



The Computing and ICT department at Wexham School

Computing and ICT Curriculum Map

Term	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Autumn 1	File management and E-Safety (Unit 1) Introduction to the school network Introduction to SharePoint File naming conventions and keyboard shortcuts Emails E safety Online awareness Assessment	Intro to Spreadsheets (Unit 7) Fundamentals of MS Excel: Use of ribbon, open/close documents, and create & save new documents. Creating New Worksheets: Formatting worksheets, font styles/sizes/colors, entering text. Creating a New Model: Knowledge of cells, inserting formulae (MIN, MAX, SUM, AVERAGE, COUNT, COUNTIF and IF). Assessment	Advanced Python (Unit 13) Strings and variables in programming. Creating Shapes using Turtle. Numbers and arithmetic in programming. Data Types – Integers, floating-point, strings, and Boolean. Selection process. Assessment	OCR Creative iMedia (J834) R097 Pack A Planning interactive digital media Formats and hardware Interactive digital media content and features Conventions and creativity Hardware and software Wireframes Storyboards Further pre-production planning R097 Pack B Creating interactive digital media Sourcing assets, vectors and bitmaps Image, video and audio assets Interactive assets OCR Computer Science J277 Systems Architecture Architecture of the CPU CPU Performance Memory Secondary storage Assessment	OCR Creative iMedia (J834) Coursework R094 Task 1 Design a visual identity Justify your design choices and why the visual identity is fit for purpose Produce relevant planning documents for your digital graphic product OCR Computer Science J277 Network security and systems software Network Threats Preventing vulnerabilities Operating systems Utility software Assessment	BTEC L3 IT AAQ UNIT 1: Information Technology Systems Pack A1 and A2 Digital devices UNIT 2: Cyber Security and Incident Management Pack A - Cyber security threats, system vulnerabilities and security protection methods A Level OCR Computer Science H446 Unit 1 Components of a system and their uses Unit 11 Programming techniques	BTEC L3 IT AAQ Unit 3 NEA Web Development Unit 4 NEA Relational Database Development A Level OCR Computer Science H446 Unit 7 Data Structure Project – Design of the solution
Autumn 2	Computational Thinking (Unit 2) Logical thinking Algorithmic thinking Abstraction Decomposition Pattern recognition Flowchart symbols and sequences Assessment	Presentational Skills (Unit 8) PPT basic features Advanced features Project Research skills using the internet Presentation skills Assessment	Intro to Databases (Unit 14) Understanding tables and fields. Creating multiple tables for a database. Exploring data types. Knowing what a record is. Creating simple reports and queries. Populating entities with data. Assessment	OCR Creative iMedia (J834) R097 Pack C Create and review interactive digital media Folder structure and file naming Master page Content and controls Triggers and behaviours Testing and performance Review Improvements and further developments Understanding NEA Brief and practice Rocket Cake OCR Computer Science J277 Programming Programming fundamentals Sequence and selection Iteration Arrays Procedures and functions	OCR Creative iMedia (J834) Coursework R094 Task 2 Create the visual identity Create the other assets for your digital graphic product Create your digital graphic products Export your digital graphic products OCR Computer Science J277 Impacts of digital technology Ethical issues Cultural issues Environmental issues Legislation and privacy Assessment	BTEC L3 IT AAQ UNIT 1: Information Technology Systems Pack B – Transmitting Data UNIT 2: Cyber Security and Incident Management Pack B - Use of networking architectures and principles for security A Level OCR Computer Science H446 Unit 2 System software	BTEC L3 IT AAQ Exam Revision A Level OCR Computer Science H446 Unit 8 Boolean Algebra Project – Developing the solution



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				Records and files Introduction to SQL Assessment		Unit 11 Programming techniques	
Spring 1	Visual Programming in Scratch (Unit 3) Understanding Visual Programming Sprites, objects and characters Use of Variables Understanding of Event Handling Sequencing, selection and iteration Assessment	Computer Crime and Cyber Security (Unit 9) Email scams Hacking Protecting personal data Copyright Health and safety Assessment	Image Editing (Unit 15) Looking at image types. Editing Images using photo editing software. Understanding the difference between upload and download speed. To know the difference between image editing and manipulation. How to save images. Assessment	OCR Creative iMedia (J834) Coursework R097 Task 1 Produce an interpretation of the client brief Produce relevant pre-production and planning documentation Identify the assets required and explain their planned use in your IDMP OCR Computer Science J277 Data representation Units Binary numbers Binary arithmetic Hexadecimal Characters Images Sound Compression Assessment	OCR Creative iMedia (J834) R093 Pack B-Preproduction-planning Workplans Mindmaps Moodboards Scripts Storyboards Visualisation diagrams and asset logs Wireframes and flow charts Hardware and software OCR Computer Science J277 Exam revisions	BTEC L3 IT AAQ UNIT 1: Information Technology Systems Pack C and D – Operating online and Protecting Data UNIT 2: Cyber Security and Incident Management Pack C and D – Cybersecurity documentation A Level OCR Computer Science H446 Unit 3 Software development Unit 10 Computational thinking	BTEC L3 IT AAQ Unit 3 NEA Web Development Unit 4 NEA Relational Database Development A Level OCR Computer Science H446 Unit 9 Ethics, Legal and Cultural Project – Evaluation
Spring 2	Data Representation (Unit 4) Binary and base 2 Binary Denary conversion Hexadecimal number system and ASCII Units of Storage Assessment	Web development (Unit 10) What is HTML? Tags Formatting webpages Hyperlinks Images Ordered and unordered lists Assessment	App Development (Unit 16) Implement and customise GUI elements Audience and purpose Variables Identify and fix common coding errors Block-based programming language to create a sequence Assessment	OCR Creative iMedia (J834) Coursework R097 Task 2 Create the components Create your IDMP Export or publish your IDMP OCR Computer Science J277 Algorithms Computational thinking Searching algorithms Sorting algorithms Flowcharts Pseudocode Correcting algorithms Assessment	OCR Creative iMedia (J834) R093 Pack C-Legal-issues-and-distribution Legal issues and regulations Intellectual property Health and safety Distribution platform and media Fire formats OCR Computer Science J277 Exam revisions	BTEC L3 IT AAQ UNIT 1: Information Technology Systems Pack E and F – Impacts of IT systems UNIT 2: Cyber Security and Incident Management Pack E - Forensic procedures A Level OCR Computer Science H446 Unit 4 Exchanging data Unit 12 Algorithms	BTEC L3 IT AAQ Unit 3 NEA Web Development Unit 4 NEA Relational Database Development A Level OCR Computer Science H446 Exam revisions



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Summer 1	BBC: Microbit (Unit 5) Introduction to Physical Computing - BBC Microbit Input command Variables Conditions and selections Project Assessment	Computer Systems and Networks (Unit 11) Computer Components Input and Output devices Storage devices CPU Convergence and new technologies Network system Assessment	Animation (Unit 17) Frame-by-frame animation. Motion tweening. Text, buttons, and Actionsript. Planning and animation. Adding sound effects. Publishing an animation. Assessment	OCR Creative iMedia (J834) Coursework R097 Task 3 Test/check and review your IDMP Recommend areas for improvement and further development OCR Computer Science J277 Networks Internet and WAN LAN Wireless networking Client-server and P2P Networks Protocols and Layers Assessment	OCR Creative iMedia (J834) R093 Exam revision Past year papers Zig Zag resources Online resources OCR Computer Science J277 Exam revisions	BTEC L3 IT AAQ UNIT 1: Information Technology Systems Exam revision UNIT 2: Cyber Security and Incident Management Exam revision A Level OCR Computer Science H446 Unit 5 Networks Unit 12 Algorithms	BTEC L3 IT AAQ Unit 3 NEA Web Development Unit 4 NEA Relational Database Development A Level OCR Computer Science H446 Exam revisions
Summer 2	Machine Learning and AI (Unit 6) What is AI Machine Learning Ethics of AI Image recognition Turing tests and chatbots Rate my review Assessment	Introduction to Python (Unit 12) - Pseudoblox Strings and variables in programming. Numbers and arithmetic in programming. Data Types – Integers, floating-point, strings and Boolean. Selection process. While loops in programming. Iteration in Python Assessment	Word Processing and research skills (Unit 18) Fundamentals of MS Word: Use of ribbon, open/close documents, create & save new documents. Creating Documents: Use of cursor keys and mouse to navigate, change text size/colour, borders & shading, Heading styles. Creating contents page, Adding cover pages, report writing Research development using the Internet Assessment	OCR Creative iMedia (J834) R094 Pack A Developing visual identity and graphics Purpose, components and elements of visual identity Design and layout File types and formats License and permissions Planning visual identity R094 Pack B Creating visual identity and digital graphics Asset sourcing and creating Creating a visual identity Compiling an image Basic tools, retouching and other tools Saving and exporting OCR Computer Science J277 Logic and Languages Logic diagrams and truth-tables Defensive design Errors and testing Translators and facilities IDEs Assessment		BTEC L3 IT AAQ Unit 3 NEA Web Development Unit 4 NEA Relational Database Development A Level OCR Computer Science H446 Unit 6 Data types Project - Analysis of the problem	