

Design & Technology Faculty 2018-19 Curriculum Overview

Please note that Year 7 and Year 8 follow a carousel system where students study for approximately ten weeks one of the following Design & Technology subjects in either: Food, Resistant Materials, Graphics, Systems and Control/Electronics. The (o) population in both Year 7 and Year 8 have an additional group/subject which is Food & Health in year 7 and Structures in Year 8.

	Year 7	Year 8
Food	Demonstrate knowledge and understanding of: Introduction to hygiene and safety, eatwell guide traffic light labelling system. Methods of evaluation to include taste, ranking tests and star diagrams as well as self and peer assessment. Food practicals to include: meat kebabs, mixed salads, fruit salads, pizza, lemon cheesecake, vegetable soup and rock buns.	Demonstrate knowledge and understanding of: hygiene and safety rules, dietary goals, eat less sugar theory, eat less fat theory, and eat more fibre theory. Food practicals to include: spaghetti bolognese, sweet/savoury muffins, oaty fruit crumble, fish fingers, vegetable curry, pizza and sweet and sour chicken.
Graphics	Designing a party box and numerous graphical products for a themed party for young children. Demonstrate knowledge, understanding and application of skills in: developing tone, drawing Isometric shapes, colour theory and exploration, Investigating existing products, product design, prototype construction and product development.	Designing numerous graphical products to advertise and promote a musical festival. Demonstrate knowledge, understanding and application of skills in: rendering, typography, colour theory - further development. Investigating existing products, product design, prototype construction and product development.
Systems and Control/Electronics	Demonstrate knowledge, understanding and application of skills in: Introduction to health & safety in the workshop, good soldering practice, produce safety poster, identifying resistors from their colour codes. Electronic practicals include: resistor test piece, mood light constructional project and vacuum forming exercise.	Demonstrate knowledge, understanding and application of skills in: revision of health & safety in the workshop, revision of good soldering practice. Identifying electronic components and using component codes. Electronic practicals include: soldering test piece, construction of project and vacuum forming exercise.
Resistant Materials	Research, design and make products for specific users. Learn about staying safe in the workshop.	Research, design and make jewellery-based products for specific users. Begin to consider industrial processes.

Food & Health in Year 7	<p>Demonstrate knowledge, understanding and working functions of: 5- a- Day, sensory evaluation, rating tables, The eatwell guide, eat less sugar, eat less fat and eat less salt.</p> <p>Carrying out nutritional analysis and evaluations; food packaging and labelling, food storage and temperature control, obesity, BMI and heart disease.</p>	N/a
Structures in Year 8.	N/a	<p>Designing, making and testing structures, especially bridges. Key principles of tower building.</p> <p>Concepts of structures, types of bridges, concept of beams in structures, triangulation. Prototype construction, load bearing and deflection. Evaluation of structures, forces of compression, tension, torsion and shear. Students work in pairs and design and make a bridge to span a gap using different construction methods from knowledge learnt.</p>

	Year 9 subject: DT GCSE	Year 10 subject: DT GCSE	Year 11 DT GCSE
Autumn Term	<p>Knowledge and understanding of: new and emerging technologies. The workplace including automation and the use of robotics. Practicals include dice construction project and desk lamp.</p>	<p>Knowledge and understanding of:</p> <p>programming using Logicator for picaxe, enterprise, crowdfunding, virtual marketing and retail, fair trade and co-operatives.</p> <p>Practicals include designing for specific contexts i.e. the elderly.</p>	<p>Design brief analysis, product survey, existing product analysis, product disassembly,</p> <p>evidence of ergonomics research, initial product specification, initial sketched ideas and evaluation of ideas. Revision and preparation for Exam Week</p>
Spring Term	<p>Knowledge and understanding of: energy, materials, systems and devices, energy storage and generation.</p> <p>Practical projects. USB desk fan</p>	<p>Developments in new materials, systems approach to designing. Mechanical devices. Practicals including: prototyping motor speed control circuits.</p>	<p>3D CAD Modelling, exploded drawing orthographic drawing, PCB design, making PCB, populating PCB with components.</p> <p>Project diary and QC, product testing / modifications and final finishing touches</p> <p>Client feedback</p> <p>Written evaluation, final product photographs, final assessment and hand-in of folder and 3D product.</p>
Summer Term	<p>Knowledge and understanding of materials and their working properties.</p>	<p>Knowledge and understanding of: common specialist technical principles, forces and</p>	<p>Students will be completing past papers in preparation for their Systems examination.</p>

Practicals include: electronic combination lock project and pewter casting.

stresses, ecological and social footprint, scales of production.

Practicals include specialist material areas, sources and origins and using and working with materials.

	Year 9 OCR National in Health and Social Care RO25 Life Stages		
Autumn Term	Physical, intellectual, language, emotional and social development in childhood, adolescence and adulthood.		
Spring Term	The ageing process, factors affecting life stages, genetic, environmental, non- birth medical conditions.		
Summer Term	Matching care and support to specific life stages.		

	Year 9 Subject: Food Preparation and Nutrition	Year 10 Food Preparation and Nutrition	Year 11 Food Preparation and Nutrition
Autumn Term	Demonstrate: knowledge, understanding and working functions of cakes and biscuits and introduction to pastry.	Students will be taught knowledge and understanding of macronutrients, carbohydrates, fats and protein.	NEA1 Science investigations
Spring Term	Knowledge and understanding of choosing, storing and fruit preparation. Vegetables and nutrition.	Students will be taught knowledge and understanding of nutritional needs and health. Diets and special dietary needs.	NEA2 Food preparation project Food hygiene and safety Revision
Summer Term	Demonstrate knowledge, understanding and working functions of bread theory. Practicals and Food science.	Knowledge and understanding of food choice and British and International cuisine.	Course revision / exam preparation

	Year 12 A Level Product Design	Year 13 A level Product Design
Autumn Term	Theory practice for their written examinations Paper 1 & Paper 2. Coursework individual projects – students to produce high quality products based on famous designers to they have studied.	Theory practice for their written examination. Coursework individual projects – students to produce high quality products for their client with detailed design portfolio from exam board design briefs.
Spring Term	Theory practice for their written examinations Paper 1 & Paper 2. Practice coursework individual projects – students to produce high quality products for their client with detailed design portfolio from exam board design briefs.	Theory practice for their written examination. Coursework individual projects – students to produce high quality products for their client with detailed design portfolio from exam board design briefs.
Summer Term	Theory practice for their written examinations Paper 1 & Paper 2. Practice coursework individual projects – students to produce high quality products for their client with detailed design portfolio from exam board design briefs.	Extensive theory practice and revision for their written examination

		Year 13 Food Science and Nutrition
Autumn Term		Current issues in Food Science & Nutrition
Spring Term		Ensuring Food is safe to eat.

Summer Term		Ensuring Food in safe to eat.
-------------	--	-------------------------------

	Year 12 OCR Technical Extended Certificate in Health and Social Care, Equality Diversity and Rights	Year 13 Health and Social Care AQA
Autumn Term	<ul style="list-style-type: none"> Concepts of equality, diversity and rights Application of the concept Values of care in services Support networks Discriminatory practices Effect on individuals Sexual Health Anatomy & Physiology 	<ul style="list-style-type: none"> Anatomy & Physiology revision Building positive relationships Nutrition for health
Spring Term	<ul style="list-style-type: none"> Equality Act 2010 Care Act 2012 Health and Social Care Act 2012 Human Rights Act 1998 Data Protection Act 1998, confidentiality policy National initiatives Impact of law and policy and national initiatives Anatomy & Physiology Sexual Health 	<ul style="list-style-type: none"> Health, Safety & security Building Positive Relationships
Summer Term	<ul style="list-style-type: none"> Best practice in childcare Explaining discriminatory practice, appropriate action and response Applying values of care Anatomy & Physiology Sexual Health 	<ul style="list-style-type: none"> Health, Safety & security Building Positive Relationships