

Creative Design and Technologies



Curriculum Purpose:

	Beyond KEVI HWGA:	<p>Food Preparation and Nutrition: Food preparation and nutrition can lead to a wide range of further courses such as BSc Food and nutrition, BSc Nutrition and dietetics, BA Culinary arts management, BSc Food development and innovation. Food can lead to a wide range of careers, ranging from Environmental health officer, food scientist, Nutritionist, dietitian, teacher primary or secondary, chef, product development, food photography, food journalism.</p> <p>Product design/graphics: Product Design (Design & Technology) can lead to a wide range of further courses such as the offered GCSE Design & Technology (AQA), Product Design A Level & Level 3 BTEC in a variety of creative courses. This subject opens up many opportunities into a fantastic career such as Mechanical, Civil & Electrical Engineering, Architecture, Product/Graphic design, Web Design or any of the other creative & technical industries on offer. At HWGA we aim to ensure that the Product Design lessons are designed to support the implementation of mathematical and scientific knowledge whilst learning to be creative and innovative.</p>
Context	KS5	<p>When the students have successfully completed a suitable creative GCSE course the A Level Product design course allows the students to fully explore the creative industry through in-depth exploration and advanced manufacturing techniques. As the A Level product design course is open to any discipline, we tailor the coursework of the students to mirror their chosen career path. This can, in many cases give the student an advantage at a University interviews as they come prepared with a subject specific research and design portfolio, regardless of their chosen university course.</p> <p>At KS5 students are able to select food preparation as an enrichment subject developing skills they may need for university life and beyond.</p>
	KS4	<p>Product design At KS4 students AQA GCSE Design & Technology with a Product Design focus. This course allows the students to create and design a final product using materials of their choice with very few limitations. This course teaches the students how to become creative thinkers, how to employ innovation to solve a problem and how to select the appropriate manufacturing technique. The course also teaches the students cross-curricular content. The course prepares the students for the AQA Product Design A-Level. It also prepares students for any other level 3 Design course.</p> <p>BTEC tech Engineering AT KS4 students can study vocational engineering. The course allows students to become creative problem solvers, and find solutions to realistic situations, students are able to realise how engineering skills are applied in everyday context, the course teaches them to think about problems by seeing the big picture. The course prepares students for further study of engineering at KS5</p>

		Food Preparation and Nutrition: At KS4 students study Eduqas GCSE Food preparation and nutrition, the science of food as well as how to prepare a range of different food commodities, students will be taught to understand the relationship between diet, nutrition and health, the economic, ethical, environmental and cultural influences on food choice, understand the functional, nutritional, sensory, and microbiological food safety considerations when preparing, serving and storing food, Develop a knowledge of the functional properties and chemical characteristics of food. GCSE Food preparation and nutrition provides a suitable foundation for studying level 3 food science and nutrition and other food related courses at As and A level.
KS3		In Year 7 students are introduced to creative design and technologies through the formats of Design and Technology and Food and Nutrition , students spent 13 weeks learning theory and key concepts in each specialism as part of a carousel. They are taught skills and techniques in each subject through a schematic curriculum set in a realistic content. In Year 9 students are taught through a series of project-based tasks encouraging them to refine their key knowledge and technical skills in designing, making and evaluating. They use annotated sketches, and 2D design, working from product specifications. In food preparation and nutrition, they are taught to be more competent in the selection of ingredients and create more complex recipes, to feed themselves and others.
KS1/2 links		Design and Technology: Students are taught through a variety of creative and practical activities how to design, make, and evaluate a range of materials in a variety of different contexts. They are able to use research to help them design, use a variety of tools and equipment to help them perform practical tasks such as shaping, cutting, joining and finishing. Cooking and Nutrition: Students are taught to understand and apply the basic principles of a healthy and balanced diet, learn foods in season and where they come from learn how to make savoury dishes.

Big Qs <i>Linked to NC</i>	Autumn 1	Autumn 2	Spring 1	Summer 1	Summer 2
Year 11 Food Preparation & Nutrition NEA	<i>How do we conduct a fair scientific investigation within food preparation and nutrition?</i> <i>NEA Food science task-set yearly by exam board</i>	<i>How do we conduct a fair scientific investigation within food preparation and nutrition?</i> <i>NEA Food science task-set yearly by exam board</i>	<i>How do we investigate and produce a range of dishes working from a design brief?</i> <i>NEA Food research task-set yearly by the exam board</i> Students will work independently on a sustained and focused portfolio which works towards a final outcome.	<i>How to we prepare and revise for exams.</i> <i>Revision in school and at home</i>	<i>How to we prepare and revise for exams.</i> <i>Revision in school and at home.</i>
Key Knowledge,	Declarative Food Science	Declarative Food science	Iterative Process Research	NEA	

<p>Concepts and skills</p>	<p>Functional and chemical properties of food</p> <p><i>Scientific investigations</i></p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>functional and chemical properties of food</p> <p><i>Scientific investigations</i></p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>Planning Procedural Testing Making Evaluations</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>HPL Perseverance Resilience Practice</p>	
<p>Feedback & Assessment</p>	<p>Controlled assessment A02 A04</p>	<p>Controlled assessment A02 A04</p>	<p>Controlled assessment A03 A04</p>	<p>Testing</p>	<p>Testing</p>
<p>Year 10 Food Preparation & Nutrition</p>	<p>Food commodities <i>How do we prepare food using different techniques, how do we apply the principles of nutrition</i> <i>How do we ensure the food we cook is safe to eat?</i></p> <p>Demonstrate knowledge and understanding of nutrition, food, cooking and preparation</p> <p>Apply knowledge and understanding of nutrition, food,</p>	<p>Food commodities/diet and health <i>How do we understand the properties of food? What impact does the environment have on food? How does nutrition contribute to lifestyle and overall health?</i></p> <p>Apply knowledge and understanding of nutrition, food, cooking and preparation</p>	<p>How do we understand the properties of food? What impact does the environment have on food? How does nutrition contribute to lifestyle and overall health?</p> <p>Apply knowledge and understanding of nutrition, food, cooking and preparation</p>	<p>How do we prepare and plan to follow a design brief, how do we answer an investigation using scientific terminology?</p> <p>Practice NEA task 1 Practice NEA task 2</p>	<p>How do we prepare and plan to follow a design brief, how do we work practically following a time plan? How to we plan and revise for an exam.</p> <p>Practice NEA Task 2 Revision</p>

	cooking and preparation				
Key Knowledge, Concepts (Substantive)	Principles of nutrition Food commodities /groups Technical Knowledge Health safety, hygiene,	Principles of nutrition - Diet and good health Where food comes from. Food science Technical knowledge	Principles of nutrition - Diet and good health Where food comes from.	Iterative process Research Planning Testing Making Evaluations	Iterative process Research Planning Testing Making Evaluations
skills (Iterative)	Making modelling- Evaluation Food science (Iterative) Cooking and food preparation. HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	Making modelling- Evaluation Food science (Iterative) Cooking and food preparation including scientific experiments HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	Technical knowledge Making modelling - evaluation Food science (Iterative) Cooking and food preparation including scientific experiments HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	(Iterative) Cooking and food preparation HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	(Iterative) Cooking and food preparation HPL Metacognition Self regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking
Feedback & Assessment	A01 A02 Yellow sheet assessment X 2	A01 A02 Yellow sheet assessment X2	A01 A02 Yellow sheet assessment X 2	A02 A04 Yellow sheet assessment X 1	A03 A04 Yellow sheet assessment x 1 End of year test
Big Qs <i>Linked to NC</i>	Autumn 1	Autumn 2	Spring 1	Summer 1	Summer 2
Year 11 Design & Technology	<i>How conduct market research to influence our designs?</i>	<i>How do we use a range of methods to communicate our design ideas?</i>	<i>How can we manufacture a design prototype to a high standard?</i>	<i>How do we revise and prepare for the written exam?</i>	<i>How do we revise and prepare for the written exam?</i>

	NEA Design & Technology. (Research)	Students working on their NEA. (Research and Design) Homework revision booklet.	Students working on their NEA. (Designing & Developing) Homework revision booklet.	Revision in school and at home	Revision in school and at home
	Completion of NEA task: Revision. Students use primary and secondary resources, practical investigation and formulation of findings presented in a numerical and written format.	Completion of NEA task: Research and Design. Students to complete their research and begin using graphics skills to visually represent their design ideas. Students to use Isometric, perspective and sketching skills.	Completion of NEA task: Design & Developing. Students to continue exploring their designs by using modelling skills and being dimensionally accurate. Considering user opinions and acting upon feedback.	All theory work as per revision timetable	All theory work as per revision timetable
Key Knowledge, Concepts	<p>Process of designing (Substantive)</p> <p>Research -knowledge of the world, its context and problems.</p> <p>Knowledge of materials, tools, technology, and design theory.</p> <p>Analytical -making use of information through analysis</p>	<p>Process of designing (substantive)</p> <p>Research -knowledge of the world, its context and problems.</p> <p>Knowledge of materials, tools, technology, and design theory.</p> <p>Analytical -making use of information through analysis</p>	<p>Process of designing (substantive)</p> <p>Research -knowledge of the world, its context and problems.</p> <p>Knowledge of materials, tools, technology, and design theory.</p> <p>Analytical -making use of information through analysis</p>	<p>Knowledge of process of designing</p> <p>Revise -knowledge of the world, its context and problems.</p> <p>Knowledge of materials, tools, technology, and design theory.</p>	
skills	<p>Iterative process</p> <p>Designing skills</p> <p>Modelling Skills</p> <p>Manufacturing</p> <p>Evaluating Skills</p>	<p>Iterative process</p> <p>Designing skills</p> <p>Modelling Skills</p> <p>Manufacturing</p> <p>Evaluating Skills</p>	<p>Iterative process</p> <p>Mathematical</p> <p>Designing skills</p> <p>Modelling Skills</p> <p>Manufacturing</p> <p>Evaluating Skills</p>	<p>Mathematical</p> <p>Manufacturing</p> <p>Materials</p> <p>Processes</p>	

	HPL Metacognition Self regulation	HPL Metacognition Self-regulation	HPL Metacognition	HPL Perseverance Resilience Practice	HPL Perseverance
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	Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking		Resilience Practice
Feedback & Assessment	Controlled assessment AO1 (A & B) Yellow assessment sheet X 2	Controlled assessment AO1 (B) & AO2 (C) Yellow assessment sheet X 2	Controlled assessment AO2 (C&D) Yellow assessment sheet X 2	Written and test scores Yellow assessment sheet X 2	Written and test scores
Year 10 Design & Technology.	<i>How do we select the most appropriate materials and design with accuracy?</i> Multi material CAD project Learning the principles of design. RESEARCH & DESIGN. This is done in a practical situation.	<i>Why is developing and modelling an important part of designing?</i> Multi material CAD project Learning the principles of design. RESEARCH, DESIGN & DEVELOPING. This is done in a practical situation.	<i>Evaluating helps us design and perfect are ideas, how?</i> Multi material CAD project Learning the principles of design. RESEARCH & DESIGN, DEVELOPING & EVALUATING. This is done in a practical situation.	<i>Designers don't normally just one material, how do we work with different materials in the same project?</i> Multi material CAD project Learning the principles of design. RESEARCH & DESIGN, DEVELOPING & EVALUATING. This is done in a practical situation.	<i>How do we begin a design project?</i> NEA Brief released from the exam board. Student to choose a brief and begin their 20- page (A3) Design and make project.

	Unit 1 of theory Revision handouts for home study	Unit 2 of theory Revision handouts for home study	Unit 3 of theory Revision handouts for home study	Unit 4 of theory Revision handouts for home study	Unit 5 and 6 of theory Revision handouts for home study
Key Knowledge, Concepts	<p>Process of designing (Substantive)</p> <p>Research -knowledge of the world, its context and problems. Knowledge of materials, tools,</p>	<p>Process of designing (Substantive)</p> <p>Research -knowledge of the world, its context and problems.</p>	<p>Process of designing (Substantive)</p> <p>Research -knowledge of the world, its context and problems.</p>	<p>Process of designing (Substantive)</p> <p>Research -knowledge of the world, its context and problems.</p>	<p>Research for the NEA. Task analysis, Market research and Secondary research.</p>

<p>Skills</p>	<p>technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative Designing Modelling Manufacturing</p> <p>Core content for revision (Environment, Sustainability, People, Theories & design movements)</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative Designing Modelling Manufacturing</p> <p>Core content for revision (Environment, Sustainability, People, Theories & design movements)</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative Designing skills Modelling Skills Evaluating Skills</p> <p>Material revision Manufacturing method revision.</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative Designing skills Modelling Skills Manufacturing Evaluating Skills</p> <p>Specialist Technical Principles. (Exam Practice) Revisit weak revision areas.</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>HPL Metacognition Self-regulation Strategy planning Perseverance Resilience Practice</p>
<p>Feedback & Assessment</p>	<p>Controlled assessment AO1 (A & B)</p>	<p>Controlled assessment AO1 (B) & AO2 (C)</p>	<p>Controlled assessment AO2 (C&D)</p>	<p>Written and test scores</p>	<p>Written and test scores</p>
<p>Big Qs</p>	<p>Autumn 1</p>	<p>Autumn 2</p>	<p>Spring 1</p>	<p>Summer 1</p>	<p>Summer 2</p>

<p>BTEC tech Level 2 Engineering year 10</p>	<p><i>How is engineering innovative and used everyday life?</i></p> <p>Component 1 Learning aim A Exploring engineering sectors and engineering design</p> <p>Learning aim B The interpretation of an engineering brief. Producing initial design proposals, the use of CAD drawings, generating and making final design solution decisions.</p> <p>The importance of engineering team and peer review</p>	<p><i>How can engineering transform the future?</i></p> <p>Component 1 Learning aim A Understand engineering sectors, products and organisations, and how they interrelate.</p> <p>Learning aim B The interpretation of an engineering brief. Producing initial design proposals, the use of CAD drawings, generating and making final design solution decisions.</p> <p>The importance of engineering team and peer review</p>	<p><i>What is the exact problem you want to solve? And whom are you solving it for?</i></p> <p>Component 2 Learning aim A Explore engineering skills through the design process</p>	<p><i>What is the exact problem you want to solve? And whom are you solving it for?</i></p> <p>Component 2 Learning A: Investigating an engineered project.</p>	<p>Component 2 Learning aim B Investigating an engineered project</p>
<p>Key knowledge Concepts and</p>	<p>Exploring engineering (Substantive) Exploring Engineering Sectors and Design Applications – Understanding different engineering sectors</p>	<p>Exploring engineering (Substantive) Organisations, functions and job roles, develop understanding of how these contribute to career progression in engineering.</p>	<p>Exploring engineering (Substantive) The engineering design and make process: define the problem, develop possible solutions, chose a solution design a model.</p>	<p>Exploring engineering (Substantive) Investigating materials, components and processes used in the production of engineered products. Engineering materials categories Ferrous, non-ferrous, characteristics of materials, machinability, workability, durability types and characteristics of components.</p>	<p>Exploring engineering Investigate engineering products</p>
<p>skills</p>	<p>Iterative Engineering Sectors: Engineering Design and Make Process To understand engineering organisations, functions,</p>	<p>Iterative Examples of engineering organisations. A range of examples covering the sectors</p>	<p>Iterative Researching existing products Producing design sketches</p>	<p>Iterative</p>	<p>Observing and recording, product disassembly Appraisal/interpretation skills, justification and reasoning.</p>

	<p>job roles and career progression</p> <p>Research engineering sectors. Understanding of types of engineering. Analyse engineering assess products.</p> <p>Producing initial design proposals CAD Drawings, using drawing, using drawing, editing, 3D models</p> <p>HPL Metacognition Strategy planning Big picture thinking Connection finding</p>	<p>Research around engineering organisations, analyse job roles, analyse products and components present data. Producing initial design proposals CAD Drawings, using drawing, using drawing, editing, 3D models</p> <p>HPL Metacognition Strategy planning Big picture thinking Connection finding</p>	<p>Producing initial design proposals CAD Drawings, using drawing, using drawing, editing, 3D models</p> <p>HPL Metacognition Strategy planning Big picture thinking</p>	<p>Engineering process, cutting, drilling, sawing filing, shearing, shaping milling, forming, joining, brazing, bonding</p> <p>characteristics of materials, machinability, workability, durability</p> <p>HPL Metacognition Strategy planning Big picture thinking</p>	<p>Technical skills use of tools and equipment product design requirements.</p>
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Feedback and assessment	Component 1 Learning aim A Assignment briefs	Component 1 Learning aim A Assignment briefs	Component 2 Learning aim A Assignment briefs	Component 2 Learning aim A Assignment briefs	Component 2 Learning aim B Assignment briefs
Big Qs	Autumn 1	Autumn 2	Spring 1	Summer 1	Summer 2
Year 11 BTEC Tech award in Engineering L1/2	<p><i>What is the exact problem you want to solve? And whom are you solving it for?</i></p> <p>Component 2 Learning A: Investigating an engineered project.</p>	<p>How can you plan and manufacture an engineered product?</p> <p>Component 2 Learning B: Manufacturing an engineered product</p>	<p>How are engineering components assembled?</p> <p>Component 2 Learning C: disassembly of an engineered product</p>	<p>Mock exam papers for students re-entered</p>	<p>External examination</p>

	<p>Exploring engineering</p> <p>(Substantive) Investigating materials, components and processes used in the production of engineered products. Engineering materials categories Ferrous, non-ferrous, characteristics of materials, machinability, workability, durability types and characteristics of components.</p> <p>Iterative Engineering process, cutting, drilling, sawing filing, shearing, shaping milling, forming, joining, brazing, bonding</p> <p>characteristics of materials, machinability, workability, durability</p> <p>HPL Metacognition Strategy planning Big picture thinking</p>	<p>exploring engineering</p> <p>(Substantive) Investigating materials, components and processes used in the production of engineered products. Engineering materials categories Ferrous, non-ferrous, characteristics of materials, machinability, workability, durability types and characteristics of components.</p> <p>Iterative Engineering process, cutting, drilling, sawing filing, shearing, shaping milling, forming, joining, brazing, bonding</p> <p>characteristics of materials, machinability, workability, durability</p> <p>HPL Metacognition Strategy planning Big picture thinking</p>	<p>exploring engineering</p> <p>(Substantive) Investigating materials, components and processes used in the production of engineered products. Engineering materials categories Ferrous, non-ferrous, characteristics of materials, machinability, workability, durability types and characteristics of components.</p> <p>Iterative Engineering process, cutting, drilling, sawing filing, shearing, shaping milling, forming, joining, brazing, bonding</p> <p>characteristics of materials, machinability, workability, durability</p> <p>HPL Metacognition Strategy planning Big picture thinking Connection finding</p>	<p>Knowledge of process of designing</p> <p>Revise -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory.</p> <p>Mathematical Manufacturing Materials Processes</p> <p>HPL Perseverance Resilience Practice</p>	
<p>Feedback and assessment</p>	<p>Component 2 Learning aim A Assignment briefs</p>	<p>Component 2 Learning aim B Assignment briefs</p>	<p>Component 2 Learning aim C Assignment briefs</p>	<p>Mock exam papers for students re-entered</p>	<p>External examination</p>

Big Qs	Autumn 1	Autumn 2	Spring 1	Summer 1	Summer 2
<p>Year 11 new – OCR Cambridge National in Engineering Design</p>	<p>What are the key elements when understanding the process of design?</p> <p>R038 Designing processes</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing Evaluating Skills</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and</p>	<p>What are the key elements to consider when investigating needs and wants before embarking upon designing?</p> <p>R038 Design requirements</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing Evaluating Skills</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>What is the most effective way for designers to communicate their ideas?</p> <p>R038 Communicating design outcomes</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing Evaluating Skills</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>What is the most effective way for designers to evaluate their ideas?</p> <p>R038 Evaluating design ideas</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing Evaluating Skills</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>How to we prepare and revise for exams.</p> <p>Revision in school and at home.</p>

	revolutionary thinking				
Feedback and assessment	Controlled assignments Yellow assessment sheet X 2	Controlled assignments Yellow assessment sheet X 2	Controlled assignments Yellow assessment sheet X 2	Written and test scores	
Big Qs	Autumn 1	Autumn 2	Spring 1	Summer 1	Summer 2
Year 10 new – OCR Cambridge National in Engineering Design	N/A	<p>What is the most effective way for designers to communicate their ideas?</p> <p>R039 Manual production of freehand sketches</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing Evaluating Skills</p>	<p>How can designers produce drawings that can be effectively used by manufacturers?</p> <p>R039 Manual production of engineering drawings</p> <p>R039 Manual production of CAD drawings</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing</p>	<p>How can designers evaluate existing products effectively to influence design ideas?</p> <p>R040 Product evaluation</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing Evaluating Skills</p>	<p>What is the most effective way for designers to model their ideas?</p> <p>R040 Modelling design ideas</p> <p>Process of designing (substantive) Research -knowledge of the world, its context and problems. Knowledge of materials, tools, technology, and design theory. Analytical -making use of information through analysis</p> <p>Iterative process Designing skills Modelling Skills Manufacturing</p>

		HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	Evaluating Skills HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking	Evaluating Skills HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking
Feedback and assessment		Controlled assignments Yellow assessment sheet X 2	Controlled assignments Yellow assessment sheet X 2	Controlled assignments Yellow assessment sheet X 2	Written and test scores
KS3 Curriculum	Food & Nutrition	Product design/Graphics	Feedback and assessment		

<p>Year 7</p> <p>Key Knowledge, Concepts and skills</p>	<p><i>How do we use equipment in the food room following food safety and hygiene, What methods can we use to cook and prepare the food we eat, how do we make the right choices for food?</i></p> <p>Skills</p> <p>Technical skills Knife skills, Bridge, and claw method, all in one, melting method, creaming method</p> <p>KNOWLEDGE Principles of Nutrition Understanding the 4 C's, the 'Eatwell' guide, understanding where food comes from and the impact of sustainable food choices, the function of ingredients Technical Knowledge Health safety and hygiene</p>	<p><i>Why should we consider the environment and how to be an ethical designer?</i></p> <p>Introduction to product design/Graphics through the bug hotel project. What do we know about sustainability? What are the 6 R's?</p> <p>Skills</p> <p>Sustainability, designing, understanding plastics, 6 R's?</p> <p>KNOWLEDGE: Understanding where plastics come from, The damage of waste materials especially plastics</p>	<p>All based on 13-week rotation 4 yellow assessment sheets, per specialism peer, self and teacher.</p>		
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	<p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>			
<p>Year 8</p> <p>Key Knowledge, Concepts and skills</p>	<p><i>How do we know the right nutrients for our bodies, how do we prepare a food using different techniques?</i></p> <p>Skills Technical Skills Using a variety of commodities and different methods to make a range of dishes</p> <p>KNOWLEDGE Nutrients what do they do for the body, what foods provide us with the correct nutrients, planning for a teenage diet. Food groups</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking</p>	<p><i>How do mechanisms and motions work?</i></p> <p>MECHANISMS PROJECT Skills Designing and making a children’s toy using a CAM mechanism. Understanding where wood comes from and the ways it can be joined.</p> <p>KNOWLEDGE: Understanding woods, mechanisms and motions, the principles of design, health and safety and manufacturing</p> <p>HPL Metacognition Self-regulation</p>	<p>All based on 12-13-week rotation</p> <p>4 yellow assessment sheets, per specialism peer, self and teacher.</p>		

	<p>Originality Evolutionary and revolutionary thinking</p>	<p>Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>			
<p>Year 9</p> <p>Key knowledge, Concepts and skills</p>	<p><i>How to we cook and prepare food using a range of cooking skills and techniques, how do we cook food for different needs.</i></p> <p>Street Foods Technical Skills Developing knife skills, Developing recipes to understanding the working characteristics of the function of ingredients.</p> <p>KNOWLEDGE Street foods Principles of Nutrition Understanding macro and micro nutrients and special diets.</p> <p>HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking</p>	<p><i>How do we design for clients, users and select an appropriate target market?</i></p> <p>Design and make a lamp from recycled materials.</p> <p>Understanding metals and sustainability.</p> <p>Knowledge: Students will learn the fundamental knowledge of materials, construction and manufacturing methods, how to design & how to design with people in mind. The students will learn this whilst learning to solve problems through innovation.</p>	<p>All based on 12-13-week rotation 4 yellow assessment sheets, per specialism peer, self and teacher.</p>		

		HPL Metacognition Self-regulation Strategy planning Intellectual playfulness Fluent thinking Originality Evolutionary and revolutionary thinking			
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