

St. Philip Neri with St. Bede's **Computing Intent** 2021 – 2022

Computer science

Information technology

Digital literacy

	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Year 1	Online Safety (Digital Literacy) 1.1 <i>Can log in safely</i> <i>Know the importance of logging out</i> <i>Know how to open, save and print</i>	Spreadsheets (Information Technology) 1.8 <i>Know what a spreadsheet program looks like</i> <i>Enter data into spreadsheet cells</i> <i>Add clipart to cells</i> <i>Lock, move cell, speak and count</i>	Grouping and Sorting (Computer Science) 1.2 <i>Sort items using a range of criteria</i> <i>Sort items on the computer using the 'Grouping' activities</i>	Animated Story Books (Information Technology) 1.6 <i>Add animation to a story</i> <i>Add sound to a story, including voice recording and music</i> <i>Work on a more complex story, including adding backgrounds and copying and pasting pages</i>	Coding (Computer Science) 1.7 <i>Know what instructions are and predict what might happen when they are followed</i> <i>Use code to make a simple computer program</i> <i>Know what object and actions are</i> <i>Know what an event is</i> <i>Use an event to control an object</i> <i>Begin to understand how code executes when a program is run</i>	Online Safety (Digital Literacy) 1.1 <i>Know how to find saved work and find teacher comments</i> <i>Become familiar with the icons and types of resources available in the Topics section</i> <i>Start to add pictures and text to work</i> <i>Explore the Tools and Games</i>
	Pictograms (Information Technology) 1.3 <i>Know that data can be represented in picture format</i> <i>Contribute to a class pictogram</i>	Maze Explorers (Computer Science) 1.5 <i>Know the functionality of the direction keys</i> <i>Know how to create and debug a set of instructions (algorithm)</i>	Lego Builders (Computer Science) 1.4 <i>Compare the effects of adhering strictly to instructions to completing tasks without complete instructions</i> <i>Follow and create simple instructions on the computer</i>			

		<i>Use the additional direction keys as part of an algorithm</i>	<i>Consider how the order of instructions affects the result.</i>		<i>Know what backgrounds and objects are</i>	
		<i>Know how to change and extend the algorithm list</i>	Technology Outside School (Digital Literacy) 1.9 <i>Know where technology is used in the local community</i> <i>Record examples of technology outside school</i>		<i>Plan and make a simple computer program</i>	

	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Year 2	Online Safety (Digital Literacy) 2.2 <i>Use a search function safely</i> <i>Know how to share work safely</i>	Coding (Computer Science) 2.1 <i>Know what an algorithm is.</i> <i>Create a computer program using an algorithm.</i> <i>Know that algorithms follow a sequence.</i> <i>Design an algorithm that follows a timed sequence.</i> <i>Know what different events do in code.</i> <i>Know the function of buttons in a program.</i> <i>Know and debug simple programs.</i>	Spreadsheets (Information Technology) 2.3 <i>Lock, move cell, speak and count tools to make a counting machine</i> <i>Copy and paste in cells</i> <i>Use the totalling tools</i> <i>Know how to perform money calculations</i> <i>Collect data and produce a graph</i>	Effective Searching (Digital Literacy) 2.5 <i>Know the terminology associated with searching</i> <i>Gain a better understanding of searching on the Internet</i>	Questioning (Information Technology) 2.4 <i>Learn about data handling tools that can give more information than pictograms</i> <i>Use yes/no questions to separate information</i> <i>Construct a binary tree to identify items</i> <i>Use a simple binary tree database to answer questions</i> <i>Use a database to answer more complex search questions</i> <i>Use the search tool to find information</i>	Presenting ideas (Information Technology) 2.8 <i>Explore how a story can be presented in different ways digitally</i> <i>Make a quiz about a story or class topic using appropriate software</i>
					Creating Pictures (Information Technology) 2.6 <i>Use appropriate software to create a digital piece of work</i>	Making Music (Information Technology) 2.7 <i>Make music digitally</i>

						<i>Explore, edit and combine sounds</i> <i>Edit and refine composed music using software</i> <i>Upload a sound from a bank of sounds in the used software</i> <i>Record and upload environmental sounds into software</i>
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	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Year 3	Be Internet Legends (Digital Literacy) <i>Know how to protect online reputation</i>	Touch Typing (Information Technology) 3.4 <i>Introduce typing terminology.</i> <i>Know the correct way to sit at the keyboard.</i> <i>Learn how to use the home, top and bottom row keys.</i> <i>Practise typing with the left and right hand.</i>	Email and Email Safety (Digital Literacy) 3.5 <i>Think about different methods of communication.</i> <i>Open and respond to an email using an address book.</i> <i>Learn how to use email safely.</i> <i>Add an attachment to an email.</i> <i>Explore a simulated email scenario</i>	Spreadsheets (Information Technology) 3.3 <i>Use the symbols more than, less than and equal to, to compare values</i> <i>Collect data and produce a variety of graphs</i> <i>Learn about cell references.</i>	Coding (Computer Science) 3.1 <i>Know what a flowchart is and how flowcharts are used in computer programming.</i> <i>Know that there are different types of timers and select the right type for purpose.</i> <i>Know how to use the repeat command.</i> <i>Know the importance of nesting.</i>	Simulations (Information Technology) 3.7 <i>Consider what simulations are.</i> <i>Explore a simulation.</i> <i>Analyse and evaluate a simulation.</i>
		Email and Email Safety (Digital literacy) 3.5 <i>Think about different methods of communication.</i> <i>Open and respond to an email using an address book.</i> <i>Learn how to use email safely.</i>	Presenting with MS PowerPoint (Information Technology) 3.9 <i>Know the uses of presenting software.</i> <i>Create a page in a presentation.</i> <i>Add media to a presentation.</i>	Graphing (Information Technology) 3.8 <i>Enter data into a graph and answer questions.</i> <i>Solve an investigation and present the results in graphic form.</i>	<i>Design and create an interactive scene.</i>	Branching Databases (Information Technology) 3.6 <i>Sort objects using just 'yes' or 'no' questions.</i> <i>Complete a branching database using appropriate software.</i> <i>Create a branching database of the children's choice.</i>

		<i>Add an attachment to an email.</i> <i>Explore a simulated email scenario</i>	<i>Add animations to a presentation.</i> <i>Add timings to a presentation.</i> <i>Use the skills learnt to design and create an engaging presentation.</i>			
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	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Year 4	Be Internet Legends (Digital Literacy) <i>Know if information online is true and reliable</i>	Effective Search (Information Technology) 4.7 <i>Locate information on the search results page.</i> <i>Use search effectively to find out information.</i> <i>Assess whether an information source is true and reliable.</i>	Making Music (Information Technology) 4.9 <i>Create a digital melodic phrase.</i> <i>Electronically compose a piece of music.</i>	Spreadsheets (Information Technology) 4.3 <i>Format cells as currency, percentage, decimal to different decimal places or fraction</i> <i>Calculate averages</i> <i>Combine tools to make spreadsheet activities such as timed times tables tests</i> <i>Use a spreadsheet to model a real-life situation</i> <i>Add a formula to a cell to automatically make a calculation in that cell</i>	Coding (Computer Science) 4.1 <i>Begin to understand selection in computer programming.</i> <i>Know how an IF statement works.</i> <i>Know how to use co-ordinates in computer programming.</i> <i>Know the 'repeat until' command.</i> <i>Know how an IF/ELSE statement works.</i> <i>Know what a variable is in programming.</i> <i>Use a number variable.</i>	Logo (Computer Science) 4.5 <i>Know the structure of the coding language of Logo.</i> <i>Input simple instructions in Logo.</i> <i>Use 2Logo to create letter shapes.</i> <i>Use the Repeat function in Logo to create shapes.</i> <i>Use and build procedures in Logo.</i>
		Animation (Information Technology) 4.6 <i>Know about onion skinning in animation.</i> <i>Add backgrounds and sounds to animations.</i> <i>Be introduced to 'stop motion' animation.</i>	Writing for Different Audiences (Information Technology) 4.4 <i>Explore how font size and style can affect the impact of a text.</i>		Hardware Investigators (Computer Science) 4.8 <i>Know the different parts that make up a computer.</i> <i>Recall the different parts that make up a computer.</i>	

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Year 5	Be Internet Legends (Digital Literacy) <i>Know what a positive digital footprint is</i> <i>Phishing</i>	Word processing with MS Word (Information Technology) 5.8 <i>Know what a word processing tool is for.</i> <i>Add and edit images to a word document.</i> <i>Know how to use word wrap with images and text.</i> <i>Change the look of text within a document.</i>	3D Modelling (Information Technology) 5.6 <i>Be introduced to appropriate e3D modelling software and the skills of computer aided design.</i> <i>Explore the effect of moving points when designing.</i> <i>Design a 3D Model to fit certain criteria.</i>	Concept Maps (Information Technology) 5.7 <i>Know the need for visual representation when generating and discussing complex ideas.</i> <i>Know the uses of a 'concept map'.</i> <i>Know and use the correct vocabulary when creating a concept map.</i>	Coding (Computer Science) 5.1 <i>Begin to simplify code.</i> <i>Know what a simulation is.</i> <i>Program a simulation using appropriate software.</i> <i>Know what decomposition and abstraction are in computer science.</i>	Databases (Information Technology) 5.4 <i>Learn how to search for information in a database.</i> <i>Contribute to a class database.</i> <i>Create a database around a chosen topic.</i>
	Spreadsheets (Information Technology) 5.3 <i>Use formulae within a spreadsheet to convert measurements of length and distance</i> <i>Use the count tool to answer hypotheses about common letters in use</i>	<i>Add features to a document to enhance its look and usability.</i> <i>Use tables within MS Word to present information.</i> <i>Introduce children to templates.</i> <i>Consider page layout including heading and columns.</i>	Game Creator (Computer Science) 5.5 <i>Plan a game.</i> <i>Design and create the game environment.</i> <i>Design and create the game quest.</i> <i>Finish and share the game.</i>	<i>Create a concept map.</i> <i>Know how a concept map can be used to retell stories and information.</i> <i>Create a collaborative concept map and present this to an audience.</i>	<i>Take a real-life situation, decompose it and think about the level of abstraction.</i> <i>Know how to use friction in code.</i> <i>Begin to know what a function is and how functions work in code.</i> <i>Know what the different variables</i>	

	<i>Use a spreadsheet to model a real life problem</i> <i>Use formulae to calculate area and perimeter of shapes</i> <i>Create formulae that use text variables</i>		<i>Self and peer evaluate.</i>		<i>types are and how they are used differently.</i> <i>Know how to create a string.</i> <i>Know what concatenation is and how it works.</i>	
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	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Year 6	Be Internet Legends (Digital Literacy) <i>Know how to build a positive digital footprint</i> <i>Knows how to form and maintain healthy online relationships</i>	Understanding Binary (Computer Science) 6.8 <i>Examine how whole numbers are used as the basis for representing all types of data in digital systems.</i> <i>Recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems).</i> <i>Know that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.</i>	Spreadsheets with MS Excel (Information Technology) 6.3 and 6.9 <i>Introduce data formulae in Excel for percentages, averages and max and min numbers</i> <i>Demonstrate how the use of Excel can save time and effort when performing calculations</i> <i>Demonstrate how Excel can make complex data clear by manipulating the way it is presented</i> <i>Create a variety of graphs in Excel</i> <i>Apply spreadsheet skills to solving problems.</i>	Quizzing (Information Technology) 6.7 <i>Create a picture-based quiz for young children.</i> <i>Know how to use the question types within a specific quiz software.</i> <i>Explore the grammar quizzes.</i> <i>Make a quiz that requires the player to search a database.</i> <i>Make a quiz to test your teachers or parents.</i>	Coding (Computer Science) 6.1 <i>Design a playable game with a timer and a score.</i> <i>Plan and use selection and variables.</i> <i>Know how the launch command works.</i> <i>Use functions and understand why they are useful.</i> <i>Know how functions are created and called.</i> <i>Use flowcharts to create and debug code.</i> <i>Create a simulation of a room in which devices can be controlled.</i> <i>Know how user input can be used in a program.</i>	Text Adventures (Computer Science) 6.5 <i>Find out what a text adventure is.</i> <i>Use appropriate digital software to plan a story adventure.</i> <i>Make a story-based adventure using appropriate software.</i> <i>Introduce an alternative model for a text adventure which has a less sequential narrative.</i> <i>Use written plans to code a map-based adventure in appropriate.</i>
	Blogging (Information Technology) 6.4	Networks (Computer Science) 6.6				

	<i>Identify the purpose of writing a blog.</i> <i>Identify the features of a successful blog.</i> <i>Plan the theme and content for a blog.</i> <i>Know how to write a blog and a blog post.</i> <i>Consider the effect upon the audience of changing the visual properties of the blog.</i> <i>Know how to contribute to an existing blog.</i> <i>Know how and why blog posts are approved by the teacher.</i> <i>Know the importance of commenting on blogs.</i>	<i>Know what the Internet consists of.</i> <i>Know what a LAN and a WAN are.</i> <i>Know how the Internet is accessed in school.</i> <i>Know about the age of the Internet.</i> <i>Think about what the future might hold with regards to future technology.</i>			<i>Know how appropriate software can be used to make a text-adventure game.</i>	
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