



# EYFS and KS1 Computing Curriculum Grid

National Curriculum KS1		Teach Computing Curriculum		National Centre for Computing Education	Funded by Department for Education
		EYFS	Year 1		
Computer Science	<b>Understand what algorithms are.</b>	<ul style="list-style-type: none"> <li>Understand that instructions lead to specific outcomes</li> <li>Order steps of a known task</li> </ul>	<ul style="list-style-type: none"> <li>Begin to understand an algorithm is a set of instructions to achieve a specific purpose</li> </ul>	<ul style="list-style-type: none"> <li>Describe a series of instructions as a sequence</li> <li>Explain that a sequence of commands has an outcome</li> </ul>	
		<ul style="list-style-type: none"> <li>Know directional words</li> <li>forward, backward, left, right</li> </ul>	<ul style="list-style-type: none"> <li>Combine forwards and backwards commands to make a sequence</li> <li>Combine four direction commands to make sequences</li> </ul>	<ul style="list-style-type: none"> <li>Combine four directions commands to make increasingly more complex sequences</li> </ul>	
	<b>Understand that computers have no intelligence, and we have to program them to do things, and that programs execute by following precise and unambiguous instructions</b>	<ul style="list-style-type: none"> <li>Understand that we control computers</li> </ul>	<ul style="list-style-type: none"> <li>Understand that we control computers by giving them instructions</li> </ul>	<ul style="list-style-type: none"> <li>Understand that computers have no intelligence, and we have to program them to do things</li> </ul>	
		<ul style="list-style-type: none"> <li>Press buttons on a floor robot and talk about the movements</li> </ul>	<ul style="list-style-type: none"> <li>Choose a command for a given purpose</li> <li>Show a series of commands can be joined together</li> </ul>	<ul style="list-style-type: none"> <li>Explain that a sequence of commands has a start</li> </ul>	
				<ul style="list-style-type: none"> <li>Explain what happens when we change the order of commands</li> </ul>	



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			<ul style="list-style-type: none"> <li>Understand that the order of instructions in an algorithm is important</li> </ul>	<ul style="list-style-type: none"> <li>Understand that instructions in an algorithm need to be in order, clear and unambiguous</li> </ul>
<b>Computer Science</b>	<b>Create and debug simple programs</b>	<ul style="list-style-type: none"> <li>Input a short sequence of instructions to control a device</li> </ul>	<ul style="list-style-type: none"> <li>Give a sequence of instructions to a floor robot. (The length of programs increasing over the course of the year)</li> </ul>	<ul style="list-style-type: none"> <li>Create a simple program on screen, correcting any errors, with a particular goal or purpose in mind (e.g., drawing a shape or moving a sprite from one place to another).</li> </ul>
		<ul style="list-style-type: none"> <li>Try alternative approaches to achieve a goal</li> </ul>	<ul style="list-style-type: none"> <li>Begin to debug instructions when a floor robot does not reach the intended destination</li> </ul>	<ul style="list-style-type: none"> <li>Use the word debug to correct mistakes in an algorithm</li> </ul>
		Understands objects (beebots) can move in different directions.		<ul style="list-style-type: none"> <li>Evaluate the success of an algorithm</li> </ul>
	<b>Use logical reasoning to predict the behaviour of simple programs</b>		Begin to predict what will happen for a short sequence of instructions in a program	Predict the outcome of a sequence
				Compare prediction to the program outcome

Computer science & computational thinking allows us to develop skills and techniques to help us solve problems effectively, with or without the aid of a computer. Computational thinking is not 'thinking like a computer': computers are not capable of thought. Rather, it



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is learning to think in ways which allow us, as humans, to solve problems more effectively and, when appropriate, use computers to help us do so. (Islington SoW)

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KS1			EYFS	Year 1	Year 2
Information technology	Creating Digital Content	Text	<ul style="list-style-type: none"> <li>• Drawing on the IWB</li> <li>• Creating pictures on an iPad.</li> <li>• Using purple mash to be creative.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and find keys on a keyboard.</li> <li>• Add and remove text using basic typing skills (including use of space bar, backspace to delete and basic, age-appropriate punctuation)</li> <li>• Save work to the appropriate location (hard drive and Google Drive)</li> <li>• Begin to print, retrieve and edit work, with support.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and find keys on a keyboard with increased confidence and speed</li> <li>• Type capital letters Change font, style (bold, italic and underline) and size of text</li> <li>• Save, print, retrieve and edit work from appropriate location (hard drive and Google Drive) independently</li> <li>• Upload images or movies to appropriate place (hard drive and Google Drive), with support</li> </ul>
		Images	Take images using an iPad.	<ul style="list-style-type: none"> <li>• Create/edit a drawing using a range of 'tools' such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape.</li> </ul>	<ul style="list-style-type: none"> <li>• Add and resize images (Including insert clip art/copy &amp; paste an image)</li> <li>• Capture/edit photograph using a range of 'tools'</li> </ul>



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		Multimedia			<ul style="list-style-type: none"> <li>Explain why tools were chosen and used</li> </ul>	
						<ul style="list-style-type: none"> <li>Use software to create and edit digital music for a purpose</li> <li>Explain and begin to justify why tools were chosen and used</li> </ul>
		Data Handling			Label objects	
			<p>Interactive games used on the interactive whiteboard.</p> <p>Children encouraged to create their own mathematical problems and use the interactive board to solve them.</p>	<ul style="list-style-type: none"> <li>Identify that object can be counted</li> <li>Count objects with same properties</li> <li>Compare groups of objects</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that objects can be counted and compared using tally charts</li> </ul>	
					Describe objects in different ways	Select objects by attribute and make comparisons
						Recognise objects can be represented as pictures



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						<ul style="list-style-type: none"> <li>• Create a pictogram</li> <li>• Explain that information can be presented using a computer</li> </ul>
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Technology Enhanced Learning: At both Key Stages, information and communication technology should be used to enhance teaching and learning right across the curriculum: this is often called Technology Enhanced Learning (TEL) whereby a clear focus is placed on learning rather than technology. Naace/CAS joint guidance, 2013 Discrete introductions to tools should be provided in the first instance, to ensure best use.

National Curriculum			Teach Computing Curriculum		National Centre for Computing Education	Funded by Department for Education
KS1			EYFS	Year 1	Year 2	
Digital Literacy	Online Safety	Use technology safely and respectfully	See Appendix 1: Online Safety Curriculum Grid (Education for a Connected World) <a href="#">ProjectEVOLVE - Education for a Connected World Resources</a>  			
		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				



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<b>Computer Systems and Networks</b>	<b>Recognise common uses of information technology beyond school.</b>	Help adults operate equipment around the school, independently operating simple equipment	Identify technology	<ul style="list-style-type: none"> <li>Identify information technology in the home</li> <li>Identify information technology beyond school</li> <li>Explain how information technology benefits us</li> </ul>
			Identify a computer and its main parts	<ul style="list-style-type: none"> <li>Recognise the uses and features of information technology</li> </ul>
			Use a mouse in different ways	Continue to practise mouse skills independently.