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| **St Mary’s RC Primary School**  Our Computing curriculum comprises a number of different strands**: information technology, computer science and digital literacy**. Each year group builds on the skills taught during the previous year, to ensure that by year 6 students are confident using technology, including a range of different programs, apps and websites.  **Skills Progression 2021/2022**  **Computing**  Version 1.0 (March 2021) | | | | | | |
| **Skill** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| ***Information technology (IT)***  (Basic Skills) | Turn the computer on and off.  Log on and off the school network and any software applications.  Use a mouse/touchpad to control the cursor on a PC/iPad.  Find, save, edit and print work.  Use the spacebar, backspace, enter, shift & arrow keys.  Starting to use two hands to type on a keyboard. | Turn the computer on and off.  Log on and off the school network and any software applications.  Use a mouse/touchpad to control the cursor on a PC/iPad.  Find, save, edit and print work.  Use the spacebar, backspace, enter, shift & arrow keys.  Select text and make simple changes such as bold, italic and underlined.  Use copy and paste function.  Using two hands to type on a keyboard. | Turn the computer on and off.  Log on and off the school network and any software applications.  Use a mouse/touchpad to control the cursor on a PC/iPad.  Find, save, edit and print work.  Use the spacebar, backspace, enter, shift & arrow keys.  Select text and make simple changes such as bold, italic and underlined.  Use copy and paste function.  Use font sizes, colours and effects to convey meaning.  Align text to the left, right or centre.  Insert tables, columns and rows.  Use borders and shading features.  Use both hands when typing and improve typing speed. | Basic skills taught in years 1,2 and 3 should now be embedded.  All skills learned should be consolidated in Year 4 so that pupils are confident users of these skills.  To improve speed and accuracy to develop competency in typing. | All pupils should be confident users of the basic skills taught and practised in years 1, 2, 3 and 4.  To improve speed and accuracy to develop competency in typing. | All pupils should be confident users of the basic skills taught and practised in years 1, 2, 3 and 4.  To improve speed and accuracy to develop competency in typing. |
| ***Information technology (IT)***  (Multimedia) | Use paint tools such as brushes, pens, stamps and fill**.** Find, save, edit and print work.  Use Word to write a short text.  Use the spacebar, backspace, enter, shift & arrow keys. Find, save, edit and print work. | Use sound recorders, sound buttons or talking tins to record & playback sounds.  **[**Use software to record music and sounds.  Change the sounds recorded.  Retrieve, edit and save music.  Record simple videos.  Arrange short clips to make a film that conveys meaning.  Add titles & credits to a film.  Select text and make simple changes including bold, italic and underlined. | To make choices about which pieces of technology to use (e.g. iPad or PC, microphone or computer, camera or iPad etc) and explain their choice to others.  Use a camera to take images for a purpose.  Use the internet to find images.  Find and combine images to create work.  Use the print screen function to capture an image.  Select certain areas of an image & resize or rotate it.  Edit pictures using basic tools.  Create a new PowerPoint presentation and add or remove pages.  Combine text and images on each PowerPoint page.  Embed sound clips in a PowerPoint page.  Add information about the author and add a title. | To make choices about when to use technology, which pieces of technology to use and explain their choice to others.  Plan a simple animation.  Take a series of photos to create an animation.  Move photos in the animation to create movement.  Edit and improve the animation.  Record a video for a purpose.  Discuss the quality of the video and choose which section to keep and which to re-shoot.  Trim and edit clips and arrange them to convey meaning.  Add titles, credits and basic special effects to the video  Discuss how these effects affect the quality of the video. | To make sensible choices about the technology used and justify their choices to others.  Create a multimedia E-Book that combines, text, graphics, photographs, audio and video linking to a topic area.  Add front cover, add/remove pages and add author data.  Collect audio from different sources including internet clips and in-school recordings.  Create a multi-track recording using effects.  Edit and improve recordings. | To make sensible choices about the technology used and justify their choices to others.  Plan a multi-scene animation including characters, set, camera angles and special effects.  Use stop-go animation software to shoot animation frames.  Adjust the number of frames and playback rate to improve the quality of the animation.  Add sound effects or a soundtrack to an animation.  Save animation so that it can be shared.  Storyboard and capture videos for a purpose.  Plan and use transitions and special effects to enhance a video.  Trim, arrange and edit the audio levels to improve the quality of the overall video.  Add titles, credits, transitions and special effects.  Publish the video in different formats for different purposes. |

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| **Skill** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| ***Information technology (IT)***  (Data handling) | Know that images give information.  Explain what a pictogram is.  Enter data into a pictogram.  Sort data into simple lists or tables. | Place objects and pictures in a simple table and create a graph.  Make a simple Y/N tree diagram to sort information  Begin to create a simple branching database. | To understand that basic structure of a database.  Choose information to put into a data table.  Recognise which information is suitable for the topic.  Design a questionnaire to collect information.  Sort and organise information to use in other ways.  Create graphs and charts. | Create and search branching databases.  Create a database from information selected.  Sort and organise information in different ways e.g. forms, databases, spreadsheets, charts and graphs. | Create forms to collect data.  Create a database from information collected and enter data accurately.  Know how to check for and spot inaccurate data.  Know how to enter simple formulae in Excel spreadsheets.  Create graphs and charts in an Excel spreadsheet. | Create data collection forms and enter the information from them into a database accurately.  Know how to check for and spot inaccurate data.  Know how to enter formulae, copy cells and use simple formatting in Excel spreadsheets.  To know how to choose which type of chart is best to use for data that has been collected.  Sort and filter information in Word and Excel.  Understand that changing the numerical data effects a calculation. |

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| **Skill** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| ***Computer Science (CS)***  (Programming) | Give instructions e.g. straight on or turns.  Explore what happens when a set of instructions are given.  Give a sequence of instructions.  Know that algorithms are a set of instructions.  Understand that computers are controlled by instructions.  Know that computers need more precise instructions than people do. | Understand what an algorithm is.  Create a sequence of instructions to make an object disappear when a key is pressed.  Combine a sequence of instructions to control an object when keys are pressed.  Create a series of instructions to control an object using the ‘swipe’ on an iPad.  Discuss how to improve instructions.  Explain how the code works.  Edit and refine sequences (including debugging commands) | Combine start events and click events to make a simple game.  Program a sequence of actions to execute at different times.  Create a simple animation using time events to make objects perform actions in a sequence.  Use a variety of inputs in the code., e.g. key presses, user information, swipe, tip.  Use the conditional “if … then …” statements to introduce variables to the code.  Design, write and debug programs that accomplish specific goals. | Understand that when a computer does something it is following instructions called code.  Understand that a program is a sequence of statements written in a programming language.  Understand that the value of a variable can change as a result of an input or event, or in response to a condition being met.  Write code that includes variables and conditional statements.  Use conditional sentences in my app (“if… then…” or “if… else…”)  Use the loop command to do something repeatedly.  Design, write and debug apps for specific purposes. | Understand that a range of different coding language exists.  Develop an understanding of the relationship between values used in code and the action of the object they relate to.  Write code that includes setting/assigning values and using co-ordinates to control the movements and location of an object.  Use programming values specific to iPads.  Create and edit variables.  Use conditional statements.  Use logical reasoning to explain how the code executes.  Distinguish between times when use of a random number in code is effective and times when it is more appropriate to set a value. | Write code that prompts the user to input the value of a variable  Write code that performs calculations with variables and loops, and writes the results to the screen.  Design, create and debug a program.  Write code that includes parameters and uses them to control the movements of an object  Use a range of different statements e.g. timers, loops, repeat, if .. then.. else  Evaluate the effectiveness of an app/game and either provide feedback or debug if required.  I can understand and explain the difference between the internet and the world wide web.  To begin to write simple scripts in an internationally recognised coding language (e.g. python script. |
| **Skill** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** | |
| ***Digital Literacy (DL)***  (E-Safety/Online)  *All year groups*  and also falls under:  *Information technology (IT) for YRs 4,5 and 6* | Using the internet  Talk about why certain websites are better than others.  Explore websites using menus, icons, hyperlinks and arrows.  Use the back button when using/navigating the internet.  Search for things on the internet (with adult help).  Internet safety  Talk about whether or not the information/pictures seen on the internet is likely to be true.  Understand what is meant by personal information.  Know how to be safe online.  Know what to do if something seen online is upsetting. | Using the internet  To know that the internet contains a large amount of information (e.g. text, images, sound, video etc).  Use a search engine to research specific information.  Internet safety  Identify information that is obviously false.  Consider other people’s feelings when I use the internet.  Identify personal information that should be kept private.  Know how to be safe online.  Know what to do if something seen online is upsetting.  Recognise an email address.  Find the @ symbol on the keyboard.  Contribute to a class email.  Open, reply and send an email as a class. | Using the internet  Type in a URL to find a website.  Add a website to my favourites  Use a search engine to find different media e.g. text, images, videos.  Think of search terms to use to find an answer to my question.  Internet safety  To know how to determine the reliability of information found on the internet.  To question whether information online is true or false.  Know how to be safe online.  Know what to do if something seen online is upsetting.  Open, reply and send emails.  Attach a file to an email.  Discuss why it is important to think before sending something online.  Understand what sort of behaviour online would be unfair or unkind. | Using the internet  Evaluate different search engines and explain choices for using.  Check the accuracy of information taken from the internet and adapt it so that it is appropriate for the audience (i.e. not just copy and paste)  Internet safety  Recognise sites and platforms that have social networking features (such as online games, hand held games consoles etc).  Know what social networks are age appropriate.  Make judgements in order to stay safe whilst communicating with others online.  Give examples of good and bad behaviour online.  Know how to be safe online.  Know what to do if something seen online is upsetting.  Open, read, reply to and send emails.  Attach a file to an email.  Download and save files from an email.  Email more than one person at once or participate in group emails by using “reply to all.” | Using the internet  Use advanced search functions including a range of keywords, to find information online e.g. key words, quotation marks etc.  Understand that some websites e.g. Wikipedia are made by users.  Find and cite the website address for any resource or information identified online.  Understand the importance of stating the source of images, videos etc used.  To understand the issues and implications of copyright and downloading material.  Internet safety  To recognise that the internet may contain information that is irrelevant, bias, implausible and inappropriate.  Know which strategies to use to check the validity of information e.g. cross checking with books, comparing with a trusted site.  Use website names and domain names (e.g. .gov, .org) to help decide if a website is reliable.  Know how to change privacy settings and understand how and why this helps to be safe online.  Explain what is good online behaviour.  Know how to be safe online.  Know how CEOP can help me online. | Using the internet  To know that different search engines may focus on different media.  To know how to check the plausibility and validity of information from a variety of sources on the same topic.  To recognise the impact of using incorrect data.  To understand plagiarism and the importance of acknowledging sources.  Set up a blog.  Change the appearance of the blog using background images, fonts, effects etc.  Create a new post, save it as a draft and publish it.  Embed pictures, hyperlinks and videos into blog posts.  Edit the blog by removing posts no longer wanted.  Interact with other blogs (within school) and build a blog throughout the year developing consistency in style.  Internet safety  Recognise the value in preserving their privacy when online for their own and other people’s safety  Recognise scenarios that involve online risk.  Know how to be safe online.  Know how CEOP can help me online. | |

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| **Skill** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| ***Digital Literacy (DL) – contd.***  (technology in the wider world). | Name devices that can go on the internet and some that cannot.  Identify what the computers inside everyday objects might do.  Understand that computers use programs of instructions to complete specific tasks. | Recognise that lots of different devices can connect us to each other e.g. PSP. X-Box, not just phones and computers. | Understand that information can be transferred between computers/devices.  Understand that wires connect computers together to make a network.  Understand that sometimes networks do not have wires. | Understand how computers connect to each other to make a network.  Understand that the Internet is a large network containing many different computers and devices.  Know a range of devices used in everyday life that connect to the Internet.  Understand the difference between software and the computer’s operating system. | To understand the purpose of and use independently a range of different technology.  Understand the different ways a device can connect to a network e.g. using a cable, a router or through wi-fi.  Understand why devices connect to the Internet.  Understand that files can be saved off their device e.g. to the “cloud” servers such as Microsoft OneDrive and Dropbox.  Understand the importance of document version control when saving and synchronising files between different devices.  Explain and name the different parts that make up the inside of a computer or device.  Know that there are different operating systems but that they do a similar job. | Show the safe and respectful use of a range of different technologies.  Understand how computers are put together.  Understand the function of different components inside a computer.  Understand how different operating systems work.  Consider how the use of technology can improve lives e.g. with visual and hearing impairment etc. |