

Curriculum Implementation

Computing is a forever changing and dynamic subject which encompasses many skills that are needed in today's modern workplace. As a department we strive to ensure that all learners are provided with the knowledge to be able to behave responsibly when using computer equipment inside and outside of school and to keep safe & secure when online. Our wish is for students to develop ideas with computational thinking and to complete further study at Key Stage 5 and beyond and to succeed in their future careers whether in the Computing industry or others.



Key Stage 2	Year 7	Year 8	Year 9	Year 10	Year 11
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>Networks & the Internet: Topics covered will be eSafety, Social Media, Online Privacy and Laws that need adhering to online.</p> <p>Computer Systems: Topics covered will be Data, the inside of Computers and the different components and selected input and output devices connected to a PC.</p>	<p>Collecting & Presenting Data: Topics covered will be planning a project, collecting, analysing and presenting data and introduction to web design software.</p> <p>Business: Topics to be covered will be target audiences and market research methodologies used by businesses.</p>	<p>Networks & the Internet: Topics covered will be the internet, network security threats and measures put in place to prevent them as well as censorship & surveillance.</p> <p>Computer Systems: Topics covered will be different software types & operating systems.</p> <p>Business: Topics covered will be finance & marketing.</p>	<p>Term 1—Component 1 User Interface Investigate user interface design for individuals and organisations - Learners will select and investigate 2 different types of user interface. Assessing usability, suitability for audience. Use project planning techniques to plan and design a user interface - Investigate different project planning techniques. select appropriate project planning tools and methodologies. Produce an initial design for a user interface .</p>	<p>Term 1—Component 3 Modern technologies Network /Cloud computing & storage. Impacts of modern technologies on organisations & individuals. Cyber security Prevention and management of threats to data</p>
	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>
	<p>Collecting & Presenting Data: Topics covered will be Word Processing, Desktop Publishing, Presentation Software & Spreadsheet software. All pieces of software will be taught and examined</p>	<p>Networks & the Internet: Topics covered will be different types of networks, wired & wireless network technologies and network topologies.</p> <p>Computer Systems: Topics covered will be The CPU, memory within a computer and internal and external storage solutions.</p>	<p>Collecting & Presenting Data: Topics covered will be databases & how and where used.</p> <p>Data Representation: Topics covered will be logic.</p> <p>Algorithms: Topics covered will be linear & binary search as well as bubble & insertion search</p>	<p>Term 2 - Component 1 User Interface Develop and review a user interface - Create a user interface, collect feedback to then improve the interface before evaluating the strengths and weaknesses. Term 2 - Component 2 Spreadsheets [Easter] Collecting, Presenting and Interpreting Data - Investigate the role and impact of using data on individuals and organisations. Explore & assess different data collection methods</p>	<p>Term 2—Component 3 The wider implications of digital systems understand how laws covering data protection, computer crimes and intellectual property impact on the way that organisations and individuals</p> <p>Practice exam questions THEORY EXAM (February)</p>
	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>
	<p>Data Representation: Topics covered will be binary numbers and characters.</p> <p>Business: Topics covered will be aims & objectives and branding and logos.</p> <p>Programming Techniques & Creating Programs: Topics covered will be Scratch, data types, operators, variables, input & outputs, sequence, selection & iteration.</p>	<p>Data Representation: Topics covered will be images, sound and compression.</p> <p>Collecting & Presenting Data: Topics covered will be audio and video software as well as graphics software.</p>	<p>Programming Techniques & Creating Programs: Topics cover will be Introduction to Python programming language, data types, operators & variables, inputs & outputs, sequence, selection and iteration.</p>	<p>Term 2 - Component 2 Spreadsheets Create a dashboard using data manipulation tools - Select and use methods to capture and manipulate data, & use presentation methods and features to show data in an effective dashboard. Draw conclusions and review data presentation methods - Use a dashboard to identify patterns & trends, draw conclusions and make appropriate recommendations. Assess how effective the presentation of the data is.</p>	<p>Term 3 Component 1: User interface Develop and improve the component 1 task</p> <p>Component 2: Spreadsheet Develop and improve the component 2 task</p>
	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>	<p>Cultural Exposure:</p>
	<p>Assessment Each individual unit is assessed either by a practical or written assessment at the end of the specific unit of work. At the end of each term there will be an assessment for that term.</p>	<p>Assessment Each individual unit is assessed either by a practical or written assessment at the end of the specific unit of work. At the end of each term there will be an assessment for that term.</p>	<p>Assessment Each individual unit is assessed either by a practical or written assessment at the end of the specific unit of work. At the end of each term there will be an assessment for that term.</p>	<p>Assessment Coursework - internally assessed and externally moderated Project must fully meet assessment criteria A report showing the drawing of conclusions & recommendations made, & assessment of how the presentation of the dashboard influences its effectiveness.</p>	<p>Assessment Externally assessed public examination for Component 3 which is taken in February. [There is a re-sit opportunity in May/June] Results published at the start of April. Internally assessed units for Components 1 & 2 internally assessed and verified.</p>