

Computing at Key Stage 2 and 3 – Progression

Computer Science, Information Technology and Digital Literacy

<p>Write programs that accomplish specific goals</p> <p>Use sequence in programs</p> <p>Work with various forms of input</p> <p>Work with various forms of output</p> <p>Use search technologies effectively</p> <p>Use a variety of software to accomplish given goals</p> <p>Collect information</p> <p>Design and create content</p> <p>Present information</p> <p>Use technology responsibly</p> <p>Identify a range of ways to report concerns about contact</p>	<p>Design programs that accomplish specific goals</p> <p>Design and create programs</p> <p>Debug programs that accomplish specific goals</p> <p>Use repetition in programs</p> <p>Control or simulate physical systems</p> <p>Use logical reasoning to detect and correct errors in programs</p> <p>Understand how computer networks can provide multiple services, such as the World Wide Web</p> <p>Appreciate how search results are selected</p> <p>Select a variety of software to accomplish given goals</p> <p>Select, use and combine internet services</p> <p>Analyse information</p> <p>Evaluate information</p> <p>Collect data</p> <p>Present data</p> <p>Understand the opportunities computer networks offer for communication</p> <p>Identify a range of ways to report concerns about content</p> <p>Recognise acceptable/unacceptable behaviour</p>	<p>Solve problems by decomposing them into smaller parts</p> <p>Use selection in programs</p> <p>Work with variables</p> <p>Use logical reasoning to explain how some simple algorithms work</p> <p>Use logical reasoning to detect and correct errors in algorithms</p> <p>Understand computer networks, including the internet</p> <p>Appreciate how search results are ranked</p> <p>Combine a variety of software to accomplish given goals</p> <p>Select, use and combine software on a range of digital devices</p> <p>Analyse data</p> <p>Evaluate data</p> <p>Design and create systems</p> <p>Understand the opportunities computer networks offer for collaboration</p> <p>Be discerning in evaluating digital content</p>	<p>Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems</p> <p>Understand several key algorithms that reflect computational thinking [for example, algorithms for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem</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 simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]</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; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits</p> <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, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability</p> <p>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</p>
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