Morecambe Bay Academy

Computing Curriculum

	Term 1	Term 2	Term 3
COMPUTING YEAR 7	**Safe Use of Technology** – Classroom Rules, Staying Safe Online and Using Technology Appropriately **Computational Thinking** – Decomposition, Abstraction and Pattern Recognition	**Computer Systems** – How computers are used and their components **Sequencing (Scratch)** – Creating a computer game using sequences of instructions	**Graphics Editing** – Using graphics editing software to create a movie poster **Extended Project** – Combining skills from previous projects to create a product for a given scenario
COMPUTING YEAR 8	**E-Safety** – Spotting risks and understanding methods of staying safe **Networks** – How computers communicate effectively	**Computer Systems** – Understanding how different computer hardware and software works, introduction to binary **Introduction to Python** – Building computer programs using Python coding	**Sound Editing** – Using sound editing software to create a radio advert **STEM Project** – Combining skills from Science, Technology, Engineering and Maths to complete a project about space
COMPUTING YEAR 9	**Cyber Security and Crime** – A closer look at risks, laws and methods of reducing risks when working with computers **HTML & JavaScript** – Using HTML coding to create web pages and adding interactive elements with JavaScript	**Databases** – How to manage data using databases and their tools **Python Further Steps** – Building more complex computer programs using Python Coding	**Video Editing** – Using video editing software to create a TV advert for Morecambe **Impact of Modern Technology** – Discussing the positive and negative impact of modern technology
COMPUTING YEAR 10	Unit 1 – 1.1 **System architecture** (CPU architecture, components and performance, embedded systems) Unit 2 – 2.2 **Programming fundamentals** (fundamentals and data types)	Unit 1 - 1.2 **Memory and storage** (primary and secondary storage, units, data storage and compression) Unit 1 – 1.3 **Computer networks**, connections and protocols (networks and topologies, wired and wireless, protocols and layers) & 1.4 Network security (threats and preventions)	Unit 2 – 2.2 **Programming fundamentals** (fundamentals and additional techniques) Unit 1 – 1.5 **System software** (operating systems and utility software)

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COMPUTING YEAR 11	Unit 1 – 1.6 **Ethical, legal, cultural and environmental impact** (impact of technology on society, laws and legislation) Unit 2 – 2.1 Algorithms (computational thinking, algorithms and searching/sorting) & 2.4 Boolean logic (logic diagrams and truth tables)	Unit 2 - 2.3 **Producing robust programs** (defensive design & testing) & 2.5 Languages and IDEs (difference in programming languages and integrated development environments Unit 2 – 2.2 Programming fundamentals (programming practice)	**Exam revision – units 1 & 2**
COMPUTING YEAR 12	Unit 1 - Computer Systems (LO1 Computer components) and Unit 2 – Algorithms and Programming (LO1 Computational thinking) Unit 1 - Computer Systems (LO2 Software) and Unit 2 – Algorithms and Programming (LO2 Problem solving and programming)	Unit 1 - Computer Systems (LO2 Software & LO3 Exchanging data) and Unit 2 – Algorithms and Programming (LO3 Algorithms) Unit 1 - Computer Systems (LO3 Exchanging data) and Unit 2 – Algorithms and Programming (LO2 Problem solving and programming)	Unit 1 - Computer Systems (LO4 Data types and structures) and Unit 2 – Algorithms and Programming (LO2 Problem solving and programming) Unit 1 - Computer Systems (LO4 Data types and structures) and Unit 3 – Programming Project (LO1 Analysis of a problem
COMPUTING YEAR 13	Unit 1 - Computer Systems (LO5 Legal, moral, cultural and ethical issues) and Unit 3 – Programming Project (LO2 Design a solution) Unit 1 - Computer Systems (LO1 and LO2 review and recap) and Unit 3 – Programming Project (LO3 Develop a solution)	Unit 1 - Computer Systems (LO3 and LO4 review and recap) and Unit 3 – Programming Project (LO3 Develop a solution) Unit 1 - Computer Systems (LO5 review and recap) and Unit 3 – Programming Project (LO4 Testing and evaluation)	Unit 1 & 2 – Exam revision and preparation. Unit 3 – Programming Project (review and improvements)