



Computing Progression of Skills

Computing Systems and Networks *

* Networks are not part of the key stage 1 national curriculum for computing but the title is used as a strand across primary.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
choose a piece of technology to do a job recognise that some technology can be used in different ways identify the main parts of a computer use a mouse in different ways use a keyboard to type use the keyboard to edit text show how to use technology safely	describe some uses of computers identify information technology in school identify information technology beyond school show how to use information technology safely	Identify input and output devices explain that a computer system accepts an input and processes it to produce an output explain how a computer network can be used to share information explain the role of a switch, server and wireless access point in a network Identify network devices	No new skills for this unit, see Concept Progression Map	describe the input and output of a search engine demonstrate that different search terms produce different results evaluate the results of search terms	outline methods of communicating and collaborating using the internet choose methods of internet communication and collaboration for given purposes evaluate different methods of online communication and collaboration decide what you should and should not share online



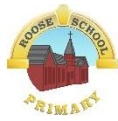
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<i>Creating Media</i>					
<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>	<i>Year 6</i>
<p><i>create a picture using freehand tools</i></p> <p><i>use shape and line tools when precision is needed</i></p> <p><i>use a range of paint colours</i></p> <p><i>use the fill tool to colour an enclosed area</i></p> <p><i>use the undo button to correct a mistake</i></p> <p><i>combine a range of tools to create a piece of artwork</i></p>	<p><i>capture a digital image</i></p> <p><i>take photographs in both landscape and portrait format</i></p> <p><i>view photographs on a digital device</i></p> <p><i>decide which photographs to keep</i></p> <p><i>hold the camera still to take a clear photograph</i></p> <p><i>use zoom to change the composition of a photograph</i></p> <p><i>consider lighting before taking a photograph</i></p> <p><i>use filters to edit the appearance of a photograph</i></p> <p><i>improve a photograph by retaking it</i></p>	<p><i>plan an animation using a storyboard</i></p> <p><i>set up the work area with an awareness of what will be captured</i></p> <p><i>capture an image</i></p> <p><i>use the onion skinning tool to review subject position</i></p> <p><i>move a subject between captures</i></p> <p><i>review captured sequence of frames as an animation</i></p> <p><i>remove frames to improve an animation</i></p> <p><i>add media to enhance an animation</i></p> <p><i>review a completed project</i></p>	<p><i>recognise that digital images can be manipulated</i></p> <p><i>recognise that digital images can be changed for different purposes</i></p> <p><i>choose the most appropriate tool for a particular purpose</i></p> <p><i>consider the impact of changes made on the quality of the image</i></p>	<p><i>use different camera angles</i></p> <p><i>use pan, tilt and zoom</i></p> <p><i>identify features of a video recording device or application</i></p> <p><i>combine filming techniques for a given purpose</i></p> <p><i>determine what scenes will convey your idea</i></p> <p><i>choose to reshoot a scene or improve later through editing</i></p> <p><i>decide what changes I will make when editing</i></p> <p><i>use split, trim and crop to edit a video</i></p>	<p><i>position 3D shapes relative to one another</i></p> <p><i>use digital tools to modify 3D objects</i></p> <p><i>combine objects to create a 3D digital artefact</i></p> <p><i>use digital tools to accurately size 3D objects</i></p> <p><i>construct a 3D model which reflects a real world object</i></p>
<p><i>use letter, number, and Space keys to enter text into a computer</i></p> <p><i>use punctuation and special characters</i></p> <p><i>select text</i></p>	<p><i>experiment with musical patterns on a computer</i></p> <p><i>experiment with different sounds on a computer</i></p>	<p><i>show that page orientation can be changed</i></p> <p><i>add text to a placeholder</i></p>	<p><i>record sound using a computer</i></p> <p><i>play recorded audio</i></p> <p><i>import audio into a project</i></p> <p><i>delete a section of audio</i></p>	<p><i>add an object to a vector drawing</i></p> <p><i>select one object or choices made multiple objects</i></p> <p><i>delete objects</i></p>	<p><i>review an existing website (navigation bars, header)</i></p> <p><i>create a new blank web page</i></p> <p><i>add text to a web page</i></p>



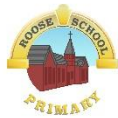
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<p>position the text cursor in a chosen location</p> <p>use the Backspace key to remove text</p> <p>choose options to achieve a desired effect</p> <p>change the appearance of text on a computer</p> <p>use Undo</p>	<p>use a computer to create a musical pattern</p> <p>use a computer to compose a rhythm and a melody on a given theme</p> <p>use a computer to play the same music in different ways (e.g. tempo)</p> <p>evaluate a musical composition created on a computer</p> <p>improve a musical composition created on a computer</p>	<p>organise text and image placeholders in a page layout</p> <p>add and remove images to and from placeholders</p> <p>edit text in a placeholder</p> <p>move resize and rotate images</p> <p>choose fonts and apply effects to text</p> <p>review a document</p>	<p>change the volume of tracks in a project</p>	<p>move objects between the layers of a drawing</p> <p>group and ungroup selected objects</p> <p>duplicate objects using copy and paste</p> <p>modify objects</p> <p>reposition objects</p> <p>combine options to achieve a desired effect</p> <p>create a vector drawing for a given purpose</p>	<p>change the appearance of text</p> <p>set the style of text on a web page</p> <p>embed media in a web page</p> <p>add web pages to a website</p> <p>preview a web page (different screen sizes)</p> <p>insert hyperlinks between pages</p> <p>insert hyperlinks to another site</p>
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Programming					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>enact a given word</p> <p>predict the outcome of a command on a device</p> <p>list which commands can be used on a given device</p> <p>run a command on a floor robot</p> <p>choose a command for a given purpose</p> <p>choose a series of words that can be enacted as a program</p> <p>choose a series of commands that can be run as a program</p> <p>build a sequence of commands in steps</p> <p>combine commands in a program</p> <p>run a program on a device</p>	<p>choose a series of words that can be enacted as a sequence</p> <p>choose a series of instructions that can be run as a program</p> <p>create a program</p> <p>trace a sequence to make a prediction</p> <p>run a program on a device</p> <p>debug a program that I have written</p>	<p>build a sequence of commands</p> <p>combine commands in a program</p> <p>order commands in a program</p> <p>create a sequence of commands to produce a given outcome</p>	<p>list an everyday task as a set of instructions including repetition</p> <p>use an indefinite loop to produce a given outcome</p> <p>use a count-controlled loop to produce a given outcome</p> <p>plan a program that includes appropriate loops to produce a given outcome</p> <p>recognise tools that enable more than one process to be run at the same time (concurrency)</p> <p>create two or more sequences that run at the same time</p>	<p>create a condition-controlled loop</p> <p>use a condition in an 'if...then...' statement to start an action</p> <p>use selection to switch the program flow in one of two ways</p> <p>use a condition in an 'if...then...else...' statement to produce given outcomes</p>	<p>identify a variable in an existing program</p> <p>experiment with the value of an existing variable</p> <p>choose a name that identifies the role of a variable to make it easier for humans to understand it</p> <p>decide where in a program to set a variable</p> <p>update a variable with a user input</p> <p>use an event in a program to update a variable</p> <p>use a variable in a conditional statement to control the flow of a program</p> <p>use the same variable in more than one location in a program</p>



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<i>Data and Information</i>					
<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>	<i>Year 6</i>
<p><i>identify some attributes of an object</i></p> <p><i>collect simple data</i></p> <p><i>show that collected data can be counted</i></p> <p><i>describe the properties of an object</i></p> <p><i>choose an attribute to group objects by</i></p> <p><i>group objects to answer questions</i></p> <p><i>explain that objects can be grouped by similarities (attribute)</i></p> <p><i>describe a group of objects (based on commonality)</i></p>	<p><i>enter data onto a computer</i></p> <p><i>recognise that people, animals and objects can be described by attributes</i></p> <p><i>use a computer to view data in different formats</i></p> <p><i>use pictograms to answer single-attribute questions</i></p> <p><i>use a computer to answer comparison questions (graphs, tables)</i></p>	<p><i>create questions with yes/no answers</i></p> <p><i>choose questions that will divide objects into evenly sized subgroups</i></p> <p><i>repeatedly create subgroups of objects</i></p> <p><i>identify an object using a branching database</i></p> <p><i>retrieve information from different levels of the branching database</i></p>	<p><i>use a digital device to collect data automatically</i></p> <p><i>choose how often to automatically collect data samples</i></p> <p><i>use a set of logged data to find information</i></p> <p><i>use a computer program to sort data by one attribute</i></p> <p><i>export information in different formats</i></p>	<p><i>choose different ways to view data</i></p> <p><i>choose which attribute and value to search by to answer a given question (operands)</i></p> <p><i>ask questions that need more than one attribute to answer</i></p> <p><i>choose which attribute to sort data by to answer a given question</i></p> <p><i>choose multiple criteria to search data to answer a given question (AND and OR)</i></p> <p><i>select an appropriate graph to visually compare data</i></p> <p><i>choose suitable ways to present information to other people</i></p>	<p><i>calculate data using a formula for each operation</i></p> <p><i>use functions to create new data</i></p> <p><i>use existing cells within a formula</i></p> <p><i>choose suitable ways to present spreadsheet data</i></p>