



Computing Progression Map



EYFS		National Curriculum KS1			National Curriculum KS2		
<p>Personal, Social and Emotional Development Remember rules without needing an adult to remind them. Show resilience and perseverance in the face of a challenge. Know and talk about the different factors that support their overall health and wellbeing: - sensible amounts of 'screen time'.</p> <p>Physical Development Match their developing physical skills to tasks and activities in the setting. Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>Expressive Arts and Design Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p> <p>Understanding the World (People and Communities) Explore how things work.</p>		<ul style="list-style-type: none"> understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 			<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 		
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Units	<p>PSHE Unit Safe Inside and Out (Internet safety)</p> <p>Computing Objectives achieved through provision</p>	<p>Technology around us</p> <p>Digital Painting</p> <p>Moving a Robot</p>	<p>IT Around Us</p> <p>Digital Photography</p> <p>code.org Course A</p>	<p>Connecting Computers</p> <p>code.org Course C</p> <p>Desktop Publishing</p> <p>Stop Frame Animation</p>	<p>The Internet</p> <p>code.org Course D</p> <p>Data Logging</p>	<p>Sharing Information</p> <p>Jimu Robots</p> <p>Powerpoint Slideshows</p> <p>Video Production</p>	<p>Communication</p> <p>Spreadsheets</p> <p>Programming – Raspberry Pi HTML and CSS</p>
Computing Systems and Networks	<p>I understand that there are different devices</p> <p>I understand devices can be used to access the internet</p> <p>I know that the internet connects us to others</p> <p>I know that the internet helps us in lots of ways</p>	<p>I can explain how different technology examples help us</p> <p>I can explain technology as something that helps us</p> <p>I can locate examples of technology in the classroom and home</p> <p>I can name the main parts of a computer</p> <p>I can switch on and log into a computer</p>	<p>I can describe some uses of computers</p> <p>I can identify examples of computers</p> <p>I can identify that a computer is a part of IT</p> <p>I can identify examples of IT</p> <p>I can identify that some IT can be used in more than one way</p> <p>I can find examples of information technology, sort IT by where it is</p>	<p>I can explain that digital devices accept inputs and produce outputs</p> <p>I can describe and follow a process</p> <p>I can classify input and output devices</p> <p>I can design a digital device</p> <p>I can explain how I use digital devices for different activities</p> <p>I can recognise similarities and suggest</p>	<p>I can demonstrate how information is shared across the internet</p> <p>I can describe the internet as a network of networks</p> <p>I can discuss why a network needs protecting</p> <p>I can describe networked devices and how they connect</p>	<p>I can describe that a computer system features inputs, processes, and outputs</p> <p>I can explain that computer systems communicate with other devices</p> <p>I can explain that systems are built using a number of parts</p> <p>I can explain the benefits of a given computer system</p>	<p>I can compare results from different search engines</p> <p>I can complete a web search to find specific information</p> <p>I can refine a search</p> <p>I can explain why we need tools to find things online</p> <p>I can recognise the role of web crawlers in creating an index</p>



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		<p>I can use a mouse and a keyboard I can open my work from a file</p>	<p>found and explain its uses I can demonstrate how IT devices work together I can say why we use IT</p>	<p>differences between using digital devices and non-digital tools I can explain how messages are passed through multiple connections I can recognise different connections I can demonstrate how information can be passed between devices I can explain the role of a switch, server, and wireless access point in a network I can recognise that a computer network is made up of a number of devices I can identify how devices in a network are connected together I can identify networked devices around me I can identify the benefits of computer networks</p>	<p>I can explain that the internet is used to provide many services I can recognise that the World Wide Web contains websites and web pages I can describe how to access websites on the WWW I can describe where websites are stored when uploaded to the WWW I can explain the types of media that can be shared on the WWW I can explain that internet services can be used to create content online I can explain what media can be found on websites I can recognise that I can add content to the WWW I can explain that websites and their content are created by people I can suggest who owns the content on websites</p>	<p>I can identify tasks that are managed by computer systems I can identify the human elements of a computer system I can explain that data is transferred over networks in packets I can explain that networked digital devices have unique addresses I can recognise that data is transferred using agreed methods I can explain that the internet allows different media to be shared I can recognise that connected digital devices can allow us to access shared files stored online I can send information over the internet in different ways I can compare working online with working offline I can explain how the internet enables effective collaboration I can identify different ways of working together online I can recognise that working together on the internet can be public or private</p>	<p>I can relate a search term to the search engine's index I can explain that a search engine follows rules to rank relevant pages I can explain that search results are ordered I can suggest some of the criteria that a search engine checks to decide on the order of results I can describe some of the ways that search results can be influenced I can explain how search engines make money I can recognise some of the limitations of search engines I can choose methods of communication to suit particular purposes I can explain the different ways in which people communicate I can identify that there are a variety of ways of communicating over the internet I can compare different methods of communicating on the internet I can decide when I should and should not share I can explain that communication on the internet may not be private</p>
<p>Creating Media</p>	<p>I can take photographs on a digital camera I can view my photographs</p>	<p>I can draw lines on a screen and explain which tools I used</p>	<p>I can explain what I did to capture a digital photo</p>	<p>I can explain the difference between text and images</p>		<p>I can identify and compare features in different videos</p>	



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	<p>I can delete low quality photographs</p>	<p>I can use the shape, square and line tools I can use the paint tools to draw a picture I can use the tools to recreate the work of an artist I can choose appropriate paint tools and colours to recreate the work of an artist I can say which tools were helpful and why I know that different paint tools do different jobs I can change the colour and brush sizes I can spot the differences between painting on a computer and on paper</p>	<p>I can recognise what devices can be used to take photographs I can explain the process of taking a good photograph I can take photos in both landscape and portrait format and why it looks better I can identify what is wrong with a photograph and can improve a photograph by retaking it I can experiment with different light sources I can explain why a picture may be unclear I can explore the effect that light has on a photo I can recognise that images can be changed I can identify which photos are real and which have been changed</p>	<p>I can identify the advantages and disadvantages of using text and images I can change font style, size, and colours for a given purpose I can edit text and explain that text can be changed to communicate more clearly I can define the term 'page orientation' I can recognise placeholders and say why they are important I can paste text and images to create a magazine cover I can choose a suitable layout for a given purpose I can compare work made on desktop publishing to work created by hand I can identify the uses of desktop publishing in the real world I can create an effective flip book—style animation I can predict what an animation will look like I can describe an animation that is achievable on screen I can evaluate the quality of my animation I can use onion skinning to help me make small changes between frames I can explain ways to make my animation</p>		<p>I can explain that video is a visual media format I can experiment with different camera angles I can identify and find features on a digital video recording device I can make use of a microphone I can review how effective my video is I can create and save video content I can decide which filming techniques I will use I can outline the scenes of my video I can explain how to improve a video by reshooting and editing I can select the correct tools to make edits to my video I can store, retrieve, and export my recording to a computer I can evaluate my video and share my opinions I can make edits to my video and improve the final outcome I can recognise that my choices when making a video will impact on the quality of the final outcome</p> <p>I know what a Powerpoint slideshow is I can identify features of slideshows I can compare features in different slideshows</p>	
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				better and improve my animation based on feedback		<p>To choose a visual style for a slideshow which suits an audience</p> <p>I can add text to a slideshow and format it</p> <p>I can search for and save images from the internet safely</p> <p>I can add and edit images to a slideshow</p> <p>I know the difference between a transition and an animation</p> <p>I can select appropriate transitions and animations to enhance my slideshow</p> <p>I can search and choose appropriate webpages to add to my slideshow</p> <p>I can evaluate and edit my slideshow to make sure it suits its intended audience</p>	
Programming	<p>I can make a beebot travel in a direction</p> <p>I understand that when I press a button the beebot will move in that direction</p> <p>I can use arrows to think about a route a beebot will need to take</p>	<p>I can match a command to an outcome</p> <p>I can run a command on a device</p> <p>I can follow an instruction</p> <p>I can give directions</p> <p>I can compare forwards and backwards movements</p> <p>I can predict the outcome of a sequence involving forwards, backwards, left and right commands</p> <p>I can start a sequence from the same place</p> <p>I can experiment with turn and move commands to move a robot</p>	<p>To begin to write visual based code unplugged and online</p> <p>I know how to drag and drop code</p> <p>I can build an algorithm using a sequence of commands</p> <p>I can write visual based code both unplugged and online</p> <p>I can build an algorithm using a sequence of commands</p> <p>I can create sequences with code</p> <p>I know how important the order of a sequence is</p> <p>I can write algorithms to control a character</p>	<p>I can begin to write word based code unplugged and online</p> <p>I can build an algorithm using a sequence of commands</p> <p>I know how to spot bugs in code and debug</p> <p>I can build an algorithm using a sequence of commands</p> <p>I can control a character to make art on screen</p> <p>I can build an algorithm using a sequence of commands</p> <p>I can use loops to make algorithms more efficient</p> <p>I can improve an algorithm using loops</p>	<p>I can speak instructions to write code unplugged</p> <p>I can build algorithms using command sequences</p> <p>I can debug code</p> <p>I can write code for a specific event happening</p> <p>I can create an interactive dance party</p> <p>I can use loops to make algorithms more efficient</p> <p>I can improve an algorithm using loops</p> <p>I can create code with nested loops - a loop within another loop</p> <p>I can improve an algorithm using nested loops</p>	<p>I can make a robot follow instructions to move and speak</p> <p>I can write different algorithms to control a robot</p> <p>I can use Loop sequences to repeat instructions</p> <p>To make a robot follow instructions to move and speak</p> <p>I can use Loop sequences to repeat instructions for a robot to follow multiple times</p> <p>I can use different loop sequences to program a robot to move including until loops, nested loops and while loops</p>	<p>I can understand the difference between HTML and CSS</p> <p>I can edit HTML and CSS</p> <p>I can write my own HTML</p> <p>I can download and upload images to a webpage</p> <p>I can edit HTML and CSS</p> <p>I can write my own CSS</p> <p>I can use different styles to improve how a webpage looks</p> <p>I can use HTML lists</p> <p>I can edit colours in CSS</p> <p>I can use nested tags in HTML</p> <p>I can use different CSS classes</p> <p>I can create different CSS styles</p>



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		<p>I can predict the outcome of a sequence involving up to four command</p> <p>I can choose the order of commands in a sequence</p> <p>I can debug my program</p> <p>I can explain what my program should do</p> <p>I can identify several possible solutions</p> <p>I can plan two programs</p> <p>I can use two different programs to get to the same place</p>	<p>I can use loops to make algorithms more efficient</p> <p>I can write a picture algorithm to control a character on screen with a loop</p> <p>I can use different code to achieve my own goals</p>	<p>I can create a game using code based around events</p> <p>I can build a step by step sequence</p> <p>I can write algorithms for specific events</p> <p>To create a game using code based around events</p>	<p>I can use a while loop – a loop that repeats while something is true/untrue</p> <p>I can create code with until loops – to continue until something changes</p> <p>I can use all different types of loop within one program to create a game around different events</p>		<p>I can style text and use different fonts</p> <p>I can use hyperlinks in webpages</p> <p>I can embed resources into webpages</p>
Data and Information					<p>I can choose a data set to answer a given question</p> <p>I can identify data that can be gathered over time</p> <p>I can suggest questions that can be answered using a given data set</p> <p>I can explain that sensors are input devices</p> <p>I can identify that data from sensors can be recorded</p> <p>I can use data from a sensor to answer a given question</p> <p>I can identify a suitable place to collect data</p> <p>I can identify the intervals used to collect data</p> <p>I can talk about the data that I have captured</p> <p>I can import a data set</p> <p>I can use a computer program to sort data</p>		<p>I can answer questions from an existing data set</p> <p>I can ask simple relevant questions which can be answered using data</p> <p>I can explain the relevance of data headings</p> <p>I can apply an appropriate number format to a cell</p> <p>I can build a data set in a spreadsheet application</p> <p>I can explain what an item of data is</p> <p>I can construct a formula in a spreadsheet</p> <p>I can explain the relevance of a cell's data type</p> <p>I can identify that changing inputs changes outputs</p> <p>I can apply a formula to multiple cells by duplicating it</p> <p>I can create a formula which includes a range of cells</p>



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					<p>I can use a computer to view data in different ways</p> <p>I can plan how to collect data using a data logger</p> <p>I can propose a question that can be answered using logged data</p> <p>I can use a data logger to collect data</p> <p>I can draw conclusions from the data that I have collected</p> <p>I can explain the benefits of using a data logger</p> <p>I can interpret data that has been collected using a data logger</p>		<p>I can recognise that data can be calculated using different operations</p> <p>I can apply a formula to calculate the data I need to answer questions</p> <p>I can explain why data should be organised</p> <p>I can use a spreadsheet to answer questions</p> <p>I can produce a graph</p> <p>I can suggest when to use a table or graph</p> <p>I can use a graph to show the answer to questions</p>
Internet Safety	<p>I know about safe and unsafe situations online</p> <p>I know that I can ask for help from my special people</p> <p>I can follow rules regarding careful and safe use of technology, and begin to understand terms such as screen time in order to support my overall wellbeing</p>	<p>I can create rules for using technology responsibly</p> <p>I can discuss how we benefit from these rules</p> <p>I can give examples of some of these rules</p> <p>I can identify rules to keep us safe and healthy when we are using technology in and beyond the home</p> <p>I can identify what things count as personal information;</p> <p>I can identify what is appropriate and inappropriate behaviour on the internet</p> <p>I can agree and follow sensible online safety rules</p> <p>I can seek help from an adult when I see something that is unexpected or worrying;</p>	<p>I can talk about different rules for using IT and how it keeps me safe</p> <p>I can identify what things count as personal information</p> <p>I can identify what is appropriate and inappropriate behaviour on the internet</p> <p>I can agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords</p> <p>I can seek help from an adult when I see something that is unexpected or worrying</p> <p>I can demonstrate how to safely open and close applications and log on and log off from websites;</p>	<p>I can reflect on my own digital footprint and behaviour online;</p> <p>I can identify what is appropriate and inappropriate behaviour on the internet, recognising the term cyberbullying;</p> <p>I can agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;</p> <p>I can seek help from an adult when I see something that is unexpected or worrying;</p> <p>I can demonstrate understanding of age-appropriate websites and adverts;</p>	<p>I can explain that not everything on the World Wide Web is true</p> <p>I can explain that there are rules to protect content</p> <p>I can explain why I need to think carefully before I share or reshare content</p> <p>I can explain why some information I find online may not be honest, accurate, or legal</p> <p>I can reflect on my own digital footprint and behaviour online;</p> <p>I can identify what is appropriate and inappropriate behaviour on the internet, recognising the term cyberbullying;</p> <p>I can agree and follow sensible online safety rules, e.g. taking pictures, sharing</p>	<p>I can explain how the internet enables effective collaboration</p> <p>I can recognise that working together on the internet can be public or private</p> <p>I am encouraged to identify online risks and share knowledge of the risks and consequences for people online.</p> <p>I can begin to think more critically about what I see online</p> <p>I can protect my password and other personal information</p> <p>I can be a good online citizen and friend</p> <p>I can judge what sort of privacy settings might be relevant to reducing different risks</p> <p>I can seek help from an adult when they see</p>	<p>I can decide when I should and should not share</p> <p>I can explain that communication on the internet may not be private</p>



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					information, storing passwords; I can seek help from an adult when I see something that is unexpected or worrying; I can demonstrate understanding of age-appropriate websites and adverts;	something that is unexpected or worrying; I can discuss scenarios involving online risk	
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