

"Giving children the keys to unlock their future"



St Peter's C of E Academy – Computing

When teaching computing, we prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for an ever-changing digital world. Knowledge and understanding of ICT is of increasing importance for our children's future both at home and for employment. Our Computing curriculum focuses on a progression of skills in digital literacy, computer science, information technology and online safety to ensure that the children become competent in safely using, as well as understanding, technology.

To ensure a broad range of skills and understanding, Computing is taught across three main strands which are revisited repeatedly through a range of themes during the children's time in school to ensure their learning is embedded and skills are successfully developed:

- Digital literacy - developing practical skills in the safe use of ICT and the ability to apply these skills to solving relevant, worthwhile problems for example understanding safe use of the internet, networks and email.
- Computer science - understanding and applying the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Information technology - children learn to use and express themselves and develop their ideas through ICT, for example writing and presenting as well as exploring art and design using multimedia.

We also teach a progression of Computing vocabulary to support children in their understanding.

We provide cross-curricular opportunities for children to apply their Computing knowledge and skills. Online safety is taught where it links to particular subjects as well as being taught as a unit each year. Online safety procedures are communicated with all staff and parents.

Our curriculum and skills progression is shown below:

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	This is based on the Teach Computing scheme of work					
Reception	All about Me To take photos with a tablet. To play games on the internet To use toy tills and remotes To listen to music		Rhyme Time To use digital devices safely To access Mathseeds on the internet To use a mouse (left click, double click, click and drag) To know about e-safety To use a keyboard (upper case keys, shift, space, return)		Allowing children the opportunity to explore technology in a independent and often child-led way, means that not only will they develop a familiarity with equipment and vocabulary but they will have a strong start in KS1 Computing. (More work required.)	
Year 1	Computing systems and networks To know the main parts of a computer To use the main parts of a computer To use a computer safely and responsibly	Data and information To group objects in different ways To describe objects and groups To group objects to answer questions	Digital Painting To use drawing tools to paint digitally To make careful choices and reflect on drawing To compare computer art and painting	Programming To move a robot To plan routes for a robot	Digital writing To add and remove text To use the toolbar for editing and changing To compare typing and writing	Explaining choices To be able to choose tools to choose To evaluate changes that have been made To use 'undo' feature
Year 2	Computing systems and networks To know what IT in our environment To know the benefits of different forms of IT To use IT safely	Data and information To create pictograms To count and compare attributes To present information in different ways.	Digital Photography To take a digital photograph To know what makes a good photograph To decide how to take the best photograph	Programming algorithms To give instructions to a robot To make predictions about sequences To design and debug algorithms	Digital music To know how music makes us feel To create digital music To review and edit digital music	Programming To use and predict what a program will do. To design and create a program To evaluate and improve designs
2023-24						
Year 3 & 4	Computer systems and networks-the internet To know what the internet is To know about websites To understand that not all websites are reliable	Creating media-audio To be able to record sounds To edit digital recordings To evaluate podcasts	Data and information-data logging To know why you need to record data over time To analyse data To plan and collect data	Creating media-Photo editing To modify digital images To know about fake images To evaluate and review images	Programming-repetition in shapes To use patterns and repeats To use loops To debug programs	Programming-repetition in games To use loops within programs To design a game To create a game with loops
Year 5 & 6	Computing systems and networks-communication	Creating media-video To know filming techniques	Data and information-flat file databases To use a database	Creating media-3D modelling To modify 3D objects	Programming-selection in quizzes	Programming-sensing movement

	<p>To know about internet addresses and data packets</p> <p>To work with others through communication</p> <p>To know how to communicate responsibly</p>	<p>To plan a video</p> <p>To edit a video</p>	<p>To compare data</p> <p>To know how databases are used in real life</p>	<p>To plan a 3D model</p> <p>To make a 3D model based on a design</p>	<p>To explore conditions and select outcomes</p> <p>To plan a quiz</p> <p>To test a program with others</p>	<p>To know how computers sense inputs</p> <p>To design a project using sensors</p> <p>To make a project using sensors</p>
2024-25						
Year 3 & 4	<p>Computing systems and networks-connecting computers</p> <p>To know parts of a digital device</p> <p>To know how digital devices help us</p> <p>To know how computers are connected</p>	<p>Creating media-stop frame animation</p> <p>To know different simple animation techniques</p> <p>To create storyboards</p> <p>To create stop frame animations</p>	<p>Data and information-branching databases</p> <p>To use a branching database</p> <p>To create a branching database</p> <p>To know uses of branching databases</p>	<p>Creating media-desktop publishing</p> <p>To know that words and pictures communicate information</p> <p>To add and edit content</p> <p>To choose suitable layouts for a given purpose</p>	<p>Programming-sequencing sounds</p> <p>To program sprites</p> <p>To create sequences</p> <p>To combine motion and sounds</p>	<p>Programming-events and actions</p> <p>I know how to move sprites</p> <p>To debug programs</p> <p>To evaluate projects</p>
Year 5 & 6	<p>Computing systems and networks-systems and searching</p> <p>To understand computer systems and us</p> <p>To know how technology has changed across time.</p> <p>To search effectively</p> <p>To understand how search engines work</p>	<p>Data and information-spreadsheets</p> <p>To know what a spreadsheet is</p> <p>To use formulae</p> <p>To present data</p>	<p>Creating media-webpage creation</p> <p>To know what makes a good website</p> <p>To design a good website</p> <p>To make links to websites responsibly</p>	<p>Creating media-vector graphics</p> <p>To use drawing tools to create images</p> <p>To use layers and objects</p> <p>To manipulate objects</p>	<p>Programming</p> <p>To combine components with conditions</p> <p>To draw designs</p> <p>To write and test algorithms</p>	<p>Programming-variables</p> <p>To understand variables in a game</p> <p>To improve a game</p> <p>To design a game</p>