



**Year 3 and 4**  
**Computing Curriculum**  
**Unit Overviews**

<p><b>Questions to Develop Children’s Spirituality in Computing:</b></p>	<p>How are we as humans different to computers?  Does giving a computer a name make it a person?  If a computer went home in your place would anyone notice? Why? What’s different?  What does it mean to be human?  Do we every treat people like machines?  Do you ever treat a computer/device as if it is more than just a machine?  Can devices/computers break the rules/misbehave?  What are the positives and negatives of the technology in our lives?</p>
<p><b>Development of the child:</b></p>	<p>Reasoning, enquiry, interpretation, critical mind and questioning.</p>

<p><b>Topic:</b> Digital Literacy Y3/4 <b>Subject:</b> Computing</p>	<p><b>Prior Knowledge/Links:</b> Y1/2 Digital Literacy Units.</p> <ul style="list-style-type: none"> <li>• Family Album (Cycle A)</li> <li>• Fighting Fit (Cycle B)</li> </ul> <p><b>Children should already know:</b></p> <ul style="list-style-type: none"> <li>• How to use technology safely and respectfully, keeping personal information private.</li> <li>• Where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>
<p><b>National Curriculum Objectives</b></p>	<p><b>Key Knowledge and Vocabulary</b></p>
<ul style="list-style-type: none"> <li>• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> <li>• Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for</li> </ul>	<p>Know that not everyone on the internet is to be trusted.          Know that concerns that they have about online content should be reported to a trusted adult.          Know how to create and use passwords.          Know why we should never share our passwords.          Know what a URL is.          Know how to use a search engine to find information given key words.          Know how to select useful websites from the results of a search.          Know how to narrow a search by refining our search criteria.          Know which websites are useful.          Know how to search for images.          Know why it is important to gather information from a selection of websites rather than rely on one source.          Know how to make notes from a website in order to present findings.          Know why we should not just copy information found and present as our own work.</p>

<p>communication and collaboration.</p> <ul style="list-style-type: none"><li>• Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</li></ul>	<p>Know how to log in and out of websites used by school. E.g. athletics. Know that the information that we share online can end up with strangers.</p>
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<p><b>Topic:</b> Information Technology Y3/4</p> <p><b>Subject:</b> Computing</p>	<p><b>Prior Knowledge/Links:</b> Year 1/2 Information Technology Units.</p> <ul style="list-style-type: none"> <li>• Animals (Cycle A)</li> <li>• Fire, Fire (Cycle A)</li> <li>• Growth and Green Fingers (Cycle A)</li> <li>• Family Album (Cycle A)</li> <li>• The Great Outdoors (Cycle A)</li> <li>• The Place Where I Live (Cycle B)</li> <li>• The Farm Shop (Cycle B)</li> <li>• Wind in the Willows (Cycle B)</li> </ul> <p><b>Children should already know:</b></p> <ul style="list-style-type: none"> <li>• How to use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• Common uses of information technology beyond school.</li> </ul>
<p><b>National Curriculum Objectives</b></p>	<p><b>Key Knowledge and Vocabulary</b></p>
<ul style="list-style-type: none"> <li>• Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing,</li> </ul>	<p>Know how to log in to a computer system and find their own personal drive and folder confidently.</p> <p>Know how to keep their personal folder in order e.g. choosing appropriate file names, adding sub folders.</p> <p>Know how to open shared documents and pictures.</p> <p>Know how to use software to create simple posters or information booklets.</p> <p>Know how to insert and resize images.</p> <p>Know how to edit, format and resize the font in a document.</p> <p>Know how to use the spell check tool.</p> <p>Know how to use cut, copy and paste to reorder content.</p>

evaluating and presenting data and information.

Know how to use different layouts and effects such as columns, tables, justification, borders etc.

Know how to use a multimedia presentation tool to create a presentation.

Know how to add and sequence slides in a presentation.

Know how to add slide transitions and animation effects.

Know how to insert images, video and audio.

Know how to deliver a presentation to an audience.

Know how to group, copy and move shapes within a picture.

Know how to order images and shapes by sending them to the back/front.

Know how to drop and rotate an image.

Know how to create a branching database.

Know how to filter and sort records in a database.

Know how to create questionnaires that will be useful for collecting information.

Know how to enter information collected into a database.

Know how to display information collected as a graph of table.

Know how to download video files and images from a device to a computer.

Know how to add text and numbers to a spreadsheet.

Know how to add simple formula using + - \* / =

Know how to change the appearance of cells.

Know how to copy and paste a formula within a spreadsheet e.g. ctrl+c ctrl+v

Know how to use a simple stop motion animation package.

Know how to shoot frames.

Know how to add sound over an animation.

Know how to add titles and photos into an animation.

<p><b>Topic:</b> Computer Science Y3/4 <b>Subject:</b> Computing</p>	<p><b>Prior Knowledge/Links:</b> Year 1/2 Computer Science Units.</p> <ul style="list-style-type: none"> <li>• Robots (Cycle A)</li> <li>• Explorers (Cycle B)</li> <li>• Buckets and Spades (Cycle B)</li> </ul> <p><b>Children should already know:</b></p> <ul style="list-style-type: none"> <li>• What algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</li> <li>• How to create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.</li> </ul>
<p><b>National Curriculum Objectives</b></p>	<p><b>Key Knowledge and Vocabulary</b></p>
<ul style="list-style-type: none"> <li>• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</li> <li>• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</li> </ul>	<p>Know how to use a block coding program e.g. Scratch Junior, Scratch to make a simple program using sequencing and timing.</p> <p>Know how to input a set of instructions according to programming language and environment.</p> <p>Know how to use a program such as Scratch to draw regular 2D shapes.</p> <p>Know how to use the repeat command.</p> <p>Know how to independently debug mistakes.</p> <p>Know how to use the 'if' conditional.</p> <p>Know how to explain how their program works.</p> <p>Know how to modify a program and how to predict the effects of any changes made.</p> <p>Know how to decompose a problem into smaller steps of instructions to achieve a goal.</p> <p>Know how to evaluate existing programs and identify possible improvements.</p>

- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.