



Moorland Primary School – Progression of Skills in Computing

SKILLS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	<p>Match a command to an outcome and run a command on a device.</p> <p>Give directions and follow instructions</p> <p>Predict the outcome of a sequence of up to 4 commands</p> <p>Choose the order of commands in a sequence & explain what the program should do.</p> <p>Plan and use two programs to get to the same place.</p> <p>Use a start block, find commands to move a sprite, run a program</p> <p>Find blocks that have numbers and say what happens when the value is changed</p> <p>Delete a sprite and show that a project can include more than one</p> <p>Create an algorithm for each sprite and decide how it will move</p> <p>Test programs and use sprites that match designs</p>	<p>Explain what happens when the order of instructions is changed.</p> <p>Logically reason the outcome of a program.</p> <p>Explain design choices and identify different routes around a mat.</p> <p>Design an algorithm and explain what it should achieve.</p> <p>Create and debug a program that has been written.</p> <p>Record data, represent a tally as a total and compare totals in a tally chart.</p> <p>Enter and view data on a computer and explain what it shows.</p> <p>Collect data, create pictograms and draw conclusions from it.</p> <p>Identify the start & outcome of a sequence of commands.</p> <p>Choose backgrounds & characters for a design.</p> <p>Create a program using own choice of images</p> <p>Improve project by adding features & debugging</p>	<p>Identify and explain objects in Scratch.</p> <p>Create a program following a design to control a sprite by commands.</p> <p>Start a program in different ways creating a correct sequence of connected commands.</p> <p>Make design choices to decide the actions for the sprite and the sequence of commands.</p> <p>Implement an algorithm as code and name the objects needed.</p> <p>Demonstrate which keys to use for actions and explain choices.</p> <p>Consider real world when making design choices.</p> <p>Identify additional features and choose suitable keys to turn them on.</p> <p>Modify a program using a design and match code to an outcome.</p> <p>Design, create and evaluate a maze-based challenge</p>	<p>Create a code snippet for a given purpose by typing commands.</p> <p>Write and test an algorithm to produce a given outcome.</p> <p>Identify everyday tasks that include repetition & use a count-controlled loop.</p> <p>Identify the effect of changing the number of times a task is repeated and predict the outcomes of a program containing a count-controlled loop. (& in Programming B – Repetition in games)</p> <p>Identify ‘chunks’ of actions and use a procedure in a program.</p> <p>Design and develop a program that includes count-controlled loops.</p> <p>Identify data that can be gathered over time and choose a data set to answer a given question.</p> <p>Identify that data loggers collect data at given points and talk about data that has been captured.</p> <p>Choose when to use a count-controlled & an infinite loop.</p> <p>Choose which action will be repeated and explain the outcome of the repeated action.</p> <p>Develop a design and evaluate the use of repetition in the project.</p>	<p>Create a simple circuit and connect it to a microcontroller.</p> <p>Design sequences that use count controlled and conditional loops.</p> <p>Create a project where a condition starts an action and uses selection to produce an intended outcome.</p> <p>Create a database and order, sort and group data cards</p> <p>Group information using a database and choose multiple criteria to answer a given question, outlining how ‘AND’ and ‘OR’ can be used to refine data selection.</p> <p>Identify, modify and recall how conditions are used in a program.</p> <p>Create a program with different outcomes using selection</p> <p>Show that a condition can direct a program flow in 1 of 2 ways</p> <p>Implement then evaluate an algorithm to create the first section of a program.</p>	<p>Identify and explain program variables as a placeholder in memory for a single value.</p> <p>Decide where in a program to change variables and make an event to set a variable.</p> <p>Choose & create artwork & algorithms for a project and test the code that was written before sharing the game with others & identifying how it could be improved.</p> <p>Collect and enter data in a spreadsheet</p> <p>Choose and apply a format for a cell</p> <p>Plan an event through a spreadsheet</p> <p>Transfer program to a controllable device, determine the flow of a program and use a variable to select the flow of a program</p> <p>Explain the importance of the order of conditions & modify a program to achieve a different outcome.</p> <p>Create & test a program based on a designed algorithm and flow.</p>



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Digital Literacy	<p>Identify rules for keeping us safe using technology.</p>	<p>Identify rules for IT and how they keep people safe.</p> <p>Choose a sequence of words that can be enacted as a sequence.</p> <p>Present information on the computer in different ways.</p>	<p>Investigate questions with yes/no answers & create groups of objects separated by one attribute</p> <p>Identify why desktop publishing might be helpful & identify uses in the real world.</p>	<p>Explain that websites and their content are created by people & explain that there are rules to protect content.</p> <p>Explain that not everything on the WWW is true and that some information may not be honest, accurate or legal.</p> <p>Draw conclusions and interpret data that has been collected.</p>	<p>Make web searches, compare results and refine a web search.</p> <p>Explain examples of criteria used to rank results and describe how results can be influenced.</p> <p>Identify and compare different features of a video & recording device.</p> <p>Evaluate videos and share opinions</p> <p>Explain and navigate a flat-file database to compare different views of information.</p> <p>Ask questions, present findings and refine a search.</p>	<p>Identify & compare different ways of communicating over the internet.</p> <p>Recognise that working together can be public or private and the internet enables effective collaboration in different ways.</p> <p>Add, move, view, lift, recolour, resize, duplicate and rotate objects in three dimensions</p> <p>Construct a 3D model, based on a design, and explain how to could be improved</p>



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Information Technology	<p>Locate examples of technology in the classroom & explain that it helps us.</p> <p>Switch on & log into a computer, name the parts.</p> <p>Use a mouse to click & drag, create a picture and open a program.</p> <p>Type name using keyboard, delete letters & save work.</p> <p>Use paint tools to draw a picture</p> <p>Choose appropriate shapes and colours to recreate the work of an artist.</p> <p>Use dots of colour to create a picture in a given style</p> <p>Describe, count, match and group objects.</p> <p>Record how many objects in a group.</p> <p>Answer questions and record and share results</p> <p>Find keys on a keyboard, enter text, use back space & space keys.</p> <p>Identify and use bold, italic, underline & capitals.</p>	<p>Describe and identify examples and uses of computers as part of IT</p> <p>Sort school IT by its use and talk about where IT is found.</p> <p>Demonstrate how IT devices work together.</p> <p>Capture a digital photograph.</p> <p>Explain why a photo looks better in portrait or landscape.</p> <p>Experiment with light sources and tools to achieve a desired effect.</p> <p>Recognise which photographs have been changed.</p> <p>Describe music and identify simple differences in pieces</p> <p>Create a rhythm pattern</p> <p>Use a computer to experiment with pitch and create sounds and musical patterns.</p> <p>Identify that music is a sequence of notes, and create a rhythm for a composed piece</p> <p>Explain how a piece has been changed and review own work</p>	<p>Explain that digital devices accept inputs and produce outputs and that we use digital devices for different activities.</p> <p>Explain how messages are passed through multiple connections.</p> <p>Explain the role of a switch, server and WAP and identify networked devices around me</p> <p>Draw/create a storyboard and sequence of flip book animations</p> <p>Evaluate animations and explain why other media was added.</p> <p>Identify an attribute to separate objects into groups & arrange objects in a tree structure.</p> <p>Create questions to use in a physical branching database that enable objects to be uniquely identified.</p> <p>Identify how text and images are different and how they can be edited.</p> <p>Create a template for a particular purpose & define the term “page orientation”.</p> <p>Paste text and images to create a magazine cover and make changes to content and layout.</p>	<p>Describe and demonstrate how information is shared across the internet as a network or networks.</p> <p>Describe where websites & media are stored, uploaded & accessed and the WWW.</p> <p>Identify and use the input and output devices to record & play sounds.</p> <p>Plan, record and save a project and review the quality of the recording.</p> <p>Arrange multiple sounds to create an effect.</p> <p>Use photo editing software to crop, edit or rotate an image.</p> <p>Experiment with different colour effects and cloning tools.</p> <p>Combine text and images and review against a given criteria.</p>	<p>Describe and explain system features.</p> <p>Capture and review a video.</p> <p>Create, save, edit, store, retrieve and export a recording.</p> <p>Experiment with shape, line & zoom tools to create a detailed vector drawing.</p> <p>Use layering to create an image.</p> <p>Copy by duplicating objects and group or ungroup objects.</p>	<p>Describe how computers use addresses to access websites and that internet devices have addresses.</p> <p>Explain that data is transferred over the internet and networks in packets.</p> <p>Explore and discuss different media used on websites</p> <p>Draw a website layout and suggest media to include.</p> <p>Critically evaluate own webpage and content.</p> <p>Describe and explain navigation paths and make multiple webpages linked by hyperlinks.</p>



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	<p>Select all text, change the font, 'undo' and say what tool is used for these.</p> <p>Compare typing on a computer to writing on paper</p>					
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Early years Computing skills overview



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<i>Development Matters (3-4 year olds)</i>	<i>Development Matters (Reception children)</i>	<i>ELG</i>
		<p><i>Knows how to operate simple equipment, e.g. turns on a CD player and uses remote control.</i></p> <p><i>Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.</i></p> <p><i>Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.</i></p> <p><i>Knows that information can be retrieved from computers.</i></p> <p><i>Completes a simple program on a computer.</i></p> <p><i>Uses ICT hardware to interact with age-appropriate computer software.</i></p>