

	Year 3	Year 4	Year 5	Year 6
<b>Computer Systems and Networks</b>	<b>Connecting computers</b> <ul style="list-style-type: none"> <li>To explain how digital devices function.</li> <li>To identify input and output devices .</li> <li>To recognise how digital devices can change the way we work.</li> <li>To explain how a computer network can be used to share information.</li> <li>To explore how digital devices can be connected.</li> <li>To recognise the physical components of a network.</li> </ul>	<b>The internet</b> <ul style="list-style-type: none"> <li>To describe how networks physically connect to other networks.</li> <li>To recognise how networked devices make up the internet.</li> <li>To outline how websites can be shared via the World Wide Web.</li> <li>To describe how content can be added and accessed on the World Wide Web.</li> <li>To recognise how the content of the WWW is created by people.</li> <li>To evaluate the consequences of unreliable content</li> </ul>	<b>Sharing information</b> <ul style="list-style-type: none"> <li>To explain that computers can be connected together to form systems.</li> <li>To recognise the role of computer systems in our lives.</li> <li>To recognise how information is transferred over the internet.</li> <li>To explain how sharing information online lets people in different places work together.</li> <li>To contribute to a shared project online.</li> <li>To evaluate different ways of working together online.</li> </ul>	<b>Communication</b> <ul style="list-style-type: none"> <li>To identify how to use a search engine.</li> <li>To describe how search engines select results.</li> <li>To describe how search engines select results.</li> <li>To explain how search results are ranked.</li> <li>To recognise why the order of results is important, and to whom.</li> <li>To recognise how we communicate using technology.</li> <li>To evaluate different methods of online communication.</li> </ul>
	<b>Stop-frame animation</b> <ul style="list-style-type: none"> <li>To explain that animation is a sequence of drawings or photographs.</li> <li>To relate animated movement with a</li> </ul>	<b>Audio editing</b> <ul style="list-style-type: none"> <li>To identify that sound can be digitally recorded.</li> <li>To use a digital device to record sound.</li> </ul>	<b>Video editing</b> <ul style="list-style-type: none"> <li>To recognise video as moving pictures, which can include audio.</li> </ul>	<b>Web page creation</b> <ul style="list-style-type: none"> <li>To review an existing website and consider its structure.</li> <li>To plan the features of a web page.</li> </ul>

	<p>sequence of images To plan an animation.</p> <ul style="list-style-type: none"> <li>To identify the need to work consistently and carefully.</li> <li>To review and improve an animation.</li> <li>To evaluate the impact of adding other media to an animation.</li> </ul>	<ul style="list-style-type: none"> <li>To explain that a digital recording is stored as a file.</li> <li>To explain that audio can be changed through editing.</li> <li>To show that different types of audio can be combined and played together.</li> <li>To evaluate editing choices made.</li> </ul>	<ul style="list-style-type: none"> <li>To identify digital devices that can record video.</li> <li>To capture video using a digital device.</li> <li>To recognise the features of an effective video.</li> <li>To identify that video can be improved through reshooting and editing.</li> <li>To consider the impact of the choices made when making and sharing a video.</li> </ul>	<ul style="list-style-type: none"> <li>To consider the ownership and use of images (copyright).</li> <li>To recognise the need to preview pages.</li> <li>To outline the need for a navigation path.</li> <li>To recognise the implications of linking to content owned by other people.</li> </ul>
	<p><b>Desktop publishing</b></p> <ul style="list-style-type: none"> <li>To recognise how text and images convey information.</li> <li>To recognise that text and layout can be edited.</li> <li>To choose appropriate page settings.</li> <li>To add content to a desktop publishing publication.</li> <li>To consider how different layouts can suit different purposes.</li> <li>To consider the benefits of desktop publishing.</li> </ul>	<p><b>Photo editing</b></p> <ul style="list-style-type: none"> <li>To explain that digital images can be changed.</li> <li>To change the composition of an image.</li> <li>To describe how images can be changed for different uses.</li> <li>To make good choices when selecting different tools.</li> <li>To recognise that not all images are real.</li> <li>To evaluate how changes can improve an image.</li> </ul>	<p><b>Vector drawing</b></p> <ul style="list-style-type: none"> <li>To identify that drawing tools can be used to produce different outcomes.</li> <li>To create a vector drawing by combining shapes.</li> <li>To use tools to achieve a desired effect .</li> <li>To recognise that vector drawings consist of layers.</li> <li>To group objects to make them easier to work with.</li> </ul>	<p><b>3D modelling</b></p> <ul style="list-style-type: none"> <li>To use a computer to create and manipulate three-dimensional (3D) digital objects.</li> <li>To compare working digitally with 2D and 3D graphics.</li> <li>To construct a digital 3D model of a physical object.</li> <li>To identify that physical objects can be broken down into a collection of 3D shapes.</li> <li>To design a digital model by combining 3D objects.</li> <li>To develop and improve a digital 3D model.</li> </ul>

			<ul style="list-style-type: none"> <li>To evaluate my vector drawing.</li> </ul>	
<b>Data and Information</b>	<b>Branching databases</b> <ul style="list-style-type: none"> <li>To create questions with yes/no answers.</li> <li>To identify the object attributes needed to collect relevant data.</li> <li>To create a branching database.</li> <li>To identify objects using a branching database.</li> <li>To explain why it is helpful for a database to be well structured.</li> <li>To compare the information shown in a pictogram with a branching database.</li> </ul>	<b>Data logging</b> <ul style="list-style-type: none"> <li>To explain that data gathered over time can be used to answer questions.</li> <li>To use a digital device to collect data automatically.</li> <li>To explain that a data logger collects 'data points' from sensors over time.</li> <li>To use data collected over a long duration to find information.</li> <li>To identify the data needed to answer questions.</li> <li>To use collected data to answer questions.</li> </ul>	<b>Flat-file databases</b> <ul style="list-style-type: none"> <li>To use a form to record information.</li> <li>To compare paper and computer- based databases.</li> <li>To outline how grouping and then sorting data allows us to answer questions.</li> <li>To explain that tools can be used to select specific data.</li> <li>To explain that computer programs can be used to compare data visually.</li> <li>To apply my knowledge of a database to ask and answer real-world questions.</li> </ul>	<b>Spreadsheets</b> <ul style="list-style-type: none"> <li>To identify questions which can be answered using data.</li> <li>To explain that objects can be described using data.</li> <li>To explain that formula can be used to produce calculated data.</li> <li>To apply formulas to data, including duplicating.</li> <li>To create a spreadsheet to plan an event.</li> <li>To choose suitable ways to present data.</li> </ul>

<h2>Programming</h2>	<h3>Sequence in music</h3> <ul style="list-style-type: none"> <li>To explore a new programming environment.</li> <li>I can identify that each sprite is controlled by the commands I choose.</li> <li>To explain that a program has a start.</li> <li>To recognise that a sequence of commands can have an order.</li> <li>To change the appearance of my project.</li> <li>To create a project from a task description</li> </ul>	<h3>Repetition in shapes</h3> <ul style="list-style-type: none"> <li>To identify that accuracy in programming is important.</li> <li>To create a program in a text-based language.</li> <li>To explain what 'repeat' means.</li> <li>To modify a count-controlled loop to produce a given outcome.</li> <li>To decompose a program into parts.</li> <li>To create a program that uses count-controlled loops to produce a given outcome.</li> </ul>	<h3>Selection in physical computing</h3> <ul style="list-style-type: none"> <li>To control a simple circuit connected to a computer.</li> <li>To write a program that includes count-controlled loops.</li> <li>To explain that a loop can stop when a condition is met, eg number of times.</li> <li>To conclude that a loop can be used to repeatedly check whether a condition has been met.</li> <li>To design a physical project that includes selection.</li> <li>To create a controllable system that includes selection.</li> </ul>	<h3>Variables in games</h3> <ul style="list-style-type: none"> <li>To define a 'variable' as something that is changeable.</li> <li>To explain why a variable is used in a program.</li> <li>To choose how to improve a game by using variables.</li> <li>To design a project that builds on a given example.</li> <li>To use my design to create a project.</li> <li>To evaluate my project</li> </ul>
	<h3>Events and actions</h3> <ul style="list-style-type: none"> <li>To explain how a sprite moves in an existing project.</li> <li>To create a program to move a sprite in four directions.</li> <li>To adapt a program to a new context To develop my program by adding features.</li> </ul>	<h3>Repetition in games</h3> <ul style="list-style-type: none"> <li>To develop the use of count-controlled loops in a different programming environment.</li> <li>To explain that in programming there are infinite loops and count controlled loops.</li> </ul>	<h3>Selection in games</h3> <ul style="list-style-type: none"> <li>To explain how selection is used in computer programs.</li> <li>To relate that a conditional statement connects a condition to an outcome.</li> </ul>	<h3>Sensing</h3> <ul style="list-style-type: none"> <li>To create a program to run on a controllable device.</li> <li>To explain that selection can control the flow of a program.</li> <li>To update a variable with a user input.</li> <li>To use an conditional statement to compare a variable to a value.</li> <li>To design a project that uses inputs and outputs on a controllable device.</li> </ul>

## Computing Progression of Skills

	<ul style="list-style-type: none"> <li>• To identify and fix bugs in a program.</li> <li>• To design and create a maze- based challenge.</li> </ul>	<ul style="list-style-type: none"> <li>• To develop a design which includes two or more loops which run at the same time.</li> <li>• To modify an infinite loop in a given program.</li> <li>• To design a project that includes repetition.</li> <li>• To create a project that includes repetition.</li> </ul>	<ul style="list-style-type: none"> <li>• To explain how selection directs the flow of a program.</li> <li>• To design a program which uses selection.</li> <li>• To create a program which uses selection To evaluate my program.</li> </ul>	<ul style="list-style-type: none"> <li>• To develop a program to use inputs and outputs on a controllable device</li> </ul>
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