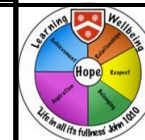




Academic Learning Plan 2022-2023

Computing – Year 8

Intent : The Computing Department aims to establish, in all students, an enquiring mind and a positive can do approach. Computing is a practical subject that at times requires students to active learns sometimes learning through trial and error, helping to build resilience. Students will leave Wadham School with essential Computing skills for everyday life and an understanding of how to develop those skills further in our ever-changing technological landscape.



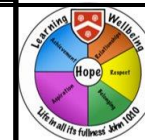
	Term 1	Term 2	Term 3
Year 8 Units	8a Design Vector Graphics	8b Computing Systems	8c Development for the Web
Content (National curriculum)	<p>Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users</p> <p>Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability</p>	<p>Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation</p> <p>Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems</p> <p>Subject content</p> <p>Understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming</p> <p>Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems</p> <p>Understand how instructions are stored and executed within a computer system</p>	<p>Create, reuse, revise, and repurpose digital artefacts for a given audience, with attention to trustworthiness, design, and usability.</p>
Literacy	Key words explained through Core knowledge	Key words explained through Core knowledge	Key words explained through Core knowledge
Knowledge organiser	Yes	yes	Yes
Assessment	Final design	Online quiz	Online quiz
GCSE Link	Digital Media- Reusing digital artefacts	Programming	Programming
Homework	NA	NA	NA
CEIAG	Graphical design	Programming	Programming
Enrichment			



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	Term 4	Term 5	Term 6
Year 78Units	8d Representations – From Clay to Silicon	8e Mobile App Development	8f Intro to Python Programming
Content (National curriculum)	Understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits	<p>Design, use, and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems</p> <p>Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables, or arrays]; design and develop modular programs that use procedures or functions</p> <p>Understand several key algorithms that reflect computational thinking; use logical reasoning to compare the utility of alternative algorithms for the same problem</p> <p>Create, reuse, revise, and repurpose digital artefacts for a given audience, with attention to trustworthiness, design, and usability</p>	<p>Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation</p> <p>Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems</p> <p>Subject content</p> <p>Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems</p> <p>Understand several key algorithms that reflect computational thinking; use logical reasoning to compare the utility of alternative algorithms for the same problem</p> <p>Understand how instructions are stored and executed within a computer system</p> <p>Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems</p>
Literacy	Key words explained through Core knowledge	Key words explained through Core knowledge	Key words explained through Core knowledge
Knowledge organiser	Yes	yes	Yes
Assessment	Online quiz	End of project	Online test
GCSE Link	Computing- programming	Computing- programming	Computing- programming
Homework	NA	NA	NA
CEIAG	Computer programmer	Social media Web designer	Computer programmer
Enrichment			