

Whole School Computing Overview

Key Concepts

| Year group | Autumn 1   | Autumn 2   | Spring 1   | Spring 2  | Summer 1  | Summer 2  |
|------------|--|--|--|---|---|---|
| Foundation | No discrete Computing lessons – provided for in the provision  |  |  |   |   |   |
|            | <b><u>Programming A</u></b>  | <b><u>Creating Media</u></b>   | <b><u>Computing Systems and Networks</u></b>   | <b><u>Data And Information</u></b>  | <b><u>Programming B</u></b>   | <b><u>Creating Media</u></b>  |
| Year 1     | <p><b>Moving a robot</b><br/>Writing short algorithms and programs for floor robots, and predicting program outcomes.<br/>Computer Science<br/>Digital Literacy</p>  | <p><b>Digital painting</b><br/>Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.<br/>Information Technology<br/>Digital Literacy</p> | <p><b>Technology around us</b><br/>Recognising technology in school and using it responsibly.<br/>Information Technology</p>   | <p><b>Grouping data</b><br/>Exploring object labels, then using them to sort and group objects by properties.<br/>Information Technology<br/>Digital Literacy</p>             | <p><b>Programming animations</b><br/>Designing and programming the movement of a character on screen to tell stories.<br/>Computer Science<br/>Information Technology</p>                         | <p><b>Digital writing</b><br/>Using a computer to create and format text, before comparing it to writing non-digitally.<br/>Information Technology<br/>Digital Literacy</p> |
| Year 2     | <p><b>Robot algorithms</b><br/>Creating and debugging programs, and using logical reasoning to make predictions.<br/>Computer Science<br/>Information Technology</p> | <p><b>Digital photography</b><br/>Capturing and changing digital photographs for different purposes.<br/>Information Technology<br/>Digital Literacy</p>                                     | <p><b>Information technology around us</b><br/>Identifying IT and how its responsible use improves our world in school and beyond.<br/>Information Technology<br/>Digital Literacy</p> | <p><b>Pictograms</b><br/>Collecting data in tally charts and using attributes to organise and present data on a computer.<br/>Information Technology<br/>Digital Literacy</p> | <p><b>Programming quizzes</b><br/>Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.<br/>Computer Science<br/>Information Technology</p> | <p><b>Digital music</b><br/>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.<br/>Information Technology</p>               |

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|--------|---|---|---|--|--|---|
| Year 3 | <p><b>Sequencing sounds</b><br/>Creating sequences in a block-based programming language to make music.<br/>Computer Science<br/>Information Technology</p>                           | <p><b>Stop-frame animation</b><br/>Capturing and editing digital still images to produce a stop-frame animation that tells a story.<br/>Information Technology<br/>Digital Literacy</p>             | <p><b>Connecting computers</b><br/>Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.<br/>Computer Science<br/>Information Technology</p>     | <p><b>Branching databases</b> Building and using branching databases to group objects using yes/no questions.<br/>Information Technology</p>   | <p><b>Events and actions in programs</b><br/>Writing algorithms and programs that use a range of events to trigger sequences of actions.<br/>Computer Science<br/>Information Technology</p> | <p><b>Desktop publishing</b><br/>Creating documents by modifying text, images, and page layouts for a specified purpose.<br/>Information Technology</p>                     |
| Year 4 | <p><b>Repetition in shapes</b><br/>Using a text-based programming language to explore count-controlled loops when drawing shapes.<br/>Computer Science<br/>Information Technology</p> | <p><b>Photo editing</b><br/>Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.<br/>Information Technology<br/>Digital Literacy</p> | <p><b>The internet</b><br/>Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.<br/>Computer Science<br/>Information Technology<br/>Digital Literacy</p> | <p><b>Data logging</b><br/>Recognising how and why data is collected over time, before using data loggers to carry out an investigation.<br/>Computer Science<br/>Information Technology</p> | <p><b>Repetition in games</b><br/>Using a block-based programming language to explore count-controlled and infinite loops when creating a game.<br/>Computer Science</p>                     | <p><b>Audio production</b><br/>Capturing and editing audio to produce a podcast, ensuring that copyright is considered.<br/>Information Technology<br/>Digital Literacy</p> |
| Year 5 | <p><b>Selection in physical computing</b><br/>Exploring conditions and selection using a programmable microcontroller.<br/>Computer Science<br/>Information Technology</p>            | <p><b>Video production</b><br/>Planning, capturing, and editing video to produce a short film.<br/>Information Technology<br/>Digital Literacy</p>  | <p><b>Systems and searching</b><br/>Recognising IT systems in the world and how some can enable searching on the internet.<br/>Computer Science<br/>Information Technology</p>                                      | <p><b>Flat-file databases</b><br/>Using a database to order data and create charts to answer questions.<br/>Information Technology</p>   | <p><b>Selection in quizzes</b><br/>Exploring selection in programming to design and code an interactive quiz.<br/>Computer Science</p>   | <p><b>Introduction to vector graphics</b><br/>Creating images in a drawing program by using layers and groups of objects.<br/>Information Technology</p>                    |
| Year 6 | <p><b>Variables in games</b><br/>Exploring variables when designing and coding a game.<br/>Computer Science<br/>Information Technology</p>  | <p><b>Webpage creation</b><br/>Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.<br/>Information Technology<br/>Digital Literacy</p>                  | <p><b>Communication and collaboration</b><br/>Exploring how data is transferred by working collaboratively online.<br/>Information Technology<br/>Digital Literacy</p>  | <p><b>Introduction to spreadsheets</b><br/>Answering questions by using spreadsheets to organise and calculate data.<br/>Information Technology</p>  | <p><b>Sensing movement</b><br/>Designing and coding a project that captures inputs from a physical device.<br/>Computer Science<br/>Information Technology</p>                               | <p><b>3D modelling</b><br/>Planning, developing, and evaluating 3D computer models of physical objects.<br/>Information Technology<br/>Digital Literacy</p>                 |

