



Whole School Skills Progression Map



Taken from the National Centre for Computing Education Unit overviews. More details about what should be taught – skills and knowledge are provided within each detailed unit overview.

www.keychaincomputing.co.uk

A comprehensive curriculum map is shown for KS1 and KS2 here: <https://teachcomputing.org/curriculum>

National Curriculum Aim	EYFS	KS1		LKS2		UKS2	
	Three and Four-Year-Olds Reception Early Learning Goals	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Skills and Knowledge	<p>I can put things in the right order (sequence)</p> <p>I can use a mouse</p> <p>I can drag and drop objects in a game</p>	<p>Computing systems and networks</p> <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>Computing systems and networks</p> <p>To recognise the uses and features of information technology</p> <p>To identify the uses of information</p>	<p>Computing systems and networks</p> <p>To explain how digital devices function</p> <p>To identify input and output devices</p> <p>To recognise how digital</p>	<p>Computing systems and networks</p> <p>To describe how networks physically connect to other networks</p> <p>To recognise how networked devices make up the internet</p>	<p>Computer Systems and Networks</p> <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>Computer Systems and Networks</p> <p>Communication and collaboration</p> <p>To explain the importance of internet addresses</p> <p>To recognise how data is</p>



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	<p>I can read and navigate an e-book</p> <p>I can type using a keyboard</p> <p>I understand algorithms</p> <p>I can create a piece of music</p> <p>I can use a touch screen</p>	<p>To use a keyboard to type on a computer</p> <p>To use the keyboard to edit text</p> <p>To create rules for using technology responsibly</p> <p>Creating media</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>technology in the school</p> <p>To identify information technology beyond school</p> <p>To explain how information technology helps us</p> <p>To explain how to use information technology safely</p> <p>To recognise that choices are made when using information technology</p>	<p>devices can change the way that 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>Creating animation</p> <p>To explain that animation is a sequence of drawings or photographs</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 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>Creating Media – Vector Drawing</p>	<p>transferred across the internet</p> <p>To explain how sharing information online can help people to work together</p> <p>To evaluate different ways of working together online</p> <p>To recognise how we communicate using technology</p> <p>To evaluate different methods of online</p>
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Whole School Skills Progression Map

		<p>Programming A</p> <p>To plan a simple program</p> <p>To explain what a given command will do</p> <p>To combine forwards and backwards commands to make a sequence</p> <p>Creating media – Digital writing</p> <p>To use a computer to write</p>	<p>Creating Media- Digital Photography</p> <p>To use a digital device to take a photograph</p> <p>Programming A</p> <p>To describe a series of instructions as a sequence</p> <p>To use logical reasoning to predict the outcome of a program</p> <p>To explain that programming projects can have code and artwork</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>Creating Media – Audio Editing</p> <p>To identify that sound can be digitally recorded</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 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>communication</p> <p>Creating Media – 3D modelling</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>
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Whole School Skills Progression Map



		<p>I can identify and find keys on a keyboard 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 explain why I used the tools that I chose</p> <p>To compare writing on a computer with writing on paper</p> <p>Grouping Data</p> <p>To label objects</p>	<p>To design an algorithm</p> <p>To create and debug a program that I have written</p> <p>Creating Media- Making Music</p> <p>To learn how music can make us feel</p> <p>To understand how music can be used</p> <p>To gain understanding of notes and tempo</p>	<p>Programming A</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</p>	<p>To evaluate editing choices made</p> <p>Programming A- Repetition in Shapes</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 evaluate my vector drawing</p> <p>Programming A</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, e.g. number of times</p> <p>To conclude that a loop can be used to repeatedly check whether a</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>Programming A</p> <p>To define a 'variable' as something that is changeable</p>
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Whole School Skills Progression Map



		<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>Programming B</p>	<p>To create a piece of digital music</p> <p>To review and edit the music made</p> <p>Pictograms</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>task description</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 decompose a program into parts</p> <p>To create a program that uses count-controlled loops to produce a given outcome</p> <p>Creating Media – Photo Editing</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</p>	<p>condition has been met</p> <p>To design a physical project which includes selection</p> <p>To create a controllable system which includes selection</p> <p>Creating Media – Video Editing</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 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>Creating media – web page creation</p>
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Whole School Skills Progression Map



		<p>To choose a command for a given purpose 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>	<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>Programming B</p> <p>To explain that a sequence of commands has a start</p>	<p>Desktop Publishing To recognise how text and images convey information</p> <p>Branching Databases To create questions with yes/no answers</p> <p>To identify the attributes needed to collect data about an object</p> <p>To create a branching database</p>	<p>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>Data Logging To explain that data gathered over time can be used to answer questions</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>Flat file Databases</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</p>
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Whole School Skills Progression Map



			<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>	<p>To explain why it is helpful for a database to be well structured</p> <p>To plan the structure of a branching database</p> <p>To independently create an identification tool</p> <p>Programming B</p> <p>To explain how a sprite moves in an existing project</p> <p>To create a program to move a sprite</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</p>	<p>To use a form to record information</p> <p>To compare paper and computer-based databases</p> <p>To apply my knowledge of a database to ask and answer real-world questions</p> <p>To explain that tools can be used to select data to answer questions</p> <p>To apply my knowledge of a database to ask and answer real-world questions</p>	<p>linking to content owned by other people</p> <p>Spreadsheets</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 formula can be used to produce calculated data</p> <p>To apply formulas to</p>
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				<p>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>to answer questions</p> <p>Programming B</p> <p>To explain that data gathered over time can be used to answer question</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</p>	<p>To apply my knowledge of a database to ask and answer real-world questions</p> <p>Programming B</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>data, including duplicating</p> <p>To create a spreadsheet to plan an event</p> <p>To choose suitable ways to present data</p> <p>Programming B</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>
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					<p>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 design a program which uses selection</p> <p>To create a program which uses selection</p> <p>To evaluate my 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>
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Subject

National Curriculum Aim	EYFS	KS1		LKS2		UKS2	
	Three and Four-Year-Olds Reception Early Learning Goals	Year One	Year Two	Year Three	Year Four	Year Five	Year Six



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Skills and Knowledge							



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