# Skills Progression in Computing at Foundation Stage

## Understanding of the world

Shaded = knowledge

| Computing links | Explores programmable toys | Understands cause and effect e.g. press forward to move it forward | Uses a simple app | Confidently knows how to use a simple app or game | Understands how to program a toy to get from A to B | Debugging when things go wrong | Identifies rules that help keep them safe and healthy when using technology |
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| | To know when something makes me sad, either online and in real life | | Knows what to do when something makes me sad, either online or in real life | | Know they need to be kind online | Knows not to share information | |
| | Knows how to safely search online with or without support<br><br>Taught throughout the year through all topics | | | | | | |

# Skills Progression in Computing at Key Stage One

| | Digital Citizenship | Digital Literacy | Computer Science | Information Technology |
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| **Year 1** | ✓ I can use the internet with adult support to communicate with people I know<br>✓ Use technology safely and respectfully<br>✓ Keeping personal information private<br>✓ Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. | ✓ I can use skills I have learnt across multiple application programs, including:<br>✓ I can input text and images using a simple publishing programs<br>✓ I can type a simple sentences on the screen, making use of a word bank<br>✓ I can alter my writing in a number of ways (size, colour, font etc.)<br>✓ I can tell you the main keys for typing e.g. shift, space bar, full stop<br>✓ I can type simple sentences using the correct format (capital letters, space and full stop)<br>✓ I can use buttons within a programme to make text bold/ italics / text alignment etc.<br>✓ I can move to different places in the text using the arrow keys or mouse<br>✓ I can use the 'undo' icon to fix a mistake<br>✓ I can use the digital camera independently<br>✓ I can create a pictogram by entering data into a simple graphing package<br>✓ I can use a pictogram to answer simple questions<br>✓ I can explore sounds in a music programme or sound app<br>✓ Use technology purposefully to create, organise, store, manipulate and retrieve digital content | ✓ I can tell you what an **algorithm is**<br>✓ I can give and follow instructions, which include straight and / or turning commands – one at a time.<br>✓ I can plan a simple algorithm<br>✓ I can **create** a simple program<br>✓ I can **debug** a simple program that is causing an unexpected outcome.<br>✓ I can predict if a simple program will fulfil my algorithm<br>✓ I can break a problem down into smaller parts (chunking / decomposing) | ✓ I can identify a browser and can use the internet to find things out<br>✓ I can use simple keywords in **search engines**<br>✓ I can save my work (Purplemash/school network) so that others know it belongs to me (e.g. filename, name on content)<br>✓ I can identify the icons for applications on the desktop and launch accordingly<br>✓ I can use online resources – Google Maps & Google Earth to conduct research & find information<br>✓ I can log on and off the school network using my individual username and password |

| Year 2 | I can use the internet to communicate with people I do not know well (e.g. email a pen pal in another school/ country)<br>I can access school online resources e.g. Blog / Purplemash | **I can use skills I have learnt across multiple application programs, including:**<br>✓ I can start to use simple keyboard shortcuts Ctrl + B, I, U to edit my text style<br>✓ I can use spell checker to check my work<br>✓ I can use the 'undo' icon to fix a mistake<br>✓ I can use the return/enter key to insert relevant line breaks I can add a page border<br>✓ I can insert a basic table<br>✓ I can use a range of ICT devices to create a sequence of sounds I can use a digital video camera to capture film and images<br>✓ I can arrange clips to make a short film that conveys meaning<br>✓ I can add simple titles and credits<br>✓ I can plan a simple Y/N tree diagram to sort information e.g. Branching database -2Question<br>✓ I can create and search a branching database<br>✓ I can use a database to answer simple questions<br>✓ I can search a database to find information<br>✓ I can use ICT to support handling data – creating simple graphs, bar charts and pie charts | ✓ I can give and follow instructions, which include direction and turning command – several in order<br>✓ I can plan use logical reasoning to predict outcomes<br>✓ I can **create** a program that contains several commands for a device or software programme<br>✓ I can **debug** a program independently that has caused an unexpected outcome<br>✓ I can use different events to start my programs – timing / on click / on button press<br>✓ Create and debug simple programs<br>✓ Use logical reasoning to predict the behaviour of simple programs<br>✓ | ✓ I can use keywords in search engines<br>✓ I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections)<br><br>✓ I can log on and off the school network using my individual username and password and save my work to Purplemash or the school network<br><br>✓ I can use a variety of sources to find, sort and select information appropriate to my class work including using the internet<br>✓ I can refine my searches to limit search results using an internet search engine |

# Skills Progression in Computing at Lower Key Stage Two

| | | Digital Citizenship | Digital Literacy | Computer Science | Information Technology |
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| **Year 3** | | ✓ **I can use technology safely and respectfully and responsibly**<br>✓ I can search for information about myself online | ✓ **I can use skills I have learnt across multiple application programs, including:**<br>✓ I can type a number of sentences using the keyboard<br>✓ I can use tab to indent paragraphs<br>✓ I can use cut, copy and paste to re-order text<br>✓ I can use simple keyboard shortcuts e.g. Ctrl + V, X, C to re-order text<br>✓ I can use columns<br>✓ I can use bullet points, speech bubbles, auto shapes and text boxes<br>✓ I can format wrapping/layout of text boxes and images in word<br>✓ I can format images - move, rotate and resize shapes<br>✓ I can use the format tab to alter word art to enhance my work<br>✓ I can use a variety of table tools (EG merge cells, fill)<br>✓ I can create a folder to save my work in<br>✓ I can give a file a name to identify it<br>✓ I can create a new eBook with a front cover and add or remove pages<br>✓ I can search and use a branching database to identify objects<br>✓ I can create a multimedia presentation / eBook incorporating images, sounds and text using a multimedia package / apps or online program<br>✓ I can edit pictures using various tools in paint or photo-manipulation software<br>✓ I can create a simple musical composition combining electronic and live sounds<br>✓ I can add suitable sound effects and tracks<br>✓ I can combine still/moving images in a show to create stop-motion animation/movies on a range of devices | ✓ I can use logical reasoning to explain what will happen next<br>✓ I can solve problems by decomposing them into smaller parts<br>✓ I can use and edit a pre-written program to achieve a specific outcome<br>✓ I can detect and debug errors in algorithms and programs<br>✓ I can sequence a simple program on Logo to produce a line drawing<br>✓ I can write a program to complete an algorithm<br>✓ Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems;<br>✓ solve problems by decomposing them into smaller parts<br>✓ Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs<br>✓ **Use** sequence in programs;<br>✓ | ✓ I can use key phrases in search engines<br>See knowledge progression document. |

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| | ✓ | ✓ 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<br>✓ Collect, analyse, evaluate and present data and information using a variety of different software | ✓ | |
| Year 4 | ✓ See knowledge progressions document. | ✓ I can use skills I have learnt across multiple application programs, including:<br>✓ I can select appropriate tools to add emphasis and effect to my work I can extend the use of multimedia packages to include importing images, hyperlinks and the use of sounds recorded independently<br>✓ I can edit the colour, text and merge digital photographs using a range of devices e.g. Skitch, Microsoft image tools, collage app<br>✓ I can storyboard a short film clip / animation - what would happen and when<br>✓ I can effectively plan for an animation or film and use purposefully<br>✓ I can take a series of pictures to form an a short film clip / animation /eBook I can use a mobile device to film a short clip<br>✓ I can save images at stages to compare my work and talk about the changes<br>✓ I can edit video, animation or music footage by cropping clips I can choose appropriate scene transitions<br>✓ I can enter a basic mathematical formula into Excel | ✓ I can use sequence and loops (repetition) in programs confidently<br>✓ I can detect and debug errors in algorithms and programs<br>✓ I can independently select and sequence code to make my own program<br>✓ I can demonstrate the loop or repeat command in all programming environments - I use more than 1 (2Simple – 2Code / ScratchJr /Kodu /Kodable / LightBot / ALEX / Scratch)<br>✓ I can transfer my coding skills between software<br>✓ I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'<br>✓ / Android | ✓ I can use key phrases in search engines See knowledge progression document. |

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| | | ✓ I can change the look of a spreadsheet by using different formats e.g. text styles, colour, number format inc, currency and date, row and column heights<br>✓ I can insert and delete columns and rows in a spreadsheet<br>✓ I can use SUM to calculate the total of a set of numbers in a range of cells<br>✓ I can change data to answer "what if…?" questions | | |

# Skills Progression in Computing at Upper Key Stage Two

The Gates
Primary School
Westhoughton

The Gates
Primary School
Westhoughton

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| ✓ **I can use technology safely and respectfully and responsibly**<br>✓ I can search for information about an individual online and create a summary report of the information I find | ✓ **I can use skills I have learnt across multiple application programs, including:**<br>✓ I can select appropriate tools to add emphasis and effect to my work<br>✓ I can draft and redraft my written work by deleting, inserting and replacing text to improve clarity and create mood.<br>**Creativity**<br>✓ I can design a 3D model using ICT to meet a specific goal, e.g. 2Design & Make<br>✓ I can evaluate and improve my finished designs<br>✓ I can evaluate multimedia pages, such as Wiki entries, websites and blogs, and recognise the features of good page design and how it is suited to an audience<br>✓ I can use a mobile device to film a short clip<br>✓ I can add titles, credits, transitions and special effects<br>✓ I can review and add to, replace and edit clips to make messages clearer I can export / embed a video in different formats for different purposes<br>**Databases** | ✓ I can tell you what a conditional is<br>✓ I can plan and write an **algorithm** using the following: commands, sequence, repetition and selection 'if...then' (conditional statement)<br>✓ I can detect and debug errors in more complex algorithms and programs<br>✓ I can use selection to create games in which the user must make a choice<br>✓ I can use my skills and understanding of selection in more than 2 programs<br>✓ I can solve problems by decomposing them into smaller parts | ✓ I can use different search technologies<br>✓ I can evaluate digital content and can explain how I make choices from search results<br>✓ I can create and use strong and secure passwords<br>✓ I can identify the features of legal downloads and illegal (pirated) content<br>✓ I can identify the key internal parts of a computer – RAM, memory, processor, motherboard |

| | | ✓ I can create a database structure of my own and enter the data<br>✓ I can prepare a data collection form and collect quality information<br>✓ I can use spreadsheets to create a graph<br>I can interpret graphs of data collected from a variety of sources | | |
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| **Year 6** | ✓ I can use technology safely and respectfully and responsibly<br>✓ I can identify messages about gender roles and make judgements based on them | ✓ **I can use skills I have learnt across multiple application programs, including:**<br>✓ I can choose, select and use a combination of software to present my work<br>✓ I can select appropriate tools to add emphasis and effect to my work I<br>✓ can draft and redraft my written work by deleting, inserting and replacing text to improve clarity and create mood<br>✓ I can interpret graphs of data collected from a variety of sources | ✓ I can confidently use events, repeats, selection and variables<br>✓ I can use a variable in a variety of programming software - 2Simple – 2Code / ScratchJr / Scratch / Kodu /Kodable / LightBot / ALEX /<br>✓ I can confidently break a problem down and methodically create a program to solve it, testing and adapting as I go<br>✓ I confidently use the Blockly programming language | ✓ I can use search technologies effectively<br>✓ I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting')<br>✓ I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important<br>✓ I can identify flag and report inappropriate content<br>✓ I use different passwords for a range of online services<br>work from different places<br>✓ I can effectively research using the world wide web<br>✓ I can demonstrate the use of search tools to find and access online content, which can be reused by others<br>✓ I can demonstrate how to make references to and acknowledge sources I have used from the internet<br>✓ I can independently save and retrieve |