



St. George's CE Primary School

Computing Curriculum Long Term Plan – 2 year cycle (following *Teach Computing*)

NB: Online safety is taught, modelled and promoted throughout the academic year by all staff

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Observe technology around us such as automatic doors and cashpoints Explore a range of real world technology Explore a range of play technology Know how to operate simple equipment and toys Show skill in making toys work by pressing parts or lifting flaps to achieve an effect		Watch the use of and operate the photocopier Children take photographs, record voices and capture their learning Use ICT hardware to interact with age appropriate computer software Complete a simple program on a computer		Retrieve information from a computer device using QR codes, child-friendly search engines and image based hyperlinks Choose the right app for the task in hand	Use a website
Online safety objectives weaved throughout the computing curriculum: <ul style="list-style-type: none"> Using the Smartie the Penguin PowerPoint Know that you should ask for help when you come across something you're not sure of. Know that not everything you see on the internet is true. Know that you should tell an adult if anything online worries you. 						
	Computing Systems and Networks	Creating Media	Programming A	Data and Information	Creating Media	Programming B
Year 1	Technology around us Recognising technology in school and using it responsibly	Digital painting Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally tuxpaint on iPads	Moving a robot Writing short algorithms and programs for floor robots, and predicting program outcomes.	Grouping data Exploring object labels, then using them to sort and group objects by properties.	Digital writing Using a computer to create and format text, before comparing to writing non-digitally.	Programming animations Designing and programming the movement of a character on screen to tell stories
Online safety objectives weaved throughout the computing curriculum: <ul style="list-style-type: none"> Use passwords to access online resources and keep them private Show awareness that information online can be seen by others Know there are rules to keep them safe when accessing content online Know there are rules concerning staying safe online Begin to understand they need to use a password to access different things on the computer, tablet or online Knowledge organiser: KS1						
Year 2	Information technology around us Identifying IT and how its responsible use improves our world in school and beyond.	Digital photography Capturing and changing digital photographs for different purposes Use filters on Gallery View	Robot algorithms Creating and debugging programs, and using logical reasoning to make predictions	Pictograms Collecting data in tally charts and using attributes to organise and present data on a computer.	Making music Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	Programming quizzes Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.
Online safety objectives weaved throughout the computing curriculum: <ul style="list-style-type: none"> Be aware of the school rules for accessing the internet Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies Use passwords to access resources and know why they need to keep them private Know the school e-safety rules and know how to respond to inappropriate content Show an awareness that information including images online can be shared at home, school and worldwide Know private information should never be given out on the internet Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies Know why there are e-safety rules and that these apply to all connected devices Be familiar with the school's online safety rules Understand they might use different passwords to access different systems (school network, home computer, online resources) and they should keep them private Knowledge organiser: KS1						

Year 3	Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks	Stop-frame animation Capturing and editing digital still images to produce a stop-frame animation that tells a story.	Sequencing sounds Creating sequences in a block-based programming language to make music.	Branching databases Building and using branching databases to group objects using yes/no questions.	Desktop publishing Creating documents by modifying text, images, and page layouts for a specified purpose	Events and actions in programs Writing algorithms and programs that use a range of events to trigger sequences of actions.
Online safety objectives weaved throughout the computing curriculum: <ul style="list-style-type: none"> • Know what to do when inappropriate material appears on the screen • Explain that passwords are used to log in to resources on the web and why these should be kept private • Understand there is an accepted behaviour when communicating in the real or virtual world • Be knowledgeable about the school online safety rules • Understand that images can be shared and viewed online and consider the privacy of themselves and others • Know data is collected and used in the world around them, and understand the need for keeping personal data safe Knowledge Organiser: LKS2						
Year 4	The internet Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	Audio editing Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	Repetition in shapes Using a text-based programming language to explore count-controlled loops when drawing shapes.	Data logging Recognising how and why data is collected over time, before using data loggers to carry out an investigation. Data Loggers or Audrino Science	Photo editing Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	Repetition in games Using a block-based programming language to explore count-controlled and infinite loops when creating a game.
Online safety objectives weaved throughout the computing curriculum: <ul style="list-style-type: none"> • Know what to do when inappropriate material appears on the screen and think about the implications at home • Demonstrate an understanding of the rules and possible implications of e-safety when collaborating on projects • Consolidate the school's online safety rules • Discuss privacy in terms of using and sharing digital images • Know that personal data is stored on systems; understand the need to be accurate and keep it private Knowledge Organiser: LKS2						
Year 5	Sharing information Identifying and exploring how information is shared between digital systems.	Video editing Planning, capturing, and editing video to produce a short film.	Selection in physical computing Exploring conditions and selection using a programmable microcontroller or online coding builder. Y5 will use scratch to create a space rocket racing game – using 'if' and 'when' conditions. Use the class login to scratch to save each game. Other possible resources: BBC Micro:bit programmable resources	Flat-file databases Using a database to order data and create charts to answer questions.	Vector drawing Creating images in a drawing program by using layers and groups of objects	Selection in quizzes Exploring selection in programming to design and code an interactive quiz.

<p>Online safety objectives weaved throughout the computing curriculum:</p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly • Be knowledgeable about the school's online safety policy and reflect on its relevance to access to home and mobile devices • Understand ways of preventing and responding to cyberbullying • Understand the importance of privacy when online and that certain information should not be publicly available • Know that there are risks when accessing resources on the Internet • Understand their responsibility towards copyright issues • Understand that personal data is collected by others for a variety of purposes and it needs to be accurate and secure <p>Knowledge Organiser: UKS2</p>						
<p>Year 6</p>	<p>Internet communication Recognising how the WWW can be used to communicate and be searched to find information.</p>	<p>Webpage creation Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.</p>	<p>Variables in games Exploring variables when designing and coding a game</p>	<p>Introduction to spreadsheets Answering questions by using spreadsheets to organise and calculate data.</p>	<p>3D modelling Planning, developing, and evaluating 3D computer models of physical objects.</p>	<p>Sensing Designing and coding a project that captures inputs from a physical device. Other possible resources: BBC Micro:bit programmable resources</p>
<p>E-safety objectives weaved throughout the computing curriculum:</p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly • Understand the responsibility of publishing on the Internet in terms of personal safety, appropriateness and relevance of content • Follow the school's online safety policy and help younger pupils to do so. • Be aware of the online safety rules when working from home and on mobile devices • Understand the need for a positive online profile in order to be a responsible member of a connected community • Be confident in all aspects of the school's online safety rules <p>Knowledge Organiser: UKS2</p>						