pie, Pavlova, Baked Alaska, Eton mess Baked egg custard / quiche Alternative proteins</p>	
11	<p><b>NEA 1 – Investigative assessment</b> (Exam board set - released 1st September each year)</p> <p><b>Homework:</b> <i>Research, thinking out, trialling and planning</i></p>	<p><b>NEA 2 – Section A research and planning</b> (Exam board set - released 1st November each year)</p> <p><b>PPE examinations</b></p> <p><b>Homework:</b> <i>Research, thinking out, trialling, preparing resources and planning</i></p>	<p><b>NEA 2 – Section B practical assessment</b> <b>NEA 2 – Section C evaluation</b></p> <p><b>Homework:</b> <i>Research, thinking out, trialling, preparing resources and planning</i></p>	<p><b>Revision</b></p> <ul style="list-style-type: none"> <li>Nutrition</li> <li>Functions of ingredients</li> </ul>	<p><b>Public examinations</b></p>	

## Key Stage 4: AQA Art and Design: Graphical Communication GCSE

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
10	<p><b>Project 1: Natural and Organic drink project</b> Understanding the course objectives. Annotation guidance, Analysis mind map, Primary fruit, Photographs, Sketching Fruit observation and stylising, Colour Theory, material experiments, Photography, Introduction to Serif photo Image manipulation</p> <p><b>Homework:</b> Mind map Observational Drawing Artist research Colour Theory Stylised Drawing College Development</p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Project 1: Natural and Organic drink project</b> Existing products analysis Branding &amp; advertising Typography design Logo design and development Colour development Layout development Final design Drink Presentation Poster Design</p> <p><b>Homework:</b> Logo Research Artist Research Branding Research Drinks labelling Research Annotation.</p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Project 2: Music Promotion</b> Product analysis, Band research Inspirational research, Legality packaging information, Artist research, recreations, computer design, illustration, development, Final design</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p> <p><b>Work experience (2 wks)</b></p>	<p><b>Project 2: Music Promotion</b> Typography designs, Layout design, Final design, Construction of final product, Presentation layout and promotional product designs.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Urban Art/Natural World</b> Main project 60% of grade Analysis mind map, Inspiration/ theme board, Typography designer exam prep hand drawn ideas Development of typography with lettering, colour. Theme investigation Exam week assessment Typography designs</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Urban Art/Natural World</b> Main project 60% of grade Theme research, Primary &amp; Secondary, artist research, recreations and development.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>
11	<p><b>Street Art Take Out</b> Main project 60% of grade artist/designer 2 research and development. Artist/designer research x2 personal response and development of ideas based upon artist inspiration, own designs inspired by artists</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Street Art Take Out</b> Main project 60% of grade Design ideas, development of ideas relating to final outcomes, final designs and constructed outcomes.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>External set exam Project 40% PPE examinations</b> Students choice a starting point from the externally set projects 2nd Jan release. Personal prep period to investigate ideas using artist and designer inspiration.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>External set exam Project 40%</b> Students work on individual projects with teacher guidance.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>External set exam Project 40%</b> Set 10 hours (2 Days) Students complete ideas ready for exam.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Public examinations</b>  <b>Students have completed the course at this point</b></p>



## Key Stage 4: AQA Art and Design: Textile Design GCSE

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
10	<p><b>Structures Fashion Project</b> Understanding the course objectives. Annotation guidance, Analysis mind map, Primary Photographs of a variety of structures, project proposal, Sketching structures observation and stylising. Fabric manipulation: pleats, tucks, piping, slashing, quilting, applique etc. Laser cutting. Mark making CAD repeat printing techniques using PowerPoint – sublimation printing and further 3D manipulation. Artist/Designer research and recreation samples.</p> <p><b>Homework:</b> <i>Mind map Primary images of structures Observational Drawings Artist/Designer research Writing notes for how experimental samples were created and evaluating them fully, suggesting ways of how to further refine ideas.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (Over 2 weeks - 2.5 hours)</i></p>	<p><b>Structures Fashion Project</b> Laser cutting. Mark making CAD repeat printing techniques using PowerPoint – sublimation printing and further 3D manipulation. Artist research (3 designers/ artists minimum per student will be fully explored and analysed along with experimental samples. Developed ideas – sampling experiments. Design ideas. Final design. Making the final product. Design boards for display.</p> <p><b>Homework:</b> <i>Mid project evaluation. Artist Research Annotation including analysis and evaluation.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Structures Fashion Project until work experience (2 wks.)</b> Complete the finished fashion product. Photograph product. Complete design display boards.</p> <p><b>Homework:</b> <i>Evaluation of the project.</i></p> <p><b>Mini Project: Trashion after work experience.</b> Pupils design and make a Trashion (recycled materials) garment based on a designer of their choice for a celebrity client of their choice.</p> <p>Mood board of inspirational ideas. Designer research. Construction methods with chosen materials. Design ideas. Final Design. Construction.</p> <p><b>Homework:</b> <i>Making diary/log. Photographs of making with notes/annotation.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Surfaces Project</b> Project analysis mind map and proposal. Primary images of interesting surfaces. Paint/dye techniques, brusho, freehand embroidery, dissolvable fabric, cotton paper, heat press, transfer dye.</p> <p><b>Homework:</b> <i>Photographs of interesting surfaces (primary images) Artist Research Annotation including analysis and evaluation.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Surfaces Project (main project 60% Grade)</b></p> <p>Artist/designer research x4 in total, artist responses, developed ideas. Experimenting with a range of different meltable fabrics such as Tyvek, lutradur and polyester voiles. Safe use of heating tools will be taught and pupils will experiment.</p> <p><b>Homework:</b> <b>Mid project evaluation. Artist Research Annotation including analysis and evaluation.</b></p> <p><b>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</b></p>	<p><b>Surfaces Project (main project 60% Grade)</b></p> <p>Ongoing surfaces project – pupils will work independently to explore a variety of different surfaces of their choice. Pupils need to have fully researched and explored 4 artists or designers with fabric samples that recreate their work and developed samples that include their own ideas.</p> <p><b>Exam week assessment:</b> Pupils will produce artist samples for assessment. The number of which will be determined by which techniques and/or artist they are studying.</p> <p><b>Homework:</b> <i>Artist Research Annotation including analysis and evaluation.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
11	<p><b>Surfaces project</b> Students will complete initial ideas over the summer break and spend the first 6 lessons creating detailed design ideas which will be developed into a final design. Students will produce: Design ideas Developed ideas Final design. These will be presented and annotated in their sketchbook.</p> <p><b>Homework:</b> <i>Further Artist/designer Research</i> <i>Photographs of surfaces to aid development</i> <i>Annotation including analysis and evaluation.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Completion of Surfaces project.</b></p> <p>This term focusses on the making of the final product/ outcome for the Surfaces project – whatever that may be for each student.</p> <p><b>Homework:</b> <i>Making diary/log.</i> <i>Annotation including analysis and evaluation.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>External set exam Project 40%PPE examinations</b> Students choose a starting point from the externally set projects 2nd Jan release. Personal prep period to investigate ideas using artist and designer inspiration.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>External set exam Project 40%</b> Students will complete ideas through experimental sampling and drawing ready for exam. The ideas will develop into a final design for their final outcome which they will produce in the practical examination.</p> <p><b>Homework:</b> <i>Students work on individual projects with teacher guidance. They will need to research a theme, take photographs, study the work of artists/designers.</i></p> <p><i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>External set exam Project 40%</b> The examination - 10 hours (2 Days) will take place this term. Students will be fully prepared so that they can work independently throughout the 10-hour practical exam.</p> <p><b>Homework:</b> <i>Students will spend a half an hour of project work for each lesson on independent study (2 weeks 2.5 hours)</i></p>	<p><b>Public examinations</b></p> <p><b><i>Students have completed the course at this point</i></b></p>

## Key Stage 5: Edexcel Design Technology GCE

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
12	<p><b>Public Seating Design project</b></p> <p><b>Materials:</b> plastics, papers/boards, textiles</p> <p><b>Processes:</b> printing, plastics (injection moulding, vacuum forming, extrusion, rotational), Drawing skills, Nets and die cutting</p> <p><b>Digital:</b> CAD, CAM, Rapid prototyping</p> <p><b>Factors influencing development of products:</b> user-centred design, anthropometrics and ergonomics, form vs function, design movements and designers.</p> <p><b>Effects of technological developments:</b> Smart material applications</p> <p><b>Maths:</b> using numbers and percentages, ratios and percentages</p>	<p><b>Public Seating Design project</b></p> <p><b>Materials:</b> smart materials</p> <p><b>Processes:</b> Paper finishes, Sand Casting</p> <p><b>Effects of technological developments:</b> Features of manufacturing industries: Quality control</p> <p><b>Maths:</b> calculating surface areas and volumes, use of trigonometry</p> <p><i>School examinations</i></p>	<p><b>Mini-tools project</b></p> <p><b>Materials:</b> metals</p> <p><b>Processes:</b> Die casting, investment casting, turning, drilling, marking out, bending, pressing/stamping/punching, welding, mechanical fixings, heat treatments</p> <p><b>Safe working practices, potential hazards and risk assessment</b></p> <p><b>Features of manufacturing industries:</b> Production planning and scheduling</p> <p><b>Designing for maintenance and the cleaner environment:</b> 5 principles of sustainability, circular economy, disassembly</p> <p><b>Maths:</b> use and analysis of data, charts and graphs</p>	<p><b>Mini-tools project</b></p> <p><b>Materials:</b> woods, composites</p> <p><b>Processes:</b> plaster of paris casting, wood joining techniques, adhesives, mechanical fixings</p> <p><b>Effects of technological developments:</b> Mass production, global marketplace</p> <p><b>Features of manufacturing industries:</b> Scales of production, quality monitoring systems, modern manufacturing methods</p> <p><b>Designing for maintenance and the cleaner environment:</b> Product life cycle and the wider issues of using cleaner technologies</p> <p><b>Maths:</b> Co-ordinates and geometry</p>	<p><b>NEA project</b></p> <p><b>Information handling modelling and forward planning:</b> collection, collation and analysis of information, standards</p> <p><b>Maths:</b> Anthropometrics and probability</p>	<p><b>NEA Project</b></p> <p><b>Information handling modelling and forward planning:</b> modelling the costing of projects, protecting intellectual property rights</p> <p><i>School examinations</i></p>
13	<p><b>NEA project</b></p> <p><b>Further processes and techniques:</b> strategies, techniques and approaches to explore, created and evaluate design ideas, project management strategies, the stages of a product's life cycle</p>	<p><b>NEA project</b></p> <p><i>PPE examinations</i></p>	<p><b>NEA project</b></p>	<p><b>NEA project</b></p>	<p><i>Revision</i></p>	<p><i>Public examinations</i></p>

## Key Stage 5: AQA Art and Design: Textile Design GCE

Year	Half-term 1	Half-term 2	Half-term 3	Half-term 4	Half-term 5	Half-term 6
12	<p><b>Decorative Architecture (Portfolio Project)</b></p> <p>Health &amp; Safety Introduction to the course Machine skills, Understanding the course objectives. Project analysis and proposal, Annotation guidance, Primary &amp; secondary research inspiration, Fabric Manipulation, Couching, elastic thread, folding, gathering, shibori, Artist/designer 1 research, artist recreation samples</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>Decorative Architecture (Portfolio Project)</b></p> <p>Artist/designer 2 research, artist recreation samples Laser cut work and development, Samples of influenced ideas developed into design ideas, Final idea, Constructed outcome.</p> <p><b>School examinations (5 Hours)</b></p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>Close-up (Portfolio Project)</b></p> <p>Project analysis mind map and proposal, Artist/designer research x2, artist responses, developed ideas, Paint/dye, marbling, heated textiles, felting, embellishing, coaching techniques, freehand embroidery, embellishing machine, felting, heat press, transfer dye</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>Close-up (Portfolio Project)</b></p> <p>Development of artist influences developed into a surface outcome, design ideas and final idea</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 4-5 hours)</p>	<p><b>Personal Investigation</b> 60% of final grade (Individual project)</p> <p>Student choice own starting point to personal investigation. Research theme, artist/designer research, recreations and developing ideas through exploring techniques.</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>Personal Investigation</b> 60% of final grade (Individual project)</p> <p><b>School examinations (5 Hours)</b></p> <p>Further researching artist/designers or contextual studies. Recreations through experimenting and developing own ideas.</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>
13	<p><b>Personal Investigation</b> 60% of final grade (Individual project) Focused directed research towards initial ideas. Continue to sample techniques and refine ideas. Commence written element.</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>Personal Investigation</b> 60% of final grade (Individual project) Design ideas, Mock-ups, construction investigations, Final idea and constructed final outcome.</p> <p><b>PPE examinations (5 HOURS)</b></p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>External set exam Project (40%)</b> <b>PPE examinations</b></p> <p>Complete final outcome. Students choice a starting point from the externally set projects 2nd Jan release. Personal prep period to investigate ideas using artist and designer inspiration.</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>External set exam Project (40%)</b></p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>External set exam Project (40%)</b> Set 10 hours (2 Days) Students complete ideas ready for exam.</p> <p><b>Personal Time:</b> Students will spend a half an hour of project work for each lesson on independent study (2 weeks 9-10 hours)</p>	<p><b>Course completed</b></p>

### Differentiation:

Please note that these are generalised overviews of the Technology curriculum, but actual schemes of work are adapted and differentiated for each ability group to try to ensure stretch and challenge for all.