



	Connecting Systems and Networks	Creating Media	Data and Information	Programming
EYFS	<ul style="list-style-type: none"> To identify types of technology in home and in school To experiment with different types of technology and understand their purpose To develop the use of keyboard and mouse to input 	<ul style="list-style-type: none"> To use technology to create pictures To use technology to produce writing/mark making To talk about what has been produced and say what went well and even better if. 	<ul style="list-style-type: none"> To begin to be able to label objects To begin to be able to identify that objects can be counted To begin to be able to count objects with the same properties To compare groups of objects To answer questions about groups of objects 	<ul style="list-style-type: none"> To explain what a given command will do To combine 2 direction commands to make a sequence To begin to plan a simple program To identify the effect of changing an instruction.
Y1	<ul style="list-style-type: none"> To identify technology To identify a computer and its main parts To use a mouse in different ways To use a keyboard to type To use the keyboard to edit text To create rules for using technology responsibly 	<ul style="list-style-type: none"> To describe what different freehand tools do To use the shape tool and the line tools To make careful choices when painting a digital picture To explain why I chose the tools I used To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper To use a computer to write To add and remove text on a computer To identify that the look of text can be changed on a computer To make careful choices when changing text To explain why I used the tools that I chose To compare writing on a computer with writing on paper 	<ul style="list-style-type: none"> To label objects To identify that objects can be counted To describe objects in different ways To count objects with the same properties To compare groups of objects To answer questions about groups of objects 	<ul style="list-style-type: none"> To explain what a given command will do To act out a given word To combine forwards and backwards commands to make a sequence To combine four direction commands to make sequences To plan a simple program To find more than one solution to a problem To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value To explain that each sprite has its own instructions To design the parts of a project To use my algorithm to create a program



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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>



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



		<p>To discuss the impact of search technologies and the issues that arise by the way they function and the way they are used</p> <p>To create hyperlinks to allow users to navigate between multiple web pages</p> <p>To discuss issues of safety and security from a technological perspective</p> <p>To discuss the impact of networking technologies and services</p>	<p>To analyse data</p> <p>To use a spreadsheet to sort and filter data</p> <p>To use the functions AVERAGE, COUNTIF, and IF in a spreadsheet</p> <p>To use conditional formatting in a spreadsheet</p> <p>To apply all of the spreadsheet skills covered in this unit</p>	<p>To identify that selection uses conditions to control the flow of a sequence</p> <p>To identify where selection statements can be used in a program</p> <p>To modify a program to include selection</p> <p>To create conditions that use comparison operators (>,<=)</p> <p>To create conditions that use logic operators (and/or/not)</p> <p>To identify where selection statements can be used in a program that include comparison and logical operators</p> <p>To define iteration as a group of instructions that are repeatedly executed</p> <p>To describe the need for iteration</p> <p>To identify where count-controlled iteration can be used in a program</p> <p>To implement count-controlled iteration in a program</p> <p>To detect and correct errors in a program (debugging)</p> <p>To independently design and apply programming constructs to solve a problem (subroutine, selection, count-controlled iteration, operators, and variables)</p>
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