

Curriculum Plan 2017/18

Computing

Year group Term	Term 1A	Term 1B	Term 2A	Term 2B	Term 3A	Term 3b
Year 7	All About Me Network basics Internet risks Develop a web page	Algorithms & Programming Flow charts Learn to code in Kodu and Scratch	Cyber Safety and Computer Crime Risks involved in being online. How the law protects us	Digital Graphic Products Build skills Develop a range of images for a website.	Searching for information Research skills Primary and secondary research HTML code Abstraction basics Skills with spreadsheets Presenting information	Hardware Software Understand how devices and programs interact in a computing system
Key assessment pieces	<ul style="list-style-type: none"> • Baseline assessment • e-safety • ICT 	<ul style="list-style-type: none"> • Flow charts • Kodu programming • Scratch programming 	<ul style="list-style-type: none"> • e-safety / ICT • e-safety / ICT • e-safety / ICT 	<ul style="list-style-type: none"> • Computers • ICT 	<ul style="list-style-type: none"> • Computational thinking • ICT • Programming • Abstraction 	<ul style="list-style-type: none"> • Computers • Computers
Year 8	Building on Year 7 Mini-project to research, develop a game, estimate costings and present findings	How computers work Recap on hardware components Networks and the internet	A Radio Advert Skills with sound editing software. Sequencing and layering Writing persuasively	Develop programming skills Algorithms and flow charts Skills and application of skills with Small Basic	e-safety hackers and types of malware social engineering animation skills	Abstraction – building on the basics What if questions Modelling and predicting
Key assessment pieces	<ul style="list-style-type: none"> • ICT • Programing • Abstraction 	<ul style="list-style-type: none"> • Computers • Computers 	<ul style="list-style-type: none"> • ICT • ICT • ICT 	<ul style="list-style-type: none"> • Computational Thinking • Programming • Programming 	<ul style="list-style-type: none"> • E-safety • ICT 	<ul style="list-style-type: none"> • Abstraction • Abstraction • abstraction
Year 9	Development of skills from year 8 The Music Festival	Introduction to GCSE Computer Science Hardware Compression & encryption Issues, trends and emerging technology	Exploring Digital Tools and Technology The Coffee Shop Communication in a business Mini project building on skills from year 8	Exploring Digital Tools and Technology The Pet Store Commerce and online transactions	Exploring Digital Tools and Technology The School Information and Entertainment tools Build a portfolio of evidence	Cleaning agency Investigate the suitability of digital technologies used by organisations Client server network model
Key assessment pieces	<ul style="list-style-type: none"> • ICT • Abstraction • programming 	<ul style="list-style-type: none"> • Computing • Computing 	<ul style="list-style-type: none"> • Computing • ICT 	<ul style="list-style-type: none"> • Computing • Computing • Computing 	<ul style="list-style-type: none"> • ICT • ICT 	<ul style="list-style-type: none"> • Networks • Hardware • Software
Year 10 Computer Science	Data Representation Binary, binary addition, overflow and binary shifts Hexadecimal	Programming skills Flow charts: iteration & selection Writing and testing code	Data Data encryption, Caesar cipher Compression RLE encoding	Bigger Picture Environment Emerging trends Ethics Programming skills	Data Management Decomposition & Abstraction Databases: flat file & Relational.	Programming skills (S) Read and write text files. Computers Logic, truth tables

	Sound and image files		Data storage	Sup programs, procedures and functions Parameters	Machines & Computational models Hardware, storage, software & OS Programming languages, translators. HTML basics	Hardware: internal components Von Neumann architecture Lille man computer
Key assessment pieces	Data Representation (1) Data Representation (2)	Basic Programming with Python (1) Basic Programming with Python (2)	Compression Encryption & ciphers	Ethics and emerging trends Sub-programs and parameters	Databases: practical task. Hardware and software	Practice NEA 1 Logic & Hardware
Year 11 Computer Science	Programming skills (3) Analysis and Design Revision for GCSE exam (1) Data representation, hardware, flow charts	Programming skills (4) Analysis and Design Revision for GCSE exam (2) System Security and software	Programming skills (5) Coding a solution Revision for GCSE exam (3) Computational Thinking Pseudocode	Programming skills (5) Testing and evaluating the program Revision for GCSE exam (4) Data Representation	Revision for GCSE exam (5) Computer Networks Revision for GCSE exam (6) System architecture, memory and storage	Intervention and exams
Key assessment pieces Skills	Practice NEA (2) AO1 AO2 Written assessment (1)	NEA AO1 NEA AO2 Written Assessment (2) Mock Exam	NEA AO3 Written Assessment (3)	NEA AO4 Written Assessment (4)	Written Assessment (5) Written Assessment (6)	
Year 11 BTEC ICT	Unit 1 – The Online World Learning Aim B: Internet components, Exchanging and storing information WWW and Internet	Unit 1 – The Online World Learning Aim C: Issues with operating online	Unit 3 – Digital Portfolio Learning Aim A: Deign a digital portfolio Learning Aim B: Create the digital portfolio	Unit 3 – Digital Portfolio Learning Aim B: Create and Test the digital portfolio	Unit 3 – Digital Portfolio Learning Aim C: Review the digital portfolio	Intervention and catch up.
Key assessment pieces Skills	Protocols Revision of Learning Aim A.	Viruses, phishing and identity Theft Unit 1 Exam (December)	Portfolio structure (storyboard) User interface design Content selection	Web page design Testing plan	Evaluation report	

Technology

Year group	Term 1A	Term 1B	Term 2A	Term 2B	Term 3A	Term 3b
	Year 7 and 8 operate on a rotation basis with 3 or 4 opportunities to develop skills in technology areas.					
Year 7	Introductory unit – Planet Me Drawing skills Perspective, oblique drawing techniques. Introduction to food, product design and CAD/CAM	Product Design Mechanical toy Motion and mechanics Design Making log Wood joints	Food Prep & Nutrition 1 Children's birthday part Nutrients Developing skills – chopping techniques; kneading technique	CAD/CAM Seasonal Earphone Wrap Develop skills with 2D design software Research and mood boards Design a product suitable for purpose & audience Laser cut the solution to the problem	Food Prep & Nutrition 2 A healthy diet Proteins, carbohydrates, fats, minerals and vitamins Knife skills	

Key assessment pieces	<ul style="list-style-type: none"> Drawing and tonal shading Design a logo 	AO2 AO3	AO3 AO4	<ul style="list-style-type: none"> AO1 AO3 	<ul style="list-style-type: none"> AO3 AO1 	
Year 8	Product Design - Games Controller Primary and secondary research Design skills Safe use of equipment electronics	Food Prep & Nutrition 1 Combining ingredients Time plans Importance of temperature Sensory analysis and evaluating a dish		CADCAM City Scape Jewellery and packaging User profile Develop skills with AutoDesk software Develop and 3D print the product Evaluate the product Design and make the packaging	Food Prep & Nutrition 1 Food Science Reasons for cooking Develop skills in preparing ingredients and using equipment Evaluate the final product	
Key assessment pieces	AO1 AO2 AO3	<ul style="list-style-type: none"> AO1 AO3 AO4 	<ul style="list-style-type: none"> AO1 AO2 AO3 	<ul style="list-style-type: none"> AO1 AO3 AO4 		
Year group Term	Term 1A	Term 1B	Term 2A	Term 2B	Term 3A	Term 3b
Year 9 Food	Science of Food Free choice recipes Microorganisms	Proteins, carbohydrates and fats Macronutrients Culinary skills	Factors affecting food choice Religion Ethical choices Influences	Macronutrients Culinary skills Macronutrients Culinary skills	Preparation and cooking techniques Knife skills Tenderise & marinate Raising agents Sensory properties	Where food comes from Afternoon tea
Key assessment pieces	<ul style="list-style-type: none"> AO3 AO1 	AO3 AO4	<ul style="list-style-type: none"> AO2 AO3 	<ul style="list-style-type: none"> AO1 AO3 	<ul style="list-style-type: none"> AO1 AO3 	<ul style="list-style-type: none"> AO2 AO4
Year group Term	Term 1A	Term 1B	Term 2A	Term 2B	Term 3A	Term 3b
Year 9 CAD CAM Product Design	Animal shelter Wood joints Analysis of existing products Design specification Safe use of machinery Core principles Materials and working properties	Audio Amplifier Analyse a design brief New and emerging technology Develop design ideas Safe and effective use of modelling equipment Develop & evaluate a prototype Core Principles Changes in fashion and trends, new and emergent technology		Memphis Phone Stand Analyse a design brief New and emerging technology Develop design ideas Effective use of 2D and 3D design software Safe and effective use of the laser cutter to Develop & evaluate a prototype	Typography and Point of Sale Write a design brief Develop design ideas Use the design to create a product Evaluate the product Architecture and civil engineering Understand the problem Effective use of 3D design software (google sketch up) Evaluate the solution	
Key assessment pieces	AO1 AO2 AO3	AO2 AO3 AO4		AO1 AO2 AO3	AO2 AO3 AO4	
Year group Term	Term 1A	Term 1B	Term 2A	Term 2B	Term 3A	Term 3b
Year 10	Food Commodities	Diet related health problems	Where food comes from GM crops	Science of food Why is food cooked	Cooking and food preparation	Food Science

Food Preparation & Nutrition	Proteins, carbohydrates, fats, fibre, vitamins and minerals.	Impact of the diet on BMR Nutritional content of a dish.	Free-range Fish farming and sustainable fishing Food miles & carbon footprint provenance		Adapting recipes Develop cooking skills	Sesory and nutritional properties of food Practice food investigation
Key assessment pieces	AO1 AO3 AO4	AO3 AO4 AO1 AO2	AO1 AO2 AO1 AO2	AO1 AO2 AO1 AO2	AO3 AO4 AO3 AO4	
Year 10 Product Design	Design and make prototypes that are fit for purpose Specialist techniques and processes	Identify investigate and outline design possibilities to address needs and wants. The work of others	Tools equipment and processes Scales of production Prototype, batch, mass, continuous	Using and working with materials Properties of materials Paper, board, timber, metal, polymers, textiles, electronic & mechanical systems	Forces and stresses Ecological, six Rs, social issues	Sources and origins Seasoning, conversion and creation of manufactured timbers Extraction and refining of metal based materials Polymers Textile based materials.
Key assessment pieces	Making diary Evaluation Practical skills in the workshop	Investigate the work of a minimum of two designers. Practical skills in the workshop	Wastage, addition, deforming and reforming Practical skills in the workshop	Properties of materials Practical skills in the workshop	How materials can be reinforced, stiffened or made more flexible. Practical skills in the workshop	Sources and origins of materials Practical skills in the workshop
Year group Term	Term 1A	Term 1B	Term 2A	Term 2B	Term 3A	Term 3b
Year 11 Food Preparation & Nutrition	Principles of Nutrition Preparation for the exam Food Science Unit 2 Assessment Task 1 (Investigation)	Food Science Unit 2 Assessment Task 1 (Investigation) Food commodities Diet and good health Preparation for mock exam (unit 1)	Assessment 2: The Food Preparation Assessment Research and investigate chosen task Plan the task Prepare, cook and present Develop portfolio and evaluate decisions, techniques etc	Preparation for the exam Where good comes from Diet and good health	Preparation for the exam Food commodities Cooking and food preparation techniques	Intervention and exams
Key assessment pieces	AO1 AO3 AO3	AO3 AO1 AO1 Mock Exam	AO1, AO2, AO3, AO4	AO1 AO1 AO1	AO1 AO1 AO1	
Year 11 Product Design	Unit 2: Design and Making Practice AO1 Investigating the design context AO2 Development of design	Unit 2: Design and Making Practice AO3 Making Preparation for the mock exam	Unit 2: Design and Making Practice AO3 Making AO4 Testing and Evaluation AO5 Communication	Unit 1 – Written Paper Materials and components Design and market influences: ethics, environment and sustainability	Unit 1 – Written Paper Processes and manufacture	Intervention and exams

Key assessment pieces	AO1 AO2	AO3 Mock Exam	AO3 AO4 AO4	Mock paper 1 Mock paper 2	Mock paper 3 "Seen" element of Unit 1.	
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