



## Computing Curriculum

### Curriculum Concepts:

1. Digital Literacy
2. Information Technology
3. Computer Science

### Intended Outcomes - by the end of key stage 2:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Concepts/Areas of Learning	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>General ICT Skills</b>	<p>To identify what is technology</p> <p>To know that technology evolves over time</p>	<p>To understand that we use logins to enable us to have personal accounts</p> <p>To be able to login</p> <p>To locate the internet icon</p> <p>Dance Mat Level 1</p>	<p>To login efficiently</p> <p>To navigate a webpage</p> <p>To login to familiar websites using username and passwords</p> <p>Dance Mat Level 2</p>	<p>To use password shortcuts when using personal accounts</p> <p>To be familiar with the App store</p> <p>To be able to navigate a device to find the app they need</p> <p>To know how to correctly store/charge a device</p> <p>Dance Mat Level 3</p>	<p>To navigate the settings menu for a device</p> <p>To know how to mirror to a display</p> <p>To know how to use Google Classroom</p> <p>Dance Mat Level 4</p>	<p>To know what to do when a device crashes</p> <p>To know how to carry a device</p>	<p>To begin to use technology to complete projects/homework</p>
<b>Digital Citizenship &amp; E-Safety</b>	<p>To know what permission means</p> <p>To identify things we can do with devices</p> <p>To know what</p>	<p>To find a balance between online and offline activities.</p> <p>To be able to leave a device alone, even when you do not want to.</p>	<p>To know how we can be safe, responsible and respectful online.</p> <p>To know what it is important to listen to your feelings when using technology.</p>	<p>To learn how to be good digital citizens.</p> <p>To know why it is important that we have device-free moments.</p> <p>To understand what kinds of information I should keep to myself when I use the internet.</p>	<p>To understand how digital citizens take responsibility for themselves, their communities and their world.</p> <p>To know how to create a strong password to help protect your privacy.</p> <p>To understand that what you post</p>	<p>To know what makes a healthy media choice.</p> <p>To know what information is okay to share online.</p> <p>To understand how</p>	<p>To understand what a media balance is and what it means to you.</p> <p>To know what clickbait is and how to avoid it.</p> <p>To understand how gender stereotypes</p>



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	being safe means	To begin to understand how to safely visit places online.	To stay safe when visiting a website or app.	To know what is a digital footprint and know what type of information is okay to have as it.  To understand what an online community is.  To know what to do if someone is unkind to you online.  How to give credit for other people's work.	online can affect your identity.  To know what makes a strong online community.  To know what to do when someone uses hurtful language online.  To understand why people alter photos and videos.	our online activity affects the digital footprint of ourselves and others.  To know how to have a positive experience when playing games online.  To understand how we can be upstanders when we see cyberbullying.  To know your rights and responsibilities as a creator.	shape our online experiences.  To know how to keep an online friendship safe.  To know what cyberbullying is and what you can do to stop it.  To know what are the important parts of an online news article.
Word Processing & Data	To know that we can use devices to write  To know what type/typing means  To identify	To type a simple caption or sentence.  To understand we can save our work and return to it later.  To understand we can change parts of our	To know how to open and save work.  To understand that work will automatically save when working on cloud-based documents (Google Docs).	To know how to inset 'Word Art'/text effects to create titles.  To know how to insert bullet points/numbered lists.  To know how to insert a picture onto a document (from either the internet or your files).	To know how to insert a table, add and delete rows and columns.  To know how to add a page border.  To know how to insert a text box.	To know how to use the snipping tool.  To know the keyboard shortcuts for undo/redo.  To know how to align text.	To know how to change layouts of tables.  To know how to change the headings.  To know how to use find and replace.



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	letters on a keyboard	document to interest the writer.  To use undo/redo arrows.	To be able to change font style, size and colour.  To use spell checker.  To be able to use the tools underline and bold.  To be able to delete, insert and replace specific text.	To be able to cut, copy and paste text/images (using mouse and keyboard shortcuts).  To know how to send images back and forward.  To know how to group images together.  <u>Slides</u> To know how to change the background  To know how to insert bullet points/numbered lists.  To know how to add, delete and move slides.  <u>Data</u> To produce different graphs using technology	To know how to format pictures.  To know how to change the page orientation.  <u>Slides</u> To know how to add transitions/animations.  <u>Data</u> To produce appropriate graphs which helps analyze data.	To be able to use word processing skills on another platform (website building).  <u>Slides</u> To know how to add hyperlinks.  To know how to add sound and video.  <u>Data</u> To use excel to produce a graph.	To know how to add symbols and equations.  <u>Data</u> To use excel to help solve simple equations (four operations)  To use excel to find the average.
<b>Programming</b>	To know that we can ask a device to do something	To create clear verbal instructions for other people to follow (an	To begin to use repeat/loop functions to	To consider how repeat/loops can be used to create more efficient code	To understand a wider range of conditionals <i>if, else, until</i>	To create my own <i>function</i> blocks	To create a range of variables



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	and it will do it  To know that programming is giving a set of instructions	algorithm)  To orally revise simple instructions when things do not go right  To know how to use icons/blocks (arrows and turns)  To know that an algorithm is a set of instructions  Use trial and error to try to solve problems with algorithms	make the same thing happen more than once  To create algorithms using block coding (arrows, turns, repeats + blue blocks in scratch)  To identify what the error is in a pre-prepared script by working through instructions systematically  To make predictions about what will happen when block code is started	To begin to understand the conditional, <i>if</i>  To create my own character & background in scratch  To program given code to <i>broadcast</i> between sprites  To begin to spot errors in script and start to debug them with some independence  To predict what will happen with given code  To check code and begin to use trial and improve to identify and solve errors	To write code in scratch for a range of inputs  To apply broadcasting between sprites to add sounds  To plan their own educational game  To add a second level to a game  To explore and create simple digital music  To check each step of code to identify errors.	To create a simulation/on-screen prototype that incorporates sensors (using conditionals)  To create a range of geometric art using selected shapes  Begin to work more systematically when identifying errors in code before correcting them	To create a counter using <i>for</i>  To create my own game incorporating random appearances and movements  To create digital music to go with this game  To systematically work through code to identify errors and correct them
<b>Digital Media, Communication &amp; Collaboration</b>	To identify jobs that use technology	<b>Paint</b> To change the background  To select and resize and image	<b>Animation</b> To understand what stop animation is  To choose a background	<b>Blog writing</b> To understand what a blog is  To be able to use word processing skills to write a blog post	<b>Music editing</b> To know that music can be edited/adapted using technology  To make adjustments to pitch/volume/rhythm	<b>Podcast</b> To know what a podcast is  To identify the key features of a	<b>Film trailer</b> To know what the purpose of a trailer is  To identify the features of a movie trailer



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		<p>To add an image to a background</p> <p>To select and resize/change colour of a paintbrush</p> <p>To paint using freehand</p>	<p>To add an image</p> <p>To understand what a frame is</p> <p>To create additional frames to show movement</p> <p>To copy and delete frames</p>	<p>To know how to share a blog post</p> <p>To know how to comment on a blog post</p> <p>To know what is/isn't appropriate to blog/comment</p>	<p>To edit a piece of music and justify your reasons for the edit</p>	<p>podcast</p> <p>To know the benefits of a podcast</p> <p>To upload music to a device</p> <p>To add sound effects</p> <p>To create, edit and publish a podcast</p>	<p>To use a device to record film</p> <p>To edit the film using software</p> <p>To publish the film to the wider world</p>
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