

## Computing Curriculum

|                          | Autumn 1   | Autumn 2   | Spring 1  | Spring 2   | Summer 1  | Summer 2  |
|--------------------------|--|--|---|--|---|---|
| Nursery & Reception EYFS | Nursery - Overarching<br>theme - Me and my<br>family/Pets<br>Reception - Friendship<br>Barefoot computing<br>module - People who help<br>us  | Nursery - Overarching<br>theme –<br>Autumn/Celebrations<br>Reception – The park<br>Barefoot computing<br>module – Awesome<br>Autumn!   | Reception and Nursery - Overarching theme – Water  Barefoot computing module – Boats ahoy!  | Nursery - Overarching<br>theme - Wild animals<br>Reception - Creatures<br>from the Past<br>Barefoot computing<br>module - Spring time  | Nursery and Reception - Overarching theme – Life cycles  Barefoot computing module – Busy bodies  | Nursery and Reception - Overarching theme - Journeys  Barefoot computing module - Super space   |
| Skills                   | Computing systems<br>and networks  | Creating media   | Programming A   | Data and information   | Creating media  | Programming B   |
| Year 1                   | <u>Technology around us</u>  | <u>Digital painting</u>  | <u>Moving α robot</u>   | <u>Grouping data</u>   | <u>Digital writing</u>  | Programming animations  |
| Key Stage 1              | <ol> <li>Technology in our classroom</li> <li>Using computer technology</li> <li>Developing mouse skills</li> <li>Using a computer keyboard</li> <li>Developing keyboard skills</li> <li>Using a computer responsibly</li> </ol> | <ol> <li>How can we paint using computers?</li> <li>Using shapes and lines</li> <li>Making careful choices</li> <li>Why did I choose that?</li> <li>Painting all by myself</li> <li>Comparing computer art and painting</li> </ol> | <ol> <li>Buttons</li> <li>Directions</li> <li>Forwards and backwards</li> <li>Four directions</li> <li>Getting there</li> <li>Routes</li> </ol> | <ol> <li>Label and match</li> <li>Group and count</li> <li>Describe an object</li> <li>Making different<br/>groups</li> <li>Comparing groups</li> <li>Answering questions</li> </ol> | <ol> <li>Exploring the keyboard</li> <li>Adding and removing text</li> <li>Exploring the toolbar</li> <li>Making changes to text</li> <li>Explaining my choices</li> <li>Pencil or keyboard?</li> </ol> | <ol> <li>Comparing tools</li> <li>Joining blocks</li> <li>Make a change</li> <li>Adding sprites</li> <li>Project design</li> <li>Following my design</li> </ol> |

|                   | Autumn 1  | Autumn 2   | Spring 1   | Spring 2   | Summer 1   | Summer 2   |
|-------------------|---|--|--|--|--|--|
| Year 2            | IT around us  | <u>Digital photography</u>   | Robot algorithms   | <u>Pictograms</u>  | <u>Digital music</u>   | Programming quizzes  |
| Key Stage 1       | <ol> <li>What is IT?</li> <li>IT in school</li> <li>IT in the world</li> <li>The benefits of IT</li> <li>Using IT safely</li> <li>Using IT in different ways</li> </ol>   | <ol> <li>Taking photographs</li> <li>Landscape or portrait</li> <li>What makes a good photograph?</li> <li>Lighting</li> <li>Effects</li> <li>Is it real?</li> </ol>                     | <ol> <li>Giving instructions</li> <li>Same but different</li> <li>Making predictions</li> <li>Mats and routes</li> <li>Algorithm design</li> <li>debugging</li> </ol>                                      | <ol> <li>Counting and comparing</li> <li>Enter the data</li> <li>Creating pictograms</li> <li>What is an attribute?</li> <li>Comparing people</li> <li>Presenting information</li> </ol>   | <ol> <li>How music makes us feel</li> <li>Rhythms and patterns</li> <li>How music can be used</li> <li>Notes and tempo</li> <li>Creating digital music</li> <li>Reviewing and editing</li> </ol> | <ol> <li>Scratch Jr recap</li> <li>Outcomes</li> <li>Using a design</li> <li>Changing a design</li> <li>Designing and creating a program</li> <li>Evaluating</li> </ol>              |
| Year 3            | Connecting computers  | Stop-frame animation   | Sequencing sounds  | Branching databases  | Desktop publishing   | Events and actions in programs   |
| Lower Key Stage 2 | 1. How does a digital device work? 2. What parts make up a digital device? 3. How do digital devices help us? 4. How am I connected? 5. How are computers connected? 6. What does our school network look like? | <ol> <li>Can a picture move?</li> <li>Frame by frame</li> <li>What's the story?</li> <li>Picture perfect</li> <li>Evaluate and make it great</li> <li>Lights, camera, action!</li> </ol> | <ol> <li>Introduction to scratch</li> <li>Programming sprites</li> <li>Sequences</li> <li>Ordering commands</li> <li>Looking good</li> <li>Making an instrument</li> </ol>                                 | <ol> <li>Yes or no questions</li> <li>Making groups</li> <li>Creating a branching database</li> <li>Structuring a branching database</li> <li>Planning a branching database</li> <li>Two ways of presenting information</li> </ol> | <ol> <li>Words and pictures</li> <li>Can you edit?</li> <li>Great template!</li> <li>Becoming a designer</li> <li>Lay it out</li> <li>Why desktop publishing?</li> </ol>                         | <ol> <li>Moving a sprite</li> <li>Maze movement</li> <li>Drawing lines</li> <li>Adding features</li> <li>Debugging<br/>movement</li> <li>Making a project</li> </ol>                 |
| Year 4            | <u>The internet</u>   | Audio production   | Repetition in shapes   | <u>Data logging</u>  | Photo editing  | Repetition in games  |
| Lower Key Stage 2 | <ol> <li>Connecting networks</li> <li>What is the internet made of?</li> <li>Sharing information</li> <li>What is a website?</li> <li>Who owns the web?</li> <li>Can I believe what I read?</li> </ol>          | <ol> <li>Recording sound</li> <li>Editing audio</li> <li>Planning a podcast</li> <li>Creating a podcast</li> <li>Behind the scenes</li> <li>Evaluating a podcast</li> </ol>              | <ol> <li>Programming a screen turtle</li> <li>Programming letters</li> <li>Patterns and repeats</li> <li>Using loops to create shapes</li> <li>Breaking things down</li> <li>Creating a program</li> </ol> | <ol> <li>Answering questions</li> <li>Data collection</li> <li>Logging</li> <li>Analysing data</li> <li>Data for answers</li> <li>Answering my question</li> </ol>   | <ol> <li>Changing digital images</li> <li>Recolouring</li> <li>Cloning</li> <li>Combining</li> <li>Creating</li> <li>Evaluating</li> </ol>   | <ol> <li>Using loops to create shapes</li> <li>Different loops</li> <li>Animate your name</li> <li>Modifying a game</li> <li>Designing a game</li> <li>Creating your game</li> </ol> |

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|-------------------|---|---|---|---|---|--|
| Year 5            | Systems and searching   | Video production  | Selection in physical computing   | <u>Flat-file databases</u>  | <u>Introduction to</u><br><u>vector graphics</u>  | Selection in quizzes   |
| Upper Key Stage 2 | <ol> <li>Systems</li> <li>Computer system and us</li> <li>Searching the web</li> <li>Selecting search results</li> <li>How search results are ranked</li> <li>How are searches influenced?</li> </ol> | <ol> <li>What is a video?</li> <li>Filming techniques</li> <li>Using a storyboard</li> <li>Planning a video</li> <li>Importing and editing video</li> <li>Video evaluation</li> </ol>                       | <ol> <li>Connecting crumbles</li> <li>Combining output components</li> <li>Controlling with conditions</li> <li>Starting with selection</li> <li>Drawing designs</li> <li>Writing and testing algorithms</li> </ol> | <ol> <li>Creating a paper-based database</li> <li>Computer database</li> <li>Using a database</li> <li>Using search tools</li> <li>Comparing data visually</li> <li>Databases in real life</li> </ol> | <ol> <li>The drawing tools</li> <li>Creating images</li> <li>Making effective drawings</li> <li>Layers and objects</li> <li>Manipulating objects</li> <li>Becoming a graphic designer</li> </ol>          | <ol> <li>Exploring conditions</li> <li>Selecting outcomes</li> <li>Asking questions</li> <li>Planning a quiz</li> <li>Testing a quiz</li> <li>Evaluating a quiz</li> </ol>     |
| Year 6            | Communication and collaboration   | Web page creation   | Selection in physical computing   | <u>Spreadsheets</u>   | 3D Modelling  | Sensing movement   |
| Upper Key Stage 2 | 1. Internet addresses 2. Data packets 3. Working together 4. Shared working 5. How we communicate 6. Communicating responsibly  | <ol> <li>What makes a good website?</li> <li>Becoming a web designer</li> <li>Copyright or copyWRONG?</li> <li>How does it look?</li> <li>Follow the breadcrumbs</li> <li>Think before you link!</li> </ol> | 1. Introducing variables 2. Variables in programming 3. Improving a game 4. Becoming a games designer 5. Design to code 6. Improving and sharing  | <ol> <li>Collecting data</li> <li>Formatting a spreadsheet</li> <li>What's the formula</li> <li>Calculate and duplicate</li> <li>Event planning</li> <li>Presenting data</li> </ol>                   | <ol> <li>Introduction to 3D modelling</li> <li>Modifying 3D objects</li> <li>Make your own name badge</li> <li>Making a desk tidy</li> <li>Planning a 3D model</li> <li>Make your own 3D model</li> </ol> | <ol> <li>The micro:bit</li> <li>Go with the flow</li> <li>Sensing inputs</li> <li>Finding your way</li> <li>Designing a step counter</li> <li>Making a step counter</li> </ol> |