



Computing

	Connecting Systems and Networks	Creating Media	Data and Information	Programming
EYFS	<p>To identify types of technology in home and in school</p> <p>To experiment with different types of technology and understand their purpose</p> <p>To develop the use of keyboard and mouse to input</p>	<p>To use technology to create pictures</p> <p>To use technology to produce writing/mark making</p> <p>To talk about what has been produced and say what went well and even better if.</p>	<p>To begin to be able to label objects</p> <p>To begin to be able to identify that objects can be counted</p> <p>To begin to be able to count objects with the same properties</p> <p>To compare groups of objects</p> <p>To answer questions about groups of objects</p>	<p>To explain what a given command will do</p> <p>To combine 2 direction commands to make a sequence</p> <p>To begin to plan a simple program</p> <p>To identify the effect of changing an instruction.</p>
Y1	<p>To identify technology</p> <p>To identify a computer and its main parts</p> <p>To use a mouse in different ways</p> <p>To use a keyboard to type</p> <p>To use the keyboard to edit text</p> <p>To create rules for using technology responsibly</p>	<p>To describe what different freehand tools do</p> <p>To use the shape tool and the line tools</p> <p>To make careful choices when painting a digital picture</p> <p>To explain why I chose the tools I used</p> <p>To use a computer on my own to paint a picture</p> <p>To compare painting a picture on a computer and on paper</p> <p>To use a computer to write</p> <p>To add and remove text on a computer</p> <p>To identify that the look of text can be changed on a computer</p> <p>To make careful choices when changing text</p> <p>To explain why I used the tools that I chose</p> <p>To compare writing on a computer with writing on paper</p>	<p>To label objects</p> <p>To identify that objects can be counted</p> <p>To describe objects in different ways</p> <p>To count objects with the same properties</p> <p>To compare groups of objects</p> <p>To answer questions about groups of objects</p>	<p>To explain what a given command will do</p> <p>To act out a given word</p> <p>To combine forwards and backwards commands to make a sequence</p> <p>To combine four direction commands to make sequences</p> <p>To plan a simple program</p> <p>To find more than one solution to a problem</p> <p>To choose a command for a given purpose</p> <p>To show that a series of commands can be joined together</p> <p>To identify the effect of changing a value</p> <p>To explain that each sprite has its own instructions</p> <p>To design the parts of a project</p> <p>To use my algorithm to create a program</p>



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Y2	<p>To recognise the uses and features of information technology</p> <p>To identify information technology in the home</p> <p>To identify information technology beyond school</p> <p>To explain how information technology benefits us</p> <p>To show how to use information technology safely</p> <p>To recognise that choices are made when using information technology</p>	<p>To know what devices can be used to take photographs</p> <p>To use a digital device to take a photograph</p> <p>To describe what makes a good photograph</p> <p>To decide how photographs can be improved</p> <p>To use tools to change an image</p> <p>To recognise that images can be changed</p> <p>To say how music can make us feel</p> <p>To identify that there are patterns in music</p> <p>To describe how music can be used in different ways</p> <p>To show how music is made from a series of notes</p> <p>To create music for a purpose</p> <p>To review and refine our computer work</p>	<p>To recognise that we can count and compare objects using tally charts</p> <p>To recognise that objects can be represented as pictures</p> <p>To create a pictogram</p> <p>To select objects by attribute and make comparisons</p> <p>To recognise that people can be described by attributes</p> <p>To explain that we can present information using a computer</p>	<p>To describe a series of instructions as a sequence</p> <p>To explain what happens when we change the order of instructions</p> <p>To use logical reasoning to predict the outcome of a program (series of commands)</p> <p>To explain that programming projects can have code and artwork</p> <p>To design an algorithm</p> <p>To create and debug a program that I have written</p> <p>To explain that a sequence of commands has a start</p> <p>To explain that a sequence of commands has an outcome</p> <p>To create a program using a given design</p> <p>To change a given design</p> <p>To create a program using my own design</p> <p>To decide how my project can be improved</p>
Y3	<p>To explain how digital devices function</p> <p>To identify input and output devices</p> <p>To recognise how digital devices can change the way we work</p> <p>To explain how a computer network can be used to share information</p> <p>To explore how digital devices can be connected</p> <p>To recognise the physical components of a network</p>	<p>To explain that animation is a sequence of drawings or photographs</p> <p>To relate animated movement with a sequence of images</p> <p>To plan an animation</p> <p>To identify the need to work consistently and carefully</p> <p>To review and improve an animation</p> <p>To evaluate the impact of adding other media to an animation</p> <p>To recognise how text and images convey information</p> <p>To recognise that text and layout can be edited</p> <p>To choose appropriate page settings</p> <p>To add content to a desktop publishing publication</p> <p>To consider how different layouts can suit different purposes</p> <p>To consider the benefits of desktop publishing</p>	<p>To create questions with yes/no answers</p> <p>To identify the object attributes needed to collect relevant data</p> <p>To create a branching database</p> <p>To explain why it is helpful for a database to be well structured</p> <p>To identify objects using a branching database</p> <p>To compare the information shown in a pictogram with a branching database</p>	<p>To explore a new programming environment</p> <p>To identify that commands have an outcome</p> <p>To explain that a program has a start</p> <p>To recognise that a sequence of commands can have an order</p> <p>To change the appearance of my project</p> <p>To create a project from a task description</p> <p>To explain how a sprite moves in an existing project</p> <p>To create a program to move a sprite in four directions</p> <p>To adapt a program to a new context</p> <p>To develop my program by adding features</p> <p>To identify and fix bugs in a program</p> <p>To design and create a maze-based challenge</p>



Y4	<p>To describe how networks physically connect to other networks</p> <p>To recognise how networked devices make up the internet</p> <p>To outline how websites can be shared via the World Wide Web</p> <p>To describe how content can be added and accessed on the World Wide Web</p> <p>To recognise how the content of the WWW is created by people</p> <p>To evaluate the consequences of unreliable content</p>	<p>To identify that sound can be digitally recorded</p> <p>To use a digital device to record sound</p> <p>To explain that a digital recording is stored as a file</p> <p>To explain that audio can be changed through editing</p> <p>To show that different types of audio can be combined and played together</p> <p>To evaluate editing choices made</p> <p>To explain that digital images can be changed</p> <p>To change the composition of an image</p> <p>To describe how images can be changed for different uses</p> <p>To make good choices when selecting different tools</p> <p>To recognise that not all images are real</p> <p>To evaluate how changes can improve an image</p>	<p>To explain that data gathered over time can be used to answer questions</p> <p>To use a digital device to collect data automatically</p> <p>To explain that a data logger collects 'data points' from sensors over time</p> <p>To use data collected over a long duration to find information</p> <p>To identify the data needed to answer questions</p> <p>To use collected data to answer questions</p>	<p>To identify that accuracy in programming is important</p> <p>To create a program in a text-based language</p> <p>To explain what 'repeat' means</p> <p>To modify a count-controlled loop to produce a given outcome</p> <p>To decompose a program into parts</p> <p>To create a program that uses count-controlled loops to produce a given outcome</p> <p>To develop the use of count-controlled loops in a different programming environment</p> <p>To explain that in programming there are infinite loops and count controlled loops</p> <p>To develop a design which includes two or more loops which run at the same time</p> <p>To modify an infinite loop in a given program</p> <p>To design a project that includes repetition</p> <p>To create a project that includes repetition</p>
Y5	<p>To explain that computers can be connected together to form systems</p> <p>To recognise the role of computer systems in our lives</p> <p>To recognise how information is transferred over the internet</p> <p>To explain how sharing information online lets people in different places work together</p> <p>To contribute to a shared project online</p> <p>To evaluate different ways of working together online</p>	<p>To recognise video as moving pictures, which can include audio</p> <p>To identify digital devices that can record video</p> <p>To capture video using a digital device</p> <p>To recognise the features of an effective video</p> <p>To identify that video can be improved through reshooting and editing</p> <p>To consider the impact of the choices made when making and sharing a video</p> <p>To identify that drawing tools can be used to produce different outcomes</p> <p>To create a vector drawing by combining shapes</p> <p>To use tools to achieve a desired effect</p> <p>To recognise that vector drawings consist of layers</p> <p>To group objects to make them easier to work with</p> <p>To evaluate my vector drawing</p>	<p>To use a form to record information</p> <p>To compare paper and computer-based databases</p> <p>To outline how grouping and then sorting data allows us to answer questions</p> <p>To explain that tools can be used to select specific data</p> <p>To explain that computer programs can be used to compare data visually</p> <p>To apply my knowledge of a database to ask and answer real-world questions</p>	<p>To control a simple circuit connected to a computer</p> <p>To write a program that includes count-controlled loops</p> <p>To explain that a loop can stop when a condition is met, eg number of times</p> <p>To conclude that a loop can be used to repeatedly check whether a condition has been met</p> <p>To design a physical project that includes selection</p> <p>To create a controllable system that includes selection</p> <p>To explain how selection is used in computer programs</p> <p>To relate that a conditional statement connects a condition to an outcome</p> <p>To explain how selection directs the flow of a program</p> <p>To design a program which uses selection</p> <p>To create a program which uses selection</p> <p>To evaluate my program</p>



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Y6	<p>To identify how to use a search engine</p> <p>To describe how search engines select results</p> <p>To explain how search results are ranked</p> <p>To recognise why the order of results is important, and to whom</p> <p>To recognise how we communicate using technology</p> <p>To evaluate different methods of online communication</p>	<p>To review an existing website and consider its structure</p> <p>To plan the features of a web page</p> <p>To consider the ownership and use of images (copyright)</p> <p>To recognise the need to preview pages</p> <p>To outline the need for a navigation path</p> <p>To recognise the implications of linking to content owned by other people</p> <p>To use a computer to create and manipulate three-dimensional (3D) digital objects</p> <p>To compare working digitally with 2D and 3D graphics</p> <p>To construct a digital 3D model of a physical object</p> <p>To identify that physical objects can be broken down into a collection of 3D shapes</p> <p>To design a digital model by combining 3D objects</p> <p>To develop and improve a digital 3D model</p>	<p>To identify questions which can be answered using data</p> <p>To explain that objects can be described using data</p> <p>To explain that formulas can be used to produce calculated data</p> <p>To apply formulas to data, including duplicating</p> <p>To create a spreadsheet to plan an event</p> <p>To choose suitable ways to present data</p>	<p>To define a 'variable' as something that is changeable</p> <p>To explain why a variable is used in a program</p> <p>To choose how to improve a game by using variables</p> <p>To design a project that builds on a given example</p> <p>To use my design to create a project</p> <p>To evaluate my project</p> <p>To create a program to run on a controllable device</p> <p>To explain that selection can control the flow of a program</p> <p>To update a variable with a user input</p> <p>To use an conditional statement to compare a variable to a value</p> <p>To design a project that uses inputs and outputs on a controllable device</p> <p>To develop a program to use inputs and outputs on a controllable device</p>
KS3	<p>To create a memorable and secure password for an account on the school network</p> <p>To remember the rules of the computing lab</p> <p>To find personal documents and common applications</p> <p>To recognise a respectful email</p> <p>To construct an effective email and send it to the correct recipients</p> <p>To describe how to communicate with peers online</p> <p>To plan effective presentations for a given audience</p> <p>To describe cyberbullying</p> <p>To explain the effects of cyberbullying</p> <p>To check who you are talking to online</p> <p>To define 'protocol' and provide examples of non-networking protocols</p>	<p>To describe what HTML is</p> <p>To use HTML to structure static web pages</p> <p>To modify HTML tags using inline styling to improve the appearance of web pages</p> <p>To display images within a web page</p> <p>To apply HTML tags to construct a web page structure from a provided design</p> <p>To describe what CSS is</p> <p>To use CSS to style static web pages</p> <p>To assess the benefits of using CSS to style pages instead of in-line formatting</p> <p>To describe what a search engine is</p> <p>To explain how search engines 'crawl' through the World Wide Web and how they select and rank results</p> <p>To analyse how search engines select and rank results when searches are made</p> <p>To use search technologies effectively</p>	<p>To identify columns, rows, cells, and cell references in spreadsheet software</p> <p>To use formatting techniques in a spreadsheet</p> <p>To use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /)</p> <p>To use the autofill tool to replicate cell data</p> <p>To explain the difference between data and information</p> <p>To explain the difference between primary and secondary sources of data</p> <p>To collect data</p> <p>To create appropriate charts in a spreadsheet</p> <p>To use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet</p>	<p>To compare how humans and computers understand instructions (understand and carry out)</p> <p>To define a sequence as instructions performed in order, with each executed in turn</p> <p>To predict the outcome of a simple sequence</p> <p>To modify a sequence</p> <p>To define a variable as a name that refers to data being stored by the computer</p> <p>To recognise that computers follow the control flow of input/process/output</p> <p>To predict the outcome of a simple sequence that includes variables</p> <p>To trace the values of variables within a sequence</p> <p>To make a sequence that includes a variable</p> <p>To define a condition as an expression that will be evaluated as either true or false</p>