

Curriculum Intent

At St. Luke's, we understand the immense value that technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. Our aims are to fulfil the requirements of the National Curriculum for Computing whilst also providing enhanced collaborative learning opportunities, engagement in rich content and supporting pupil's conceptual understanding of new concepts which support the needs of all our pupils. "A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world...core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content." National Curriculum. Our Computing curriculum and teaching has links to the wider curriculum and our aim is to provide a broad and balanced curriculum whilst ensuring that pupils become digitally literate and digitally resilient. Technology is ever evolving, and we aim to develop pupils who can use and express themselves, develop their ideas through, information and communication technology at a suitable level for the future workplace and as active participants in a digital world.

Curriculum Implementation

To ensure high standards of teaching and learning in computing, we implement a curriculum that is progressive throughout the whole school. Our implementation of the computing curriculum is in line with 2014 Primary National Curriculum requirements for KS1 and KS2. We use and follow the National Centre for Computing Education which contains the scheme of work from year 1-6 ensuring consistency and progression throughout the school. The NCCE scheme of work enables clear coverage of the computing curriculum whilst also providing support and CPD for less confident teachers to deliver lessons. The lessons are broken down into weekly units. Units are practical and engaging and allow computing lessons to be hands on. Units cover a broad range of computing components such as coding, spreadsheets, Internet and Email, Databases, Communication networks, touch typing, animation and online safety. Teachers ensure computing capability is also achieved through core and foundation subjects and where appropriate and necessary computing should be incorporated into work for all subjects where possible. Computing teaching is practical and engaging and a variety of teaching approaches and activities are provided based on teacher judgement and pupil ability. Teachers and pupils are aware of the importance of health and safety and pupils are always supervised when using technology and accessing the internet. Computing and safeguarding go hand in hand and we provide a huge focus on internet safety inside and outside of the classroom.

Curriculum Impact

Our Computing Curriculum is high quality, well thought out and is planned to demonstrate progression and build on and embed current skills. Children become increasingly proficient on school equipment and have good, transferable knowledge and understanding of online safety which is transferred into their own lives.. Pupil voice, subject monitoring and lesson observations all ensure a positive impact of computing as a subject.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Computing systems and networks – Technology around us <ul style="list-style-type: none"> - Technology in our classroom - Using technology - Developing mouse skills - Using a computer keyboard - Developing keyboard skills - Using a computer responsibly 	Creating media – Digital painting <ul style="list-style-type: none"> - How can we paint using computers? - Using shape and lines - Making careful choices - Why did I choose that? - Painting all by myself - Comparing computer art and painting 	Programming A – Moving a robot <ul style="list-style-type: none"> - Buttons - Directions - Forwards and backwards - Four directions - Getting there - Routes 	Data and information – Grouping data <ul style="list-style-type: none"> - Label and match - Group and count - Describe an object - Making different groups - Comparing groups - Answering questions 	Creating media – Digital writing <ul style="list-style-type: none"> - Exploring the keyboard - Adding and removing text - Exploring the toolbar - Making changes to text - Explaining my choices - Pencil or keyboard 	Programming B - Programming animations <ul style="list-style-type: none"> - Comparing tools - Joining blocks - Make a change - Adding sprites - Project design - Following my design
Year 2	Computing systems and networks – IT around us <ul style="list-style-type: none"> - What is IT? - IT in school - IT in the world - The benefits of IT - Using IT safely - Using IT in different ways 	Creating media – Digital photography <ul style="list-style-type: none"> - Taking photographs - Landscape or portrait? - What makes a good photograph? - Lighting - Effects - Is it real? 	Programming A – Robot algorithms <ul style="list-style-type: none"> - Giving instructions - Same bit different - Making predictions - Mats and routes - Algorithm design - Debugging 	Data and information – Pictograms <ul style="list-style-type: none"> - Counting and comparing - Enter the data - creating pictograms - What is an attribute? - Comparing people - Presenting information 	Creating media – Digital music <ul style="list-style-type: none"> - How music makes us feel - Rhythms and patterns - How music can be used - Notes and tempo - Creating digital music - Reviewing and editing music 	Programming B - programming quizzes <ul style="list-style-type: none"> - ScratchJr recap - Outcomes - Using a design - Changing a design - Designing and creating a program - Evaluating
Year 3	Computing systems and networks – Connecting computers <ul style="list-style-type: none"> - How does a digital device work? - What parts make up a digital device? - How do digital devices help us? - How am I connected? - How are computers connected? - What does our school network look like? 	Creating media – Stop-frame animation <ul style="list-style-type: none"> - Can a picture move? - Frame by frame - What's the story? - Picture perfect - Evaluate and make it great! - Lights, camera, action! 	Programming A – Sequencing sounds <ul style="list-style-type: none"> - Introduction to Scratch - Programming sprites - Sequences - Ordering commands - Looking good - Making an instrument 	Data and information – Branching databases <ul style="list-style-type: none"> - Yes or no questions - Making groups - Creating a branching database - Structuring a branching database - Using a branching database - Two ways of presenting information 	Creating media – Desktop publishing <ul style="list-style-type: none"> - Words and pictures - Can you edit? - Great template! - Becoming a designer - Lay it out - Why desktop publishing? 	Programming B -Events and actions in programs <ul style="list-style-type: none"> - Moving a sprite - Maze movement - Drawing lines - Adding features - Debugging movement - Making a project
Year 4	Computing systems and networks – The Internet <ul style="list-style-type: none"> - Connecting networks - What is the internet made of? - Sharing information 	Creating media – Audio production <ul style="list-style-type: none"> - Digital recording - Editing audio - Planning a podcast - Creating a podcast 	Programming A – Repetition in shapes <ul style="list-style-type: none"> - Programming a screen turtle - Programming letters - Patterns and repeats - Using loops to create shapes 	Data and information – Data logging <ul style="list-style-type: none"> - Answering questions - Data collection - Logging - Analysing data 	Creating media – Photo editing <ul style="list-style-type: none"> - Changing digital images - Recolouring - Cloning - Combining 	Programming B -Events Repetition in games <ul style="list-style-type: none"> - Using loops to create shapes - Different loops - Animate your name

	<ul style="list-style-type: none"> - What is a website? - Who owns the web? - Can I believe what I read? 	<ul style="list-style-type: none"> - Behind the scenes - Evaluating podcasts 	<ul style="list-style-type: none"> - Breaking things down - Creating a program 	<ul style="list-style-type: none"> - Data for answers - Answering my question 	<ul style="list-style-type: none"> - Creating - Evaluating 	<ul style="list-style-type: none"> - Modifying a game - Designing a game - Creating our games 	
Year 5	<p>Computing systems and networks – systems and searching</p> <ul style="list-style-type: none"> - Systems - Computer systems and us - Searching the web - Selecting search results - How search results are ranked - How are searches influenced 	<p>Creating media – Video production</p> <ul style="list-style-type: none"> - What is video? - Filming techniques - Using a storyboard - Planning a video - Importing and editing video - Video evaluation 	<p>Programming A – Selection in physical computing</p> <ul style="list-style-type: none"> - Connecting Crumbles - Combining output components - Controlling with conditions - Starting with selection - Drawing designs - Writing and testing algorithms 	<p>Data and information – Flat-file databases</p> <ul style="list-style-type: none"> - Creating a paper-based database - Computer databases - Using a database - Using search tools - Comparing data visually - Databases in real life 	<p>Creating media – Introduction to vector graphics</p> <ul style="list-style-type: none"> - The drawing tool - Creating images - Making effective drawings - Layers and objects - Manipulating objects - Becoming a graphic designer 	<p>Programming B – Selection in quizzes</p> <ul style="list-style-type: none"> - Exploring conditions - Selecting outcomes - Asking questions - Planning a quiz - Testing a quiz - Evaluating a quiz 	
Year 6	<p>Computing systems and networks – Communication and collaboration</p> <ul style="list-style-type: none"> - Internet addresses - Data packets - Working together - Shared working - How we communicate - Communicating responsibly 	<p>Creating media – Web page creation</p> <ul style="list-style-type: none"> - What makes a good website - Becoming a web designer - Copyright or CopyWRONG? - How does it look? - Follow the breadcrumbs - Think before you link! 	<p>Programming A – Variables in games</p> <ul style="list-style-type: none"> - Introducing variables - Variables in programming - Improving a game - Becoming a game designer - Design to code - Improving and sharing 	<p>Data and information – Introduction to Spreadsheets</p> <ul style="list-style-type: none"> - Collecting data - Formatting a spreadsheet - What's the formula? - Calculate and duplicate - Event planning - Presenting data 	<p>Creating media – 3D modelling</p> <ul style="list-style-type: none"> - Introduction to 3D modelling - Modifying 3D objects - Make your own name badge - Making a desk tidy - Planning a 3D model - Make your own 3D model 	<p>Programming B – Sensing movement</p> <ul style="list-style-type: none"> - The micro:bit - Go with the flow - Sensing inputs - Finding your way - Designing a step counter - Making a step counter 	<p>Using the microbit for primary to secondary transition</p> <ul style="list-style-type: none"> - Creating a microbit counter - Creating a microbit timer