

# Computing Curriculum Map

|                          |  | Personal, Social and Emotional Development   | Physical Development   | Understanding the World  |   |
|--------------------------|--|--|--|--|---|
| Three and Four-Year-Olds |  | Increasingly follow rules, understanding why they are important.   | Match their developing physical skills to tasks and activities in the setting.   | Explore how thingswork.  |   |
|                          |  | Personal, Social and Emotional Development   | Physical Development   | Expressive Arts and Design   |   |
| Reception                |  | Show resilience and perseverance in the face of a challenge.   | Develop their small motor skills so that they can use a range of tools competently, safely and confidently.<br><br>Know and talk about the different factors that support their overall health and wellbeing:<br>-sensible amounts of ‘screen time’.   | Explore, use and refine a variety of artistic effects to express their ideas and feelings.   |   |
|                          |  | Personal, Social and Emotional Development   |  | Expressive Arts and Design   |   |
|                          |  | Managing Self  |  | Creating with Materials  |   |
| ELG                      |  | Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.<br><br>Explain the reasons for rules, know right from wrong and try to behave accordingly. |  | Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  |   |
|                          | Using technology purposefully  |  | Internet skills  | E-safety   | Coding  |
| EYFS                     | Recognise that a range of technology is used in homes and in schools.<br>Use a simple application on a computer or mobile device.<br>Use computing devices to interact with age-appropriate applications.<br>Create simple representations of events, people and objects.  |  |  |  | To make a floor robot move.<br>To use simple software to make something happen.<br>To make choices about the buttons and icons I press, touch or click on.  |
| Year 1                   | To know how to log on to the school system and know that it is necessary to log off and shut down when finished.<br>To know what it means to open and save documents.<br>To know common places to save and appreciate the importance of naming documents appropriately and regularly saving important work.<br>To know how to print work.<br>To be able to change font, text colour and writing size in word.<br>To be able to highlight and underline text. |  | To know what a ‘search engine’ is and that Google is easily the most comprehensive, although there are alternatives.<br>To know that the suffix co.uk means a website is British and that .com is American.<br>To know that information can be located on Google; images on Google images and maps on Google maps.<br>Know that it is possible to switch between map view, aerial photo view and street view in Google maps. | To know that the internet brings together everything that anywhere wants to put on it and that they may encounter material that is inappropriate for their age group.<br>To know that is it important to close down and report anything undesirable encountered when on the internet.<br>To know that when they play a game online or have an online interaction, they are interacting with a real person who may be lying about who they are. | To give instructions to my friend and follow their instructions to move around.<br>To describe what happens when I press buttons on a robot.<br>To press the buttons in the correct order to make my robot do what I want.<br>To describe what actions I will need to do to make something happen and begin to use the word algorithm.<br>To begin to predict what will happen for a short sequence of instructions.<br>To begin to use software/apps to create movement and patterns on a screen.<br>To use the word debug when I correct mistakes when I program. |

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| <b>Year 2</b> | <p>To know that the undo tool is the quickest way of correcting errors.</p> <p>To know that zigzag underlining suggests an error and that right clicking suggests improvements – but that the computer will not always be correct.</p> <p>To know that Microsoft Word is best for documents to print but that Microsoft PowerPoint is best for making presentations to look at on a screen.</p> <p>To be able to insert WordArt, Clip Art and Shapes in Word and PowerPoint.</p>                      | <p>To know that information and pictures can be copied from the internet and used in own work.</p> <p>To be able to independently use Google to search for information, images and maps.</p>  | <p>To know that the internet brings together everything that anywhere wants to put on it and that they may encounter material that is inappropriate for their age group.</p> <p>To know that it is important to close down and report anything undesirable encountered when on the internet.</p> <p>To know that when they play a game online or have an online interaction, they are interacting with a real person who may be lying about who they are.</p> | <p>To give instructions to my friend (using forward, backward and turn) and physically follow their instructions.</p> <p>To tell you the order I need to do things to make something happen and talk about this as an algorithm.</p> <p>To program a robot or software to do a particular task.</p> <p>To look at my friend's program and tell you what will happen.</p> <p>To use programming software to make objects move.</p> <p>To watch a program execute and spot where it goes wrong so that I can debug it.</p>  |
| <b>Year 3</b> | <p>To be able to independently manipulate images and text between Paint, Word, PowerPoint and the internet.</p> <p>Know that stretching an image diagonally retains its original proportions.</p> <p>Able to create information pages by combining text and images.</p> <p>Able to use text boxes to aid page layout.</p> <p>Know that right clicking on an image and using text wrapping menu prevents images from floating or disappearing and allows user to control what goes on top of what.</p> | <p>To know how to send emails, including attachments.</p> <p>To know how to filter Google images for different sized images.</p> <p>To appreciate the importance of using correctly seized pictures from the internet for the purpose intended and suggest when different sizes might be most useful – e.g. large images won't blur when stretched but take up greater memory and will be slower to load.</p> | <p>To know to keep all passwords safe and only give personal information to trusted friends.</p> <p>To remember that people online may not be who they pretend to be.</p> <p>That snippets of information posted online can be put together to build a comprehensive picture of who we are.</p>   | <p>To break an open-ended problem up into smaller parts.</p> <p>To put programming commands into a sequence to achieve a specific outcome.</p> <p>To keep testing my program and can recognise when I need to debug it.</p> <p>To use repeat commands.</p> <p>To describe the algorithm I will need for a simple task.</p> <p>To detect a problem in an algorithm which could result in unsuccessful programming.</p>   |
| <b>Year 4</b> | <p>To know that animation is simply many images displayed quickly.</p> <p>To be able to create own animations.</p> <p>To know that Excel can be used as a database which stores information.</p> <p>To be able to enter information into cells and use co-ordinates to identify any given cell.</p> <p>To use the sort and filter tool.</p> <p>To be able to use Moviemaker to create an effective slideshow, inserting images and sounds.</p> <p>To effectively edit photographs using paint.net</p> | <p>To know the strategies for fine tuning Google searches.</p> <p>To be able to suggest when the different search strategies might be able to be used in real life.</p>   | <p>To know that information, photos and videos posted online may later prove impossible to remove and that these may be used by others for different purposes that you had not envisaged.</p> <p>To know that snippets of information posted online can be put together to build a comprehensive picture of who we are.</p> <p>That we should never meet up with anyone online without first discussing this with our parents.</p>                            | <p>To use logical thinking to solve an open-ended problem by breaking it up into smaller parts.</p> <p>To use an efficient procedure to simplify a program.</p> <p>To use a sensor to detect a change which can select an action within my program.</p> <p>To know that I need to keep testing my program while I am putting it together.</p> <p>To use a variety of tools to create a program.</p> <p>To recognise an error in a program and debug it.</p> <p>To recognise that an algorithm will help me to sequence more complex programs.</p> <p>To recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.</p> |