



OVERVIEW

Computing aims to ensure that all pupils: can understand and apply the fundamental principles and concepts of computer; science, including abstraction, logic, algorithms and data representation; can analyse problems in computational terms, and have repeated practical experience; of writing computer programs in order to solve such problems ; can evaluate and apply information technology, including new or unfamiliar; technologies, analytically to solve problems; are responsible, competent, confident and creative users of information and communication technology .

Term	Focus	Assessment
Aut 1	<ul style="list-style-type: none"> Introduction to computer science understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns. Using office software to learn how to work efficiently on a computer and record their progress. 	Ongoing assessment through class tasks
Aut 2	<ul style="list-style-type: none"> Using knowledge of spreadsheets and other office software by undertake a creative project that involve analysing, designing and implementing a solution to a real life problem 	Ongoing class assessment of tasks and end of unit term on screen test
Spr 1	<ul style="list-style-type: none"> Programming using scratch to solve a variety of computational problems; make appropriate use of flowchart program design. Students will gain an understanding various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits 	Ongoing assessment through class tasks
Spr 2	<ul style="list-style-type: none"> Using knowledge of scratch by undertake a creative project that involve analysing, designing and implementing a solution to a real life problem 	Ongoing class assessment of tasks and end of unit term on screen test
Sum 1	<ul style="list-style-type: none"> Programming using Python 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. Through the term students will understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming 	Ongoing assessment through class tasks
Sum 2	<ul style="list-style-type: none"> Using knowledge of python by undertake a creative project that involve analysing, designing and implementing a solution to a real life problem 	Ongoing class assessment of tasks and end of unit term on screen test

Home Learning:

- Weekly task set on set on show my homework

Useful resources:

- Scratch & computer club for schools websites
- BBC Bitesize KS3 Computing



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Computer Science will encourage learners to understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms, and data representation; analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs; understand the components that make up digital systems, and how they communicate with one another and with other systems; and understand the impacts of digital technology to the individual and to wider society.

Term	Focus	Assessment
Aut 1	<ul style="list-style-type: none">• Data representation intro to numbers and formats• System Architecture• Introduction to Programming Techniques	Weekly knowledge tests. End of unit tests
Aut 2	<ul style="list-style-type: none">• System Architecture• Storage• Introduction to Programming Techniques	Weekly knowledge tests. End of unit tests End of term paper
Spr 1	<ul style="list-style-type: none">• Wired & Wireless Networks• Network Topologies, protocols• Producing Robust programs	Weekly knowledge tests. End of unit tests
Spr 2	<ul style="list-style-type: none">• System Security• Producing Robust programs• Computational Logic	Weekly knowledge tests. End of unit tests End of term paper
Sum 1	<ul style="list-style-type: none">• System Software• Data representation intro to numbers and formats• Translators and facilities of language	Weekly knowledge tests. End of unit tests
Sum 2	<ul style="list-style-type: none">• Data storage and compression• Ethical, legal, cultural and environmental concerns• Internet and WWW	Weekly knowledge tests. End of unit tests End of term paper 1 and paper 2

Home Learning:

- Weekly exam questions with online video and multiple choice test on content

Useful resources:

- CGP – Computer Science OCR Revision book
- AQA GCSE (9-1) Computer Science textbook



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Term	Focus	Assessment
Aut 1	<ul style="list-style-type: none"> • Compression • Programming structures 	Weekly knowledge tests. End of unit tests
Aut 2	<ul style="list-style-type: none"> • Standard algorithms • Hand tracing Algorithms 	Weekly knowledge tests. End of unit tests End of term paper
Spr 1	<ul style="list-style-type: none"> • Database design • Revision 	Weekly knowledge tests. End of unit tests
Spr 2	<ul style="list-style-type: none"> • Revision 	Weekly knowledge tests. End of unit tests End of term paper
Sum 1	<ul style="list-style-type: none"> • Revision 	
Sum 2		

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