



Manland Primary School-Long Term Curriculum Plan

Overview of Skills – Computing



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Know how to operate simple equipment Show an interest in technological toys Make toys work by pressing or lifting parts Program toys Talk about how to stay safe on the computer Use tools on the interactive whiteboard Know that information can be retrieved from computers		Use ICT hardware to interact with age appropriate computer software Recognise that a range of technology is used in homes and schools Select and use technology for particular purposes Complete a simple program on a computer		Find out about and use a range of everyday technology Talk about how to stay safe on the computer Type own name Use computer tools with increased control and accuracy Select appropriate applications that support an identified need	
Year 1	We are celebrating (Creating a card digitally) Develop basic keyboard skills, through typing and formatting text develop basic mouse skills use the web to find and select images develop skills in storing and retrieving files develop skills in combining text and images discuss their work and think about whether it could be improved.	We are story tellers (Producing a talking book) Use sound recording equipment to record sounds develop skills in saving and storing sounds on the computer develop collaboration skills as they work together in a group understand how a talking book differs from a paper-based book talk about and reflect on their use of ICT share recordings with an audience.	We are painters (Illustrating an eBook) Use the web safely to find ideas for an illustration select and use appropriate painting tools to create and change images on the computer understand how this use of ICT differs from using paint and paper create an illustration for a particular purpose know how to save, retrieve and change their work reflect on their work and act on feedback received.	We are T.V. chefs (Filming the steps of a recipe) Break down a process into simple, clear steps, as in an algorithm Use different features of a video camera Use a video camera to capture moving images develop collaboration skills discuss their work and think about how it could be improved.	We are treasure hunters (Using programmable toys) Understand that a programmable toy can be controlled by inputting a sequence of instructions Develop and record sequences of instructions as an algorithm Program the toy to follow their algorithm Debug their programs Predict how their programs will work.	We are collectors (Finding images using the web) Find and use pictures on the web, know what to do if they encounter pictures that cause concern Group images on the basis of a binary (yes/no) question Organise images into more than two groups according to clear rules Sort (order) images according to some criteria Ask and answer binary (yes/no) questions about their images.
Year 2	Technology in our lives (email) Identify why we use technology in the classroom, at home and in the community. Start to understand that other people have created the information we use.		Programming Give instructions to a friend and physically follow their instructions. Say the order needed to do things to make something happen.		Multimedia Use technology to organise and present ideas in different ways. Use an online tool that will help to share ideas with other people.	



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	<p>Identify the benefits of using technology including creating and communicating.</p> <p>Multimedia Use the keyboard to add, delete and space text for others to read. Talk about an online tool that will help to share ideas with other people. Save and open files on devices used.</p>	<p>Talk about instructions as algorithms. Program a floor robot or software to do a particular task. Look at other people's program and predict what will happen. Use programming software to make objects move. Watch a program execute and spot where it goes wrong and unbug it.</p>	<p>Save and open files on the devices used.</p> <p>Handling Data Talk about the different ways technology is used to collect information, including a camera. Make and save a chart or graph using data collected. Talk about the data that is shown on the graph. Start to understand a branching database. Say what kind of information could be used to help to investigate a question.</p>			
Year 3	<p>Animations Control motion by specifying the number of steps to travel, direction and turn.</p> <p>Specify user inputs (such as clicks) to control events.</p> <p>Set the appearance of objects and create sequences of changes.</p>	<p>Bug fixers Specify conditions to trigger events.</p> <p>Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions).</p>	<p>Film makers Select sounds and control when they are heard, their duration and volume.</p> <p>Add text strings, show and hide objects and change the features of an object.</p>	<p>Opinion pollsters Use simple databases to record information in areas across the curriculum.</p>	<p>Presenters Contribute to blogs that are moderated by teachers.</p>	<p>Communicators Use a range of applications and devices in order to communicate ideas, work and messages. Participate in class social media accounts.</p> <p>Understand online risks and the age rules for sites</p>
Year 4	<p>Programming Simple Games: Use logical reasoning to detect and correct errors in algorithms</p>	<p>Musical composition using computing software: Work with various forms of input and output Use sequence in programs</p>	<p>Creating a multimedia weather report: Collect, analyse, evaluate and present information Collect, analyse, evaluate and present data Select use and combine software</p>	<p>Designing an Iron Man: Designing content and systems Control or simulate physical systems</p>	<p>Programing using Scratch Write programs that accomplish specific goals Design programs that accomplish specific goals Debug programs that accomplish specific goals</p>	<p>Using HTML to build simple web pages Understand computer networks, including the internet. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>
Year 5	We are game developers	We are cryptographers	We are artists	We are web developers	We are bloggers	We are architects



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	<p>Design and write programs</p> <p>Use sequence selection and repetition</p> <p>Design a range of programs, systems and content that accomplish given goals</p>	<p>Use logical reasoning to explain simple algorithms.</p> <p>Use technology safely, respectfully and responsibly</p> <p>Identify a range of ways to report concerns about content</p>	<p>Use sequence, selection and repetition in programmes</p> <p>Select, use and combine a variety of software to create a range of programmes</p> <p>Develop links between geometry and art</p>	<p>Develop research skills to decide what information is appropriate</p> <p>Question the plausibility and quality of information</p> <p>Develop understanding of E-safety and responsible use of technology</p>	<p>Become familiar with blogs as a medium and a genre</p> <p>Create a sequence of blog posts on a theme</p> <p>Incorporate additional media</p> <p>Comment on the posts of others</p>	<p>Understand the work of architects, designers and engineers working in 3D</p> <p>Develop familiarity with a simple CAD tool</p> <p>Explore and experiment with a 3D virtual environment</p>
Year 6	<p>Quiz Codes</p> <p>Set IF conditions for movements.</p> <p>Specify types of rotation giving the number of degrees.</p> <p>Use IF THEN ELSE conditions to control events or objects.</p> <p>Use lists to create a set of variables.</p> <p>Use the Boolean operators <code>() < ()</code> <code>() = () ></code></p> <p><code>() and()</code> <code>() or()</code> <code>Not()</code> to define conditions.</p> <p>Use the Reporter operators <code>() + ()</code> <code>() - ()</code> <code>() * ()</code> <code>() / ()</code> to perform calculations.</p> <p>Pick <code>Random ()</code> to <code>() Join ()</code> <code>() Letter ()</code> of <code>() Length of ()</code> <code>() Mod ()</code></p>	<p>Digital Design</p> <p>Change the position of objects between screen layers (send to back, bring to front).</p> <p>Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation.</p> <p>Combine the use of pens with movement to create interesting effects.</p> <p>Set events to control other events by 'broadcasting' information as a trigger.</p>	<p>Wonderful Web Pages</p> <p>Collaborate with others online on sites approved and moderated by teachers.</p> <p>Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems.</p> <p>Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder.</p> <p>Understand how simple networks are set up and used.</p>	<p>Creative CSS</p> <p>Understand the effect of online comments and show responsibility and sensitivity when online.</p> <p>Choose the most suitable applications and devices for the purposes of communication.</p> <p>Use many of the advanced features in order to create high quality, professional or efficient communications.</p> <p>Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.</p>	<p>Mastering Micro bit</p> <p>Use IF THEN ELSE conditions to control events or objects.</p> <p>Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions.</p> <p>Use lists to create a set of variables.</p> <p>Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.</p>	



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