

Computing

Knowledge & Skills Progression - Challenge



| Art and Design opportunities | Coding | Connecting | Communicating | Collecting |
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| <p>Use a range of devices and applications across all curriculum subjects.</p> <p>Further develop coding skills and applications.</p> <p>Communicate a wide range of ideas to a variety of audiences.</p> <p>Collect, manipulate and analyse data.</p> | <p>Design and use computer abstractions that model real world problems and systems.</p> <p>Understand some key algorithms for sorting and searching.</p> <p>Use a number of programming languages to solve a variety of computational problems.</p> <p>Use data structures such as tables or arrays.</p> <p>Use procedures to write modular programs.</p> <p>Understand Boolean logic (such as AND, OR and NOT) and its use in determining which parts of a program are executed.</p> <p>Explain how instructions are stored and executed within a computer system.</p> | <p>Understand the devices and applications that make up networked computer systems and how they interact.</p> <p>Explain how networks such as the internet work.</p> <p>Understand how computers can monitor and control physical systems.</p> | <p>Undertake creative projects that involve selecting, using and combining multiple applications, across a range of devices, to achieve goals.</p> <p>Create, reuse, revise and repurpose digital information and content with attention to design, intellectual property and audience.</p> | <p>Explain how data of various types can be represented and manipulated in the form of binary digits including numbers, text, sounds and pictures.</p> <p>Collect and analyse data.</p> |

