

DESIGN & TECHNOLOGY CURRICULUM MAP - Possible Career Education links in Purple			
A. FORMAL KEY STAGE FIVE DESIGN & TECHNOLOGY ADVANCED LEVEL CURRICULUM			
Core Threads	By the end of key stage FIVE we want all students of Design & Technology to know and do the following key things: Be able to Identify and investigate design possibilities; develop design proposals; develop design prototypes; understanding of technical principles; and designing and Making Principles.		
Prior Knowledge	In KS5, students of Design & Technology will build on the following prior learning : GCSE Design and Presentation Skills; Material and Processes Knowledge; Planning and Manufacturing Skills; and Evaluative Skills		
Future Knowledge	The Curriculum in KS5 Design & Technology will prepare students for the following future learning : Skills required at Higher Education; such as independent learning; practical life skills, such as Computer Aided Design & Computer Aided Manufacturing 3D printing and workshop skills; and learning in employment, such as avenues to a future in the creative industries.		
Year 12	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
	T1	Practical Skills- Use of Metals, Woods and Plastics, to develop prototyping skills, general workshop tools/processes/finishes- Bottle Opener Theory- classification, forming/redistribution/addition processes, and finishes for Metal , Woods, Polymers	Design & Make – Metal Project Theory– Metal, Woods, Polymers Test
	T2	Practical Skills - Workshop skills, CAD CAM, CNC - Laser Cutting Theory- classification, forming/redistribution/addition processes, and finishes for Smart/Modern Materials, Composites, Paper/Board	Design & Make – Wood Project Theory- Smrt/Mdrn Materials, Comp, Paper/Brd Test
	T3	Practical Skills- CAD 3D modelling software, workshop skills, 3D Printing . Theory- Modern Industrial and Commercial Practice/Digital design and manufacture	Design & Make – 3D printed project. Theory–MMIC/DDM Test
	T4	Practical Skills - Workshop skills, Use of Boards, Paper, Woods, to develop modelling skills . Theory- The requirements for product design and development. Health and safety	Design & Make – Plastic Project Theory- TRFPDAD, H&S Test
	T5	Theory- Design & make Principles. Protecting designs and intellectual property. Design for manufacturing, maintenance, repair and disposal. Consolidating skills and concepts. Synthesizing and revising existing knowledge.	Year 12 Internal Interim Assessments. Remaining Unit 3.1 Topics Test.
	T6	Practical Skills- Use of acrylic working techniques and finishing/ CAD skills . Theory- Identify & Investigating Design Possibilities. Feasibility studies. Enterprise and marketing in the development of products. Design communication. Modern manufacturing systems	NEA Section A- Inv. Design Possibilities
Year 13	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
	T1	Non-Examined Assessment, Sec A: Identifying and investigating design possibilities. Sec B: Producing a design brief and specification Theory: Design methods and processes. Design theory. How technology and cultural changes can impact on the work of Designers	NEA Section A- Inv. Design Possibilities NEA Section B- Design Brief/Spec
	T2	Non-Examined Assessment, Sec C: Development of design proposal(s), including sketching in the industrial design style, and adopting a range of design strategies including User Centered Design, SCAMPER and Iterative Design. Theory - Design processes. Critical analysis and evaluation. Selecting appropriate tools, equipment and processes	NEA Section C- Development of Design Proposal Unit 3.2 Topics Tests- D&M Principles
	T3	Non-Examined Assessment, Sec D: Development of design prototype(s), ensuring that you have prototyped via a range of materials a series of design solutions, to test their validity. These would include physical 2D and 3D models, CAD, CAM and 3D printing. Theory: Accuracy in design and manufacture. Responsible design, thinking about environmental issues, the circular economy etc.	NEA Section D- Development of Design Prototypes Year 13 Internal Mock Examination
	T4	Non-Examined Assessment, Sec E: Development of design prototype(s). Non-Examined Assessment, Sec E: Analysing and evaluating Theory. Design for manufacture and project management. National and international standards in product design	NEA Section E- Analysing and Evaluating
	T5	Revision for Examination. Embedding core knowledge, including Materials & their Applications, Performance Characteristics of Materials, Enhancement of Materials Forming, Redistribution and Addition Processes, The Use of Finishes, Modern Industrial & Commercial Practice, Digital Design & Manufacture The Requirements of Product Design & Development, Health & Safety, Protecting Designs & Intellectual Property Design for Manufacturing , Maintenance, Repair & Disposal, Feasibility Studies Enterprise & Marketing in the Development of Products, Design Communication, Modern Manufacturing Systems, Design Methods & Processes, Responsible Design	A range of Examination-style Practice Tests, past exam papers. Exampro questions.
B. WIDER KEY STAGE FIVE DESIGN & TECHNOLOGY CURRICULUM			
- Students in Key Stage Five also have the opportunity to be considered for the role of DT prefect, which involves mentoring and supporting students in KS3 and KS4 - STEM (Science, Technology, Engineering and Mathematics) Projects in KS5 - Young Enterprise Competition, which involves allying with Business Studies in working students in setting up and running their own business. In addition, assisting with product design and manufacture where necessary.			

DESIGN & TECHNOLOGY CURRICULUM MAP			
A. FORMAL KEY STAGE FOUR DESIGN & TECHNOLOGY GCSE LEVEL CURRICULUM			
Core Threads		By the end of key stage FOUR we want all students of DESIGN & TECHNOLOGY to know and do the following key things: core Design & Technology concepts, such as Core Technical Principles & Designing Principles; practical skills, such as modelling and prototyping in papers, boards, woods, metals, textiles and smart materials; design process, such using the iterative design process, and focusing on user centered design; writing skills required for KS4 exam style including the Core Technical Principles, Specialist Technical Principles and Designing and Making Principles.	
Prior Knowledge		In KS4, students of Design & Technology will build on the following prior learning: KS3 Design Skills; KS3 knowledge of Safety in the workshop; KS3 Making Skills; prior knowledge of KS3 Computer Aided Design Computer Aided Manufacture – and Laser cutting.	
Future Knowledge		The Curriculum in KS4 Design & Technology will prepare students for the following future learning : work confidently with materials & processes in a range of contexts including apprenticeships, or specialist practical training; the skills and knowledge required to move forward to courses, including A level Product Design.	
Year 10	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
	T1	Theory - New and Emerging Technologies , the design and organization of the workplace including automation and the use of robotics, buildings and the place of work, tools and equipment. Practical Skills – Pewter Casting Project– Use of CAD/CAM, MDF, Metalwork casting techniques, filing, edge finishing	Unit 1 Test on New and Emerging Technologies. Casting- Design Folder and Practical work
	T2	Theory – Systems approach to designing including the use of light sensors, temperature sensors, pressure sensors and switches. The use of buzzers, speakers, lamps, to provide functionality. Practical Skills – Cadbury Project- Vac. Former, Sander, Laser Cutting	Unit 2 Test on Energy, Materials, Systems and Devices. Cadbury- Design Folder & Practical
	T3	Theory – Energy, Materials, Systems and Devices, including how power is generated and stored. Practical Skills – Cadbury's Project – Vac. Former, Sander, Laser Cutting, Packaging design and decoration	Unit 3 Test on Materials. Cadbury- Design Folder and Practical
	T4	Theory – Materials, Developments made through the invention of new or improved processes e.g. Graphene, Metal foams and Titanium, in addition to conventional, modern and smart materials. Practical Skills – Clock Project- Working with Pine- wood joints, sander, wood filler, finishing techniques, laser cut elements	Unit 4 Test on Specialist Technical Principles. Timber Project- Design Folder & Practical
	T5	Synthesizing & revising KS4 knowledge, including that relating to topics such as Material Properties, Production Techniques & Systems .	Year 10 Internal Mock Examinations
	T6	Further embedding KS4 theory knowledge, including that relating to topics such as obsolescence, tolerances, composite materials and technical textiles. Practical Skills: Non-Examined Assessment Section A: Identifying and investigating design possibilities – You will explore the 3 contexts which are published on June 1 st , conduct some initial research to determine which context you choose.	Unit 5 Test- Specialist Material Area Completed Non-Examined Assessment – Sec A
Year 11	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
	T1	Theory – Selection of materials and components - Functionality: application of use, ease of working. Aesthetics: surface finish, texture and colour. Environmental factors: recyclable or reused materials. Practical Skills: Non-Examined assessment Section B: Design Brief & Specification – students write their own design brief and specification, based upon the context & research they have chosen to follow.	Completed Non-Examined Assessment – Sec B
	T2	Theory – Forces and stresses - Tension, compression, bending, torsion and shear. How materials can be reinforced, stiffened or made more flexible: e.g. lamination, bending, folding, webbing, fabric interfacing . Practical Skills –Non-Examined Assessment Section C: Design Ideas, for demonstrating no fixation, to create a range of ideas to satisfy the design brief. Hand drawn sketched ideas.	Completed Non-Examined Assessment – Sec C Yr. 11 Mock Examination- All Units
	T3	Theory – Designing Principles, Students should investigate, analyse and evaluate the work of past and present designers and companies to inform their own designing. E.g. Alessi, Apple, Braun, Dyson etc. Practical Skills – Non-Examined Assessment Section D: Design Development to develop a concept on paper, using CAD, 3D computer modelling, producing orthographic drawings, refine concept.	Completed Non-Examined Assessment – Sec D Unit 6 assessment
	T4	Theory – Designing Principles , including Design strategies - How this can be done using an iterative process Including sketching, modelling, testing, evaluation of their work. Practical Skills – Non-Examined Assessment Section E: Realisation – students test the validity of developed design through modelling and construction. Manufacture a single/range of prototypes/test rigs.	Completed Non-Examined Assessment – Sec E Unit 7 assessment
	T5	Theory – Planning and composing answers for a range of past paper GCSE questions, in order to prepare for external examinations.	Past Examination Paper Exampro questions.
B. WIDER KEY STAGE FOUR DESIGN & TECHNOLOGY CURRICULUM			
- The Arkwright Scholarship, which allows students to compete for funding in the next stage of their learning, by presenting a design and make project to a panel of judges. - Out-of-lesson practical support sessions to support students learning as they require, including learning 3D printing software and 3D printing, Laser cutting, dye sublimation etc. - All D&T students in Yr.10 get the opportunity to visit Cadbury world, to support their project work, and to experience scales of production first-hand.			

FOOD PREPARATION AND NUTRITION CURRICULUM MAP			
A. FORMAL KEY STAGE FOUR FOOD PREPARATION AND NUTRITION GCSE LEVEL CURRICULUM			
Core Threads	By the end of key stage FOUR we want all students of Food Preparation and Nutrition to know and do the following key things: Secure knowledge of all aspects OF Food Preparation and Nutrition; practical food preparation skills; knowledge of Food science, Food safety, Food Choice, Food provenance; and cooking techniques		
Prior Knowledge	In KS4, students of Food Preparation and Nutrition will build on the following prior learning : KS3 Food Technology, especially building on themes such as Government guidelines for healthy eating, the Eatwell Guide, Factors affecting food choice, functions of ingredients, preparation and cooking techniques.		
Future Knowledge	The Curriculum in KS4 Food Preparation and Nutrition will prepare students for the following future learning : further study of food, including that covered in KS5 Science courses; applied courses and job-related learning both in Food Science, Catering and Hospitality. Hospitality & catering. Degree level food qualifications.		
Year 10	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
	T1	Government Healthy Eating Guidelines. Composite meals. Knife cuts (e.g. julienne) Protein – HBV and LBV as well as how heat effects protein- eg coagulation. Nutritional analysis using the Nutrition Program (Jenny Ridgwell) Simple and complex carbohydrates. Bread making and gluten development. Sugars. Insoluble and Soluble fiber, Portioning a chicken. Fish filleting and quality. Fats and heat transference.	Written Assessment: Nutritional analysis Food practical work: composite meals
	T2	Technical challenges: Choux pastry and profiteroles. Lamination- puff pastry. Crème patisserie and piping. Short crust pastry and blind baking. Lemon curd sauce/gelatinization. Aeration of egg white foams/ meringues. Complete Christmas cake research/ designs/planning/ making.	Knowledge Test: mock exam paper on theory thus far. Choux practical and exam Q
	T3	Mock NEA 1 gluten: Research, plan, hypothesis, fair testing, experiment, testing methods and star profiles, analysis and evaluation. British and international cuisine. Pasta making- lasagna with ragu and roux/gelatinization. Upskilling to fill ravioli and tortellini. Vitamins and minerals. Energy – Basal Metabolic Rate/ Physical Activity Level. Dietary related illness.	Practical work: Filled pasta Mock NEA 1 feedback
	T4	Sensory testing methods. Denaturation and browning reactions Mock NEA 2 cuisine task: Research, plan, time plan, justification of dishes.	Written Assessment: mock exam paper on theory thus far
	T5	Mock NEA 2: Practical exam (3 hours), analysis and evaluation (sensory, cost and nutritional). Feedback session. Types of food poisoning Use of micro-organisms in Food production- molds/cheese/Yeast/Bacteria. Milk processing, cheese and yoghurt. Gnocchi making. Emulsification and mayonnaise with flatbreads.	Mock NEA 2 feedback Homework and practical
	T6	Food Provenance – where and how ingredients are grown/reared and caught. Environmental issues. Technological developments.	EOY exam Homework and practical
Year 11	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
	T1	Non-Examined Assessment: Food Investigation Task (15%) Controlled assessment lessons (10 hours) within lesson time. Reflect on progress following generic class feedback. Revision for mock exams Skills based practical work to support Non-Examined Assessment (NEA) 2 in Term 3	NEA 1
	T2	Continue with NEA 1. Revision of key topics (Macronutrients/micronutrients Nutritional needs and health/Cooking of food and heat transfer/ functional and chemical properties of food/ food spoilage and contamination/ factors affecting food choice/ food labelling and marketing) for mocks.	NEA 1 Internal Mock Examinations
	T3	NEA 2 (35% GCSE) Core skills demonstrated include: S1 – General practical skills, S2 – Knife skills, S3 – Preparing fruit and vegetables, S4 – Use of the cooker, S5 – Use of equipment, S6 – Cooking methods, S7 – Prepare, combine and shape, S8 – Sauce making, S9 – Tenderize and marinate, S10 – Dough, S11 – Raising agents, S12 – Setting mixtures	NEA 2 Food Preparation Task (35%) including 3 Hour practical session.
	T4	Complete Non-Examined Assessment 2 Evaluation section: involves evaluating through accurate nutritional analysis data for the final dishes/sensory testing with detailed analysis and evaluation/ costing/ creative improvements suggested for the final dishes. Revision for Exam (50%): including preparing questions on Food Nutrition and Health/ Food Science/Food safety/Food choice/Food provenance	Non-Examined Assessment 2: Final Section Evaluation/sensory analysis/costing/ nutritional analysis
	T5	Revision/exams: with a focus on all aspects of the specifications/ areas identified within the group Revision activities in class will include groups tasks/private quiet study/quiz	Practice Qs for External Examinations
B. WIDER KEY STAGE FOUR FOOD CURRICULUM			
- Christmas Cake Competition/ Future Chef competitions - Food support session every Friday lunch time in TE2 - Out-of-Lesson Revision Clubs - GCSE Pod - Trips: Dairy Farm/ Afternoon Tea - Wider reading such as AQA GCSE Food Preparation and Nutrition (Rickus/Saunders/Mackey), The Science of Cooking (Dr S Farrimond) - Websites: https://www.foodafactoflife.org.uk/ https://www.nutrition.org.uk/ https://www.nhs.uk/live-well/eat-well/ https://www.nutritionprogram.co.uk/			

DESIGN & TECHNOLOGY: TEXTILES CURRICULUM MAP

A. FORMAL KEY STAGE FOUR DESIGN & TECHNOLOGY: TEXTILES GCSE LEVEL CURRICULUM

Core Threads	By the end of key stage FOUR we want all students to know and do the following key things: core Concepts, such as Core Technical Principles & Designing Principles; practical skills, modelling and prototyping in papers, boards, woods, metals, textiles and smart materials; design process, the iterative design process, user centred design; writing skills required for KS4 exam style, Specialist Technical Principles and Designing and Making Principles.
Prior Knowledge	In KS4, students of Design & Technology: Textiles will build on the following prior learning: KS3 Design Skills; KS3 knowledge of Safety in the workshop; KS3 Making Skills; prior knowledge of KS3 Computer Aided Design Computer Aided Manufacture – and Laser cutting.
Future Knowledge	The Curriculum in KS4 Design & Technology: Textiles will prepare students for the following future learning : To work confidently with materials and processes in a range of contexts including apprenticeships, or specialist practical training; the skills and knowledge required to move forward to a broad range of further education, including A level Product Design.

	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
Year 10	T1	Theory – Unit 1 New and Emerging Technologies , the design and organisation of the workplace including automation and the use of robotics, buildings and the place of work, tools and equipment. Practical Skills – Pewter Casting (designing a button) – Use of CAD/CAM, MDF, Metalwork casting techniques.	End of Unit 1 Test on the topic of New and Emerging Technologies. Casting - Design Folder and Practical work.
	T2	Theory – Unit 2 Energy, materials, systems approach to designing including the use of light sensors, temperature sensors, pressure sensors and switches. The use of buzzers, speakers and lamps, to provide functionality to products and processes. Energy sources and sustainability Practical Skills – Cadbury's Project – Scales of Production, dyeing processes, decoration skills including knowledge of batik, tie dye, embroidery, printing, applique with various materials.	End of Unit 2 Test on The Systems Approach. Cadbury - Design Folder and Practical work.
	T3	Theory – Unit 3 Materials, Developments made through the invention of new or improved processes e.g., Graphene, Metal foams and Titanium, in addition to conventional, modern and smart materials. Practical Skills – Complete Cadbury project - Scales of Production, dyeing processes, decoration skills including knowledge of batik, tie dye, embroidery, printing, applique with various materials.	End of Unit 3 Test, on the Energy, Materials, Systems and Devices Cadbury – Complete design folder and practical work
	T4	Theory – Unit 4 Common specialist technical principles. Tension, compression, bending, torsion and shear. How materials can be reinforced, stiffened or made more flexible: e.g. lamination, bending, folding, webbing, fabric interfacing. Practical Skills – Making a skirt – Understand about pattern cutting, fastenings, seams and hems, patch pockets.	End of Unit 4 Test, on the topic of materials. Skirt - Design Folder and Practical work.
	T5	Theory – Unit 5 Textiles, Timber based materials and/or Polymers. Synthesising and revising KS4 knowledge, including that relating to topics such as Material Properties, Production Techniques and Systems. Practical Skills – Upcycle a pillowcase into an item of clothing, students will develop their environmental & modelling skills.	Year 10 Internal Mock Examinations Upcycling - Design Folder and Practical work.
	T6	Further embedding KS4 theory knowledge, including that relating to topics such as environment, obsolescence, tolerances, composite materials and technical textiles. Practical Skills: Non-Examined Assessment Section A: Identifying and investigating design possibilities – You will explore the 3 contexts which are published on June 1 st , conduct some initial research to determine which context you choose.	End of Unit 5 Test and online quizzes, to consolidate all learning in Yr.10. Completed Non-Examined Assessment – Sec A
Year 11	Term	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT	Common Assessment End Points
	T1	Theory – Unit 6/7 Design Principles and Design Strategies - Students should investigate, analyse and evaluate the work of past and present designers and companies to inform their own designing. E.g., Alessi, Apple, Braun, Dyson etc. Aesthetics: surface finish, texture and colour. Environmental factors: recyclable or reused materials. Practical Skills: Non-Examined assessment Section B: Design Brief & Specification – students will write their own design brief and specification, based upon the context and research they have chosen to follow.	End of Unit 6/7 Test, on design principles and strategies Completed Non-Examined Assessment – Sec B
	T2	Theory – Designing Principles, including Design strategies - How this can be done using an iterative process. Including sketching, modelling, testing, evaluation of their work to improve outcomes. Practical Skills – Non-Examined Assessment Section C: Design Ideas, for demonstrating no fixation, to create a range of ideas to satisfy the design brief . This will take the form of hand drawn sketched ideas, to demonstrate creativity.	Mock Examinations Completed Non-Examined Assessment – Sec C
	T3	Practical Skills – Non-Examined Assessment Section D: Design Development allows students the freedom to develop a concept on paper, using CAD, 3D computer modelling, producing orthographic drawings, to refine their concept.	Past Examination Paper responses and use of Exampro questions. Completed Non-Examined Assessment – Sec D
	T4	Practical Skills – Non-Examined Assessment Section E: Realisation – students can test the validity of their developed design through modelling and construction. They will manufacture a single/range of prototypes/test rigs.	Past Examination Paper responses and use of Exampro questions. Completed Non-Examined Assessment – Sec E
	T5	Theory – Planning and composing answers for a range of past paper GCSE questions, to prepare for external examinations.	Past Examination Paper responses and use of Exampro questions.

B. WIDER KEY STAGE FOUR DESIGN AND TECHNOLOGY: TEXTILES CURRICULUM

The Arkwright Scholarship, which allows students to compete for funding in the next stage of their learning, by presenting a design and make project to a panel of judges.

We offer KS4 learners several out-of-lesson practical support sessions to support students learning as they require, including learning 3D printing software and 3D printing, Laser cutting, dye sublimation etc.

All D&T students in Yr.10 get the opportunity to visit Cadbury world, to support their project work, and to experience scales of production first hand. One off bespoke, batch production, mass production and Just In Time production.

DESIGN & TECHNOLOGY CURRICULUM MAP				
A. FORMAL KEY STAGE THREE DESIGN & TECHNOLOGY CURRICULUM				
Core Threads		By the end of key stage THREE we want all students of Design and Technology to know and do the following key things: idea generation, development and graphic presentation skills; Computer Aided Design; Computer Aided Manufacturing; use Hand Tools and Machine Tools, AND health and safety issues in a workshop and textiles room; work safely and hygienically when preparing food; where food comes from; how to adapt recipes, use Sewing Machines ; where fabric comes from; how to construct and decorate products in Textiles.		
Prior Knowledge		In KS3, students of DT will build on the following prior learning : build on existing Arts and Crafts Skills developed in key stage two; existing knowledge of cookery, food and nutrition; utilize KS3 mathematics skills, such weighing, measuring, costing and building on any hand sewing skills gained at key stage two.		
Future Knowledge		The Curriculum in KS3 Design and Technology will prepare students for the following future learning : GCSE Design and Technology knowledge, such as dying techniques in Textiles, fabric construction and fiber sources; GCSE knowledge of Food Preparation and Nutrition, including practical Food preparation skills; knowledge of Food science, Food safety, Food Choice, Food provenance; and cooking techniques		
Year 7	Rotation	KEY KNOWLEDGE SKILLS CONCEPTS – TAUGHT, REVISED, REVISITED, AND LEARNT [*KS3D&T is taught in rotations]		Common Assessment End Points
	R1	Rotation One - Graphics & Workshop Part 1: learn work safety; basic freehand sketching; Pencil control; parallel lines; sketch simple 2D & 3D shapes; Isometric drawing - with grids; produce a perspective drawing; discover a range of pop up and paper folding mechanisms & produce their own iteration		Graphic Design Work assessment Pop-up Book assessment
		Rotation One - Graphics & Workshop Part 2: learn how to manufacture a clock using a pillar drill, coping saw, scroll saw, sanding machines/paper, and decoration techniques; further develop an appreciation of health and safety issues in a workshop		Clock practical: drilling pilot hole, using pillar drill, using belt sander
	R2	Rotation Two - Graphics & Workshop Part 1: develop an understanding of Computer Aided Design (CAD) and Computer Aided Manufacturing; use Techsoft 2D Design software; produce clock parts on laser cutter; use hand tools to produce an acrylic cutlery; polymers; workshop health/safety		2D Design & Clock Assessment 2D Design Skills
		Rotation Two - Graphics & Workshop Part 2: further develop knowledge of how to use hand tools to produce an item of acrylic cutlery; further explore Polymers and their application; develop a deeper appreciation of health and safety issues in a workshop.		Acrylic cutlery design and manufacturing task
	R3	Rotation Three – Textiles: develop understanding and practice skills related to: Workroom safety, Hand sewing skills. Machine sewing skills, Sewing machine driving test, Applique. Work with a Brief and specification. Complete Design work, including the planning and making of cushions and Evaluation of their practical making skills. Understand about sustainability and reusing old products for a new purpose.		Practical: Make a cushion using hand and machine sewing skills out of an old shirt
	R4	Rotation Four – Food: knife skills including bridge and claw; government guidelines and the Eatwell Guide; name and use kitchen tools & equipment to demonstrate practical skills to make and describe products; meat safety; dairy, protein, pasta sauce with costing homework, International Cuisine; Glazing practical experiment. Free choice celebration/development.		Practical/s: Fruit salad; Rock cakes; Koftas; Pizza Toast; Kofta; Goujon End of unit assessment
Year 8	R1	Rotation One – Electronics: design, make and evaluate a Moisture Tester; understand the basic concepts of Electronics and Components-Voltage, Current, Resistance, Conductors and Insulators, The Cell / Battery, Resistor and LED. Recap on plastics and how they can be manipulated- Thermo and Thermo-setting Plastics – properties. Sawing, drilling, polishing the edges of Acrylic - Cross filing, draw filing, abrasive paper, buffing, strip heating.		Practical: Design and Manufacture of a Moisture Tester
	R2	Rotation Two – Resistant Materials: theory of woods- Hardwood/Softwood and the Seasoning of Timber; Evaluate Adhesives; Finishes that can be applied to wood; tools used- Rule, Try Square, Marking Gauge; drilling, cutting & abrading; joints inc. Butt/Miter/Finger/Dovetail/Mortise/ Tenon/Lap		Practical: use wood Joints to make a Desk Calendar
	R3	Rotation Three – Food: develop skills from Yr7; revisit the Eatwell guide; macro/micronutrients; biscuits and batch production; seasonal foods; energy balance; Fair Trade; Enzymatic Browning experiment; dextrinization, Maillard, caramelization and blanching, food safety-knife skills; composite meals, Chinese food. Free choice celebration/development.		Practical Work: Biscuit; Quesadilla; Stir Fry; Pancakes; Jalousie; Bolognaise End of unit assessments
	R4	Rotation Four – Textiles: product analysis; Zip practice; machine practice; dying techniques – tie dye and batik; overlocking samples – finishing techniques: CAD skills to create an appliqued shape to be cut on the laser cutter; creating design ideas; planning skills; tote bag; evaluation		Practical Work: make a dyed tote Bag with Pocket & laser cut detail

Year 9	R1	Rotation One – Food: Allergies and Intolerances; the 6 R's- sustainability and reducing waste; special diets: Religion; meat consumption; plasticity experiment (shortbread) chemical properties of fats and shortening; aeration (cross curricular with science); milk processing; gelatinization. Free choice celebration/development.	Practical Work: Gluten/lactose free Cupcakes; Pizza Wheel; Chicken Pitta; Swiss Roll, loaded mac & Cheese. End of unit assessment.
	R2	Rotation Two – Lighting Project: build the skills required for Non-Examined Assessments in future years; <i>work of famous designers/design periods</i> ; research a Context; write a Design Brief; write a Specification; explore a range of design Ideas; design development; technical drawings; <i>manufacturing skills</i> ; CAD/CAM; product testing; evaluation Extension Task- Graphics/Card Modelling: modelling materials, application of models/prototypes, modelling techniques, adhesives,	Practical Work: Manufacture of multi material light
	R3	Rotation Three – Textiles: product analysis; Zip practice; machine practice; dying techniques – tie dye and batik; overlocking samples – finishing techniques: <i>CAD skills</i> to create an applique shape for the bag to be cut on the laser cutter; creating design ideas; planning skills; tote bag ; evaluation	Practical Work: make a dyed tote Bag with Pocket & laser cut detail
B. WIDER KEY STAGE THREE DESIGN & TECHNOLOGY CURRICULUM			
- Voluntary lunchtime catch-up sessions. Textiles Club.			