

EYFS; KS1; KS2	These are the minimum end of year expectations for our EYFS learners in relation to Understanding the World		This document shows how computing objectives are designed in a progressive way to ensure learners become more proficient users as they move through the school, securing and applying the computing mastery objectives. Each teacher should be aware of their own computing objectives, and of those which have come before.						
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
<b>Potential hooks and driving context</b>									
Enrichment			Media Suite Enrichment 1 half term	Media Suite Enrichment 1 half term	Media Suite Enrichment 1 half term	Media Suite Enrichment 1 half term	Media Suite Enrichment 1 half term	Media Suite Enrichment 1 half term	Media Suite Enrichment 1 half term
<b>Online Safety</b>									
	Learning Objectives: Supported using the Common Sense Media Digital Citizenship UK Lesson Plans: <a href="https://www.common sense.org/education/uk/digital-citizenship/primary">https://www.common sense.org/education/uk/digital-citizenship/primary</a>								
		<p>I can talk about good &amp; bad choices in real life e.g. taking turns, saying kind things, helping others, telling an adult if something upsets you</p> <p>I can play appropriate games on the Internet</p> <p>I can talk about good and bad choices when using websites – being kind, telling a grown up if something upsets us &amp; keeping ourselves safe by keeping information private</p>	<p>I can find a happy balance between my online and offline activities.</p> <p>I can identify how to say goodbye to technology when I don't want to use it.</p> <p>I can visit places safely online.</p>	<p>I can identify how we can be safe, responsible, and respectful online.</p> <p>I can identify why it is important to listen to my feelings when using technology.</p> <p>I can identify how we can stay safe when visiting a website or app.</p>	<p>I can identify how we can be good digital citizens.</p> <p>I can identify why it is important that we have device-free moments in our lives.</p> <p>I can identify what kinds of information I should keep to myself when I use the internet.</p> <p>I can identify what information is OK to have in my digital footprint.</p> <p>I can identify why we are all part of an online community.</p> <p>I can identify what I should do if someone is mean to me online.</p> <p>I can give credit for other people's work.</p>	<p>I can identify how digital citizens take responsibility for themselves, their communities, and their world.</p> <p>I can create a strong password to help protect my privacy.</p> <p>I can identify how what we post online affects our identity.</p> <p>I can identify what makes a strong online community.</p> <p>I can identify what I should do when someone uses mean or hurtful language on the internet.</p> <p>I can identify why people alter digital photos and videos.</p>	<p>I can identify what makes a healthy media choice.</p> <p>I can identify what information about us is OK to share online.</p> <p>I can identify how our online activity affects the digital footprints of ourselves and others.</p> <p>I can be positive and have fun while playing online games, and help others to do the same.</p> <p>I can identify what to do when I see cyberbullying.</p> <p>I can identify what rights and responsibilities I have as a creator.</p>	<p>I can identify what media balance means for me.</p> <p>I can identify what clickbait is, and how we can avoid it.</p> <p>I can identify how gender stereotypes shape our experiences online.</p> <p>I can identify how we keep online friendships safe.</p> <p>I can identify what cyberbullying is, and what we can do to stop it.</p> <p>I can identify the important parts of an online news article.</p>	
<b>Computer science and Programming</b>									
	Learning Objectives: Supported using the NCCCE Teach Computing Lesson Plans: <a href="#">NCCCE Lesson Resources</a>								

## Computing Progression Mapping

		<p>I can help adults operate equipment around the school, independently operating simple equipment</p> <p>I can use simple software to make things happen</p> <p>I can press buttons on a floor robot and talk about the movements</p> <p>I can explore options and make choices with toys, software and websites</p>	<p>Suggested technology: Beebot / Scratch Jr</p> <p>I can explain what a given command will do</p> <p>I can combine forwards and backwards commands to make a sequence</p> <p>I can combine four direction commands to make sequences</p> <p>I can identify the effect of changing a value</p> <p>I can plan and design a simple program using algorithms</p> <p>I can find more than one solution to a problem</p>	<p>Suggested technology: Beebot / Scratch Jr</p> <p>I can describe a series of instructions as a sequence</p> <p>I can explain what happens when we change the order of instructions and identify the importance of the start and outcome.</p> <p>I can use logical reasoning to predict the outcome of a program (series of commands)</p> <p>I can explain that programming projects can have code and artwork</p> <p>I can design an algorithm</p> <p>I can create a program using a given design and improve this design</p> <p>I can create, debug and improve a program that I have written</p>	<p>Suggested technology: Scratch</p> <p>I can explore new programming environments</p> <p>I can identify that sprites are controlled by the commands I choose</p> <p>I can explain how a sprite moves in an existing project</p> <p>I can recognise that a sequence of commands has an order and explain the start of a program.</p> <p>I can create a program to move a sprite in four directions</p> <p>I can adapt and develop a program to a new context by adding features</p> <p>I can identify and fix bugs in a program</p> <p>I can change the appearance of my project.</p> <p>I can create a maze based project from a task description.</p>	<p>Suggested technology: Logo / Probots / Scratch</p> <p>I can identify that accuracy in programming is important</p> <p>I can create a program in a text-based language</p> <p>I can explain what 'repeat' means</p> <p>I can design and create a project that includes repetition</p> <p>I can modify a count-controlled loop to produce a given outcome</p> <p>I can decompose a program into parts</p> <p>I can create a program that uses includes two or more loops to produce a given outcome</p> <p>I can develop the use of loops in a different programming environment</p> <p>I can explain that in programming there are infinite loops and count controlled loops</p> <p>I can modify an infinite loop in a given program</p>	<p>Suggested technology: Scratch / Tinkr Drones</p> <p>I can write a program that includes count-controlled loops</p> <p>I can explain that a loop can stop when a condition is met, e.g. number of times and repeatedly check.</p> <p>I can design a physical project and create a controllable system which include selection</p> <p>I can explain how selection directs the flow of a program</p> <p>I can relate that a conditional statement connects a condition to an outcome</p> <p>I can design, create and evaluate a program which uses selection</p> <p>I can control a device connected to a computer</p>	<p>Suggested technology: Scratch / Microbit</p> <p>I can define a 'variable' as something that is changeable and why they are used</p> <p>I can choose how to improve a game by using variables</p> <p>I can design, create and evaluate a project that builds on a given example</p> <p>I can create and develop a program which uses inputs and outputs to run on a controllable device</p> <p>I can explain that selection can control the flow of a program</p> <p>I can update a variable with a user input</p> <p>I can use an conditional statement to compare a variable to a value</p>
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Multimedia		<p><b>Digital Media</b></p> <p>I can use a mouse to rearrange objects and pictures on a screen</p> <p>I can recognise text, images and sound when using technology</p> <p>I can use a camera or sound recorder to collect photos or sound</p> <p>I can use paint programs to create pictures</p>	<p><b>Digital Painting</b></p> <p>I can use the shape tool and the line tools and explain why I used them</p> <p>I can make careful choices when painting a digital picture</p> <p>I can use a computer on my own to paint a picture</p> <p>I can compare painting a picture on a computer and on paper</p> <p><b>Digital Writing</b></p> <p>I can use a keyboard to write edit and remove text on a computer</p> <p>I can identify that the look of text can be changed on a computer</p> <p>I can make careful choices when changing text and explain why</p> <p>I can compare writing on a computer with writing on paper</p> <p>I can describe objects in different ways</p> <p>I can count objects with the same properties</p> <p>I can compare and answer questions about groups of objects</p>	<p><b>Digital Music</b></p> <p>I can identify that there are patterns in music using technology</p> <p>I can describe how music can be used, with technology, in different ways</p> <p>I can show how music is made, in a computer program, from a series of notes</p> <p>I can use technology to create music for a purpose and review it</p> <p><b>Digital Photography</b></p> <p>I can identify what devices can be used to take photographs</p> <p>I can use a digital device to take a photograph</p> <p>I can describe what makes a good photograph and how to improve them</p> <p>I can recognise that images can be changed and change using tools</p>	<p><b>Desktop Publishing</b></p> <p>I can recognise how text and images convey information and recognise the benefits of desktop publishing</p> <p>I can recognise that text and layout can be edited to suit different purposes</p> <p>I can add content to a desktop publishing publication use appropriate settings</p> <p><b>Animation</b></p> <p>I can explain that animation is a sequence of images</p> <p>I can plan, create, review and improve an animation</p> <p>I can identify the need to work consistently and carefully</p> <p>I can evaluate the impact of adding other media to an animation</p>	<p><b>Photo Editing</b></p> <p>I can explain that digital images can be changed and describe why</p> <p>I can change the composition of an image and evaluate improvements</p> <p>I can make good choices when selecting different tools</p> <p>I can recognise that not all images are real</p> <p><b>Audio Editing</b></p> <p>I can identify that sound can be digitally recorded, explaining how it is stored as a file</p> <p>I can use a digital device to record sound</p> <p>I can explain that audio can be changed through editing</p> <p>I can combine different audio to be played together and evaluate</p>	<p><b>Vector Drawing</b></p> <p>I can identify that drawing tools can be used to produce different outcomes</p> <p>I can create and evaluate a vector drawing by using tools, combining shapes, recognising layers and grouping objects to achieve a desired effect.</p> <p><b>Video Editing</b></p> <p>I can recognise video as moving pictures, which can include audio</p> <p>I can identify digital devices that can record video</p> <p>I can capture video using a digital device, improving it using reshooting and editing.</p> <p>I can recognise the features of an effective video</p> <p>I can consider the impact of the choices made when making and sharing a video</p>	<p><b>3D Modelling</b></p> <p>I can use a computer to create and manipulate three-dimensional (3D) digital objects</p> <p>I can compare working digitally with 2D and 3D graphics</p> <p>I can construct a digital 3D model of a physical object</p> <p>I can identify that physical objects can be broken down into a collection of 3D shapes</p> <p>I can design and improve a digital model by combining 3D objects</p> <p><b>Web Page Creation</b></p> <p>I can review an existing website and consider its structure</p> <p>I can plan the features of a web page outlining a navigation path</p> <p>I can consider the ownership and use of images (copyright) recognising the implications of linking to content owned by other people</p> <p>I can recognise the need to preview pages</p>
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Systems & Networks		<p>I can begin to use a keyboard</p> <p>I can develop an interest in ICT by using age appropriate websites or programs</p> <p>I can recognise purposes for using technology in school and at home</p> <p>I can understand that things I create belong to me and can be shared with others using technology</p> <p>I can use the Internet to play and learn</p>	<p>I can identify technology</p> <p>I can identify a computer and its main parts</p> <p>I can use a mouse in different ways</p>	<p>I can recognise the uses and features of information technology</p> <p>I can identify information technology in the home and beyond</p> <p>I can explain how information technology benefits us</p> <p>I can recognise that choices are made when using information technology</p>	<p>I can explain how digital devices function, identifying input and output devices</p> <p>I can recognise how digital devices can be connected and how this can change the way we work</p> <p>I can explain how a computer network can be used to share information identifying the physical components</p>	<p>I can describe how networks physically connect to other networks and make up the internet</p> <p>I can outline how websites can be shared via the World Wide Web, how content can be added and accessed.</p> <p>I can recognise how the content of the WWW is created by people evaluating the consequences of unreliable content</p>	<p>I can explain that computers can be connected together to form systems</p> <p>I can recognise the role of computer systems in our lives</p> <p>I can recognise how information is transferred over the internet</p> <p>I can explain how sharing information online lets people in different places work together</p> <p>I can contribute to a shared project online evaluating different ways of working.</p>	<p>I can identify how to use a search engine</p> <p>I can describe how search engines select results</p> <p>I can explain how search results are ranked, why this is important and to whom</p> <p>I can recognise and evaluate how we communicate using technology</p>
Data		<p>I can collect information as photos or sound files</p> <p>I can use a simple pictogram or set of photos to count and organise information</p>	<p>I can label objects</p> <p>I can identify that objects can be counted</p>	<p>I can recognise that we can count and compare objects using tally charts</p> <p>I can recognise that objects can be represented as pictures and create a pictogram</p> <p>I can select objects by attribute and make comparisons</p> <p>I can recognise that people can be described by attributes</p> <p>I can explain that we can present information using a computer</p>	<p>I can create questions with yes/no answers</p> <p>I can create a branching database and explain the importance of a good structure</p> <p>I can identify objects using a branching database identifying the attributes needed to collect relevant data</p> <p>I can compare the information shown in a pictogram with a branching database</p>	<p>I can explain that data gathered over time can be used to answer questions</p> <p>I can use a digital device to collect data automatically and use this to answer questions</p> <p>I can explain that a data logger collects 'data points' from sensors over time</p>	<p>I can use a form to record information</p> <p>I can compare paper and computer-based databases</p> <p>I can apply my knowledge of a database to ask and answer real-world questions</p> <p>I can explain that tools can be used to select data to answer questions</p>	<p>I can identify questions which can be answered using data</p> <p>I can explain that objects can be described using data</p> <p>I can explain that formula can be used to produce calculated data</p> <p>I can apply formulas to data, including duplicating</p> <p>I can create a spreadsheet to plan an event and choose suitable ways to present the data</p>