



Shirley Schools' Computing Progression

At Shirley Infant School we strive to build a community of pupils who are competent, confident users of ICT and are knowledgeable about emerging technologies. Children become aware of their responsibility when using technology as well as exploring the risks through fictional stories. As a result, they are given the tools they need to develop their resilience and know what to do to keep themselves safe. We understand the need to equip all learners with the experiences and skills of ICT to prepare them for a rapidly changing technological world. Children will have gained key knowledge and skills in the three main areas of the computing curriculum: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully).

In Computing at Shirley Junior School, pupils are being equipped for life in a world where technology is changing the lives of everyone. We intend for children to leave our school being able to embrace and utilise new technology in a socially responsible and safe way in order to flourish. More than that though, we want our children, through their computing lessons, to develop their use of all of our school's learning values, including, but not limited to, problem solving, reflection and curiosity and imagination. Children are exposed to a wide range of software that allows them to develop a proficiency in being autonomous, independent users of computing technologies. These are embedded into our wider curriculum and used throughout the school to enhance learning in all subject areas as part of our embedded creative curriculum. Children have many opportunities to use logical reasoning to design, write and debug programmes; applying their developing skills of sequencing, selection and repetition. Safety online is a topic that is discussed regularly throughout the year so that our pupils have the tools of discernment and the power of knowledge to resolve the inevitable issues they will face in the online world.

Skills	R	1	2	3	4	5	6
Computer Science (Computational thinking and Programming)	Use a variety of electronic toys in play situations using basic directional language. Explore toys that simulate control devices e.g. scanner, microwave, cash tills. I can program a simple floor robot to carry out a short sequence of steps	I can move a programmable toy in different directions by giving and following instructions. I can combine commands to follow a route. I can explore outcomes when instructions are given in different orders. I can explain what an algorithm is. I can describe and write algorithms to complete specific tasks.	I can plan out and enter a sequence of commands to carry out specific tasks. I can reorder a sequence of instructions and correct errors in programs (debug) I can explain what a program is. I can predict the outcome of a program.	I can use sequence to create an animation.	I can use and adjust variables to store information.	I can control objects' properties using numerical inputs.	I can use more complex variables to store information.
				I can use conditional selection to control objects within an animation.	I can create repeating selections using loops.	I can apply random selections to simulations.	I can use code to detect the parameters of other objects in a simulation.
Information Technology (Multimedia)	I can use multimedia equipment (e.g. digital camera, video camera) to capture still and moving images. Explore ways of making and listening to sounds using simple programs and devices.	I can paint with different colours using undo or eraser to correct mistakes I can use different tools such as brush, pen, line, shape and fill, I can use a digital still camera to take a picture I understand the need to frame the image and keep the camera still. I can record an audio recording I can play back an audio recording	I can discuss the quality of my images and make decisions (e.g. delete a blurred image) I can use a photograph within a simple document. I can capture video. I understand the need to frame the image and move the camera carefully, I can play back a video recording.	I can use images I have taken to match real locations on a map.	I can use images I have taken to a map to present to an different audience.	I can add additional data alongside images on the map.	I can add more complex data to the map.
					I can select appropriate images from the internet for a video	I can take my own photos to add to a video.	I can critique and edit a video I have created.
						I can use computer aided design (CAD) to create a design initially drafted on paper	I can use CAD to create 3D representations of designs to be viewed from various angles and focusing on specific intricate details.
Digital Literacy (Communication)	Develop mouse control. Use a paint program to make marks, using simple tools, to communicate their ideas. Use different forms of electronic communication in free play. Begin to use a keyboard to produce text on screen, developing familiarity with letters, numbers, backspace, arrow keys and space bar.	I can use letters, basic punctuation, spacebar and enter key to type words and sentences quickly. I can use the backspace to make corrections. I can use the shift key for punctuation. I can save my work.	I can edit and improve my work by changing, adding or removing words. I can change the font size, colour and style to change my work.	I can use a given programme to record data I have collected.	I can use a given programme to interpret data I have collected.	I can select appropriate programmes to record and interpret data in various forms including charts and graphs, adding explanation within the programme.	I can select appropriate programmes to record and interpret data, presenting it different programmes.
				I can use digital technologies to communicate ideas in the context of musical composition.			I can use digital technologies to create, edit and communicate creative ideas in the context of musical composition.



<p>Digital Literacy (Using the WWW)</p>	<p>With support, use appropriate websites or CD ROMs to locate small amounts of information/images</p>	<p>I can explore a website using buttons, menus and hyperlinks I can use the 'back' button I can read words, look at pictures and watch videos on a website to find information</p>	<p>I can find out facts by navigating websites I know each website has a unique address I can navigate a website via favourites and typing in address I know not all information found on the internet will be accurate or useful I can use a search engine to find facts using key word search</p>	<p>I can find more specific facts for given topics by using fewer, more specific key words.</p>	<p>I can use web search to find a range of information to compare and ensure it agrees.</p>	<p>I can use BOOLEAN searches to get more specific results.</p>	<p>I can use the idea of ranked searches to find appropriate information - not being reliant on the first searches that appear.</p>			
<p>Skills vocabulary</p>	<p>Left Right Forward Back Mouse Keyboard Letters Numbers</p>	<p>Camera Moving image Still image Tools Retrieve Save Caption</p>	<p>Algorithm Instructions Sequence Program Input Code Tools Retrieve Save Caption</p>	<p>Image Capture Frame Play Record Spacebar Backspace Insert Enter key</p>	<p>Algorithm Instructions Precise Debug Program Research Reliable sources Tabs Website</p>	<p>Capture Upload Quality image Insert Recording Playback Edit Improve</p>	<p>Sequence If statement Condition Selection key words facts</p>	<p>Variable Repeat Loop Nested compare reliable</p>	<p>Properties Random Simulation boolean if/and</p>	<p>Parameters Detect Variables ranked commercial</p>