The Holy Family Catholic Primary School Computing Skills and Knowledge Progression

			Computer Science			
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Programming Nursery Give and follow instructions Make a car and a floor robot move Use simple software to make something happen Make choices about the icons, buttons and switches I push, touch or click on Reception Talk about different kinds of information - pictures, videos, text and sound Sort and categorise data	**Grouping and sorting** Sort items on the computer. **Lego builders** Follow and create instructions. Consider how the order affects the result. **Maze explorers** Understand the use of the direction keys Know how to create and debug a set of instructions (algorithm). **Coding** Draw symbols to represent instructions. Create a program using code blocks Use code to make the program they have designed work	**Coding** Explain that an algorithm is a set of instructions. Describe the algorithms they created. Children can create a program using collision detection. Children can create a program that uses a timer-after command. Children can create a computer program that includes a button object. Children can debug simple programs.	**Coding** Understand what a flowchart is and how flowcharts are used in computer programming. To understand that there are different types of timers. Select the right type of timer for a purpose. Understand how to use the repeat command. Use coding knowledge to create a range of programs. Design and create an interactive scene	**Coding** Create a simple computer program. Understand how an IF statement works. Understand how to use coordinates in computer programming. understand how an IF/ELSE statement works. Understand what a variable is. Use a number variable. Create a playable game. **Logo** To learn the structure of the language of 2Logo. Input simple instructions in 2Logo **Hardware investigators** understand and recall the different parts that make up a desktop computer	**Coding** Begin to be able to simplify code. Create a playable game Understand what a simulation is. Program a simulation using 2 Code. **Game creator** Introduce the 2DIY 3D tool. Begin planning a game. Design the environment and game quest to make it a playable game. To self- and peer evaluate.	**Coding** Design a playable game with a timer and a score. use flowcharts to test and debug a program. Create a simulation of a room in which devices can be controlled. Understand how 2Code can be used to make a text-based adventure game. **Text adventures** Find out what a text-based adventure game is and explore an example made in 2Create a Story. Use 2Connect to plan a 'Choose your own Adventure' type story. Use written plans to code a map-based adventure in 2 Code. **Networks** Discover what the children know about the Internet. Find out how we access the internet in school. Research and find out about the age of the internet.

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Information technology						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Multimedia Nursery Move objects on a screen Create shapes on a screen Create a simple picture Choose the pencil and change the colours Reception Move objects on a screen Create shapes and text on a screen Create a picture Change the colours for the pencil Move the objects around in my picture Use technology to show my learning	**Pictograms** Known data can be represented in pictures. Use a pictogram to record. **Animated stories** Explore 2Create a Story. Add an animation, sound and background to a page. Use the copy and paste function to add more pages to their e-book. **Spreadsheets** Navigate around a spreadsheet. Explain what rows and columns are. Save and open sheets. Enter data into cells. Use the 'lock' tool to prevent changes to cells. Add the count tool to count items.	**Spreadsheets** Open, save and edit a spreadsheet. Add images from the image toolbox and allocate them a value. Add the count tool to count. Children can use copying, cutting and pasting to help make spreadsheets. **Questioning** Know what a binary tree is. Design a binary tree to sort pictures. Understand that questions are limited to 'yes' and 'no' in a binary tree. Use a database to answer simple and more complex search questions. **Creating pictures** Children can describe the main features of a given style of art. Use 2Paint a Picture to create art based upon this style. **Making music** Understand what 2Sequence is and how it works.	**Spreadsheets** Add and edit data in a table layout. Find out how spreadsheet programs can create graphs from data. **Touch typing** Practice and improve typing for home, bottom, and top rows. Practise the keys typed with the left hand. Practise the keys typed with the right hand. **Branching databases** Sort objects using YES/NO questions Complete a branching database using 2Question. **Simulations** Find out what a simulation is and understand the purpose of simulations. Explore a simulation, making choices and discussing their effects. **Graphing** Enter data into a graph and answer questions.	**Spreadsheets** Explore how the numbers entered into cells can be set to either currency or decimal. Find out how to add formula to a cell. Explore how tools can be combined to use 2Calculate to make number games. Use the line graphing tool in 2Calculate with appropriate data. To use 2Calculate to create a model of a real-life situation. **Writing for different audiences** Explore how font size and style can affect the impact of a text **Animation** Learn how animations are created by hand. Find out how 2Animate animations can be created in a similar way using technology. Introduce 'stop motion' animation. **Effective searching** Locate information on the search results page. Search effectively to find out information.	**Spreadsheets** Use formula within a spreadsheet to convert measurements of length and distance. Use a spreadsheet to model a real-life problem. **Databases** Learn how to search for information in a database. Create a database around a chosen topic. **3D modelling** Introduce 2 Design and Make tools. Explore the effect of moving points when designing. Design a 3D model to fit certain criteria. **Concept maps** Understand the need for visual representation when generating and discussing complex ideas. Understand the uses of a 'concept map' Create a concept map **Word processing** Add and edit images to a document. Change the look of text within a document.	**Spreadsheets** Use a spreadsheet to investigate probability. Use a spreadsheet to calculate the discount and final prices in a sale. Create a formula to help work out the prices of items in the sale. Use a spreadsheet to plan how to spend pocket money and the effect of saving money. **Blogging** Identify the purpose of writing a blog. Identify the features of successful blog writing. To plan the theme and content for a blog To understand how to write a blog and a blog post. To understand how to contribute to an existing blog To understand the importance of commenting on blogs. To peer-assess blogs against the agreed success criteria. To understand how and why blog posts and comments are

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		Use the different sounds within 2Sequence to create a tune. Add sounds to a tune they have already created to change it. Consider how music can be used to express feelings. Create, upload and use their own recorded sound. Create their own tune using some of the chosen sounds. **Presenting ideas** Make a publisher fact file on a non-fiction topic. Add appropriate clipart. Add an appropriate photo. Make a presentation to the class. Collect, organise and present data and information in digital content.		Assess whether an information source is true and reliable. **Making music** Identify and discuss the main elements of music: Pulse, Rhythm, Tempo, Pitch, Texture Compose a piece of electronic music.	Use tables within Google docs to present information.	approved by the teacher. **Quizzing** Create a picture-based quiz.. Learn how to use the question types within 2 Quiz. **Spreadsheets** Navigate and enter data into cells. Introduce some basic data formulae in Sheets. Demonstrate how the use of Sheets can save time and effort when performing calculations. Use a spreadsheet to model a situation. Demonstrate how spreadsheets can make complex data clearer by manipulating the way it is presented. Apply spreadsheet skills to solving problems.

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Digital Literacy						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online safety I ask an adult when I want to use the internet I tell an adult if something worrying happens. I am careful with technology devices. **Technology in our lives** Nursery Take a picture Operate simple equipment Reception Understand the main parts of a computer and how to use them Take a picture Talk about technology used at home and at school Operate simple equipment	**Online safety** Log in safely Create an avatar Create a picture Save work Find saved work Explore the Tools area of Purple Mash and learn about the common icons used for Save, Print, Open, New. Understand the importance of logging out. **Technology out of school** Find and understand examples of where technology is used in the local community Record examples of technology outside school.	**Online Safety** Use the search facility to refine searches on Purple Mash by year group and subject. Share the work created to a display board. Open and send an email to a 2Respond character. Discuss own experiences and understanding of what email is used for. Discuss what makes us feel happy and what makes us feel sad. Explain what a digital footprint is. Give examples of things that they would not want to be in their digital footprint **Effective searching** Identify the basic parts of a web search engine search page. Read a web search results page. Search the Internet for answers to a quiz.	**Online safety** know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away. Understand how a blog can be used to help us communicate with a wider audience. Consider if what can be read on websites is always true. Look at a 'spoof' website. Create a 'spoof' webpage. Learn about the meaning of age restrictions symbols on digital media and devices. Discuss why PEGI restrictions exist. Know where to turn for help if they see inappropriate content or have inappropriate contact from others. **Email** Open and respond to an email. Write an email to someone from an address book.	**Online safety** Understand how children can protect themselves from online identity theft. Understand that information put online leaves a digital footprint and that this can aid identity theft. Understand that copying the work of others and presenting it as their own is called 'plagiarism' Identify the positive and negative influences of technology on health and the environment. Understand the importance of balancing game and screen time with other parts of their lives.	**Online safety** Gain a greater understanding of the impact that sharing digital content can have. Review sources of support when using technology. Review children's responsibility to one another online. Know how to maintain secure passwords. Understand the advantages, disadvantages, permissions, and purposes of altering an image digitally and the reasons for this. To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. Search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information	**Online safety** Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g., apps accessing location. Identify secure sites by looking for privacy seals of approval, e.g., https, padlock icon. Identify the benefits and risks of giving personal information and device access to different software. Understand how and why people use their information and online presence to create a virtual image of themselves Have a clear idea of appropriate online behaviour Understand the importance of balancing game and screen time with other parts of their lives Identify the positive and negative influences of technology on health and the environment.

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			Learn how to use email safely. Add an attachment to an email.			