



## Subject- Computing



### Threshold Concepts and Milestones

Threshold Concept		Year 4	Content
<b>Code</b> This concept involves developing an understanding of instructions, logic and sequences.	<b>Motion</b>	<ul style="list-style-type: none"> <li>Use specified screen coordinates to control movement.</li> </ul>	<ul style="list-style-type: none"> <li>Children create variables that allow them to set an objects starting point based on screen coordinates.</li> </ul>
	<b>Looks</b>	<ul style="list-style-type: none"> <li>Set the appearance of objects and create sequences of changes.</li> </ul>	<ul style="list-style-type: none"> <li>Children create app games and races using Espresso Coding including variables, sequences and loops.</li> </ul>
	<b>Sound</b>	<ul style="list-style-type: none"> <li>Create and edit sounds. Control when they are heard, their volume, duration and rests.</li> </ul>	<ul style="list-style-type: none"> <li>Children add sounds to games, animations and stories using PurpleMash and Espresso Coding</li> </ul>
	<b>Draw</b>	<ul style="list-style-type: none"> <li>Control the shade of pens.</li> </ul>	<ul style="list-style-type: none"> <li>Children use a variety of "paint" techniques including water colour to create images and pictures</li> </ul>
	<b>Events</b>	<ul style="list-style-type: none"> <li>Specify conditions to trigger events.</li> </ul>	<ul style="list-style-type: none"> <li>Children create app games and races using Espresso Coding including variables, sequences and loops.</li> </ul>
	<b>Control</b>	<ul style="list-style-type: none"> <li>Use IF THEN conditions to control events or objects.</li> </ul>	<ul style="list-style-type: none"> <li>Children create app games and races using Espresso Coding including variables, sequences and loops.</li> </ul>
	<b>Sensing</b>	<ul style="list-style-type: none"> <li>Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions).</li> </ul>	<ul style="list-style-type: none"> <li>Children create app games and races using Espresso Coding including variables, sequences and loops.</li> </ul>

	<b>Variables and lists</b>	<ul style="list-style-type: none"> <li>• Use variables to store a value.</li> <li>• Use the functions define, set, change, show and hide to control the variables.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduced to the concept of points and score keeping in Espresso coding. Children are required to create a game that allows a score/time to be monitored by a variable indicator.</li> </ul>
	<b>Operators</b>	<ul style="list-style-type: none"> <li>• Use the Reporter operators</li> <li>() + ()</li> <li>() - ()</li> <li>() * ()</li> <li>() / ()</li> <li>to perform calculations.</li> </ul>	<ul style="list-style-type: none"> <li>• Children complete unit 4,3 (spreadsheets) in purple mash and create times table calculators and timed math quizzes.</li> </ul>
<p><b>Connect</b> This concept involves developing an understanding of how to safely connect with others.</p>		<ul style="list-style-type: none"> <li>• Contribute to blogs and vlogs that are moderated by teachers.</li> <li>• Give examples of the risks posed by online communications.</li> <li>• Understand the term 'copyright'.</li> <li>• Understand that comments made online that are hurtful or offensive are the same as bullying.</li> <li>• Understand how online services work.</li> </ul>	<ul style="list-style-type: none"> <li>• Children do a variety of online research and consider the reliability of sources.</li> <li>• Children conduct searches for images that are not copyrighted and why.</li> <li>• Children continue to contribute to class blogs and are instructed to leave comments on other people's posts.</li> <li>• Children learn about moderators and administrators and how they can help when encountering cyberbullying online.</li> </ul>
<p><b>Communicate</b> This concept involves using apps to communicate one's ideas.</p>		<ul style="list-style-type: none"> <li>• Use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally.</li> </ul>	<ul style="list-style-type: none"> <li>• Children cover unit 4.4 writing for different audiences in Purple Mash</li> <li>• Children will have access to class blogs, Dojo and 2email to message friends and their class teacher (monitored).</li> </ul>

<p><b>Collect</b> This concept involves developing an understanding of databases and their uses.</p>		<ul style="list-style-type: none"><li>• Devise and construct databases using applications designed for this purpose in areas across the curriculum.</li></ul>	<ul style="list-style-type: none"><li>• Children create spreadsheets to support numeracy and science-based work using 2calculate and 2investigate.</li></ul>
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