



## Subject- Computing



### Threshold Concepts and Milestones

Threshold Concept		Year 6	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>Set IF conditions for movements. Specify types of rotation giving the number of degrees.</li> </ul>	Use Discovery Coding to demonstrate control of an objects coordinates and rotation <a href="#">Level 6 - Rocket Blaster</a>
	<b>Looks</b>	<ul style="list-style-type: none"> <li>Change the position of objects between screen layers (send to back, bring to front).</li> </ul>	Use DrawPlus to create a layered drawing using a picture to trace (e.g. Marilyn Monroe in an Andy Warhol style). Chn to understand how to layer different objects to get the effect their require. Extension of roto-scoping a short video sequence (using drawing tablets).
	<b>Sound</b>	<ul style="list-style-type: none"> <li>Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation.</li> </ul>	Chn to create podcasts and soundscapes including short sounds created in Garageband. Use Audacity to do these.
	<b>Draw</b>	<ul style="list-style-type: none"> <li>Combine the use of pens with movement to create interesting effects.</li> </ul>	Use Control technology such as the Turtle (ProBot?) to create patterns using Purple Mash of Textease.
	<b>Events</b>	<ul style="list-style-type: none"> <li>Set events to control other events by 'broadcasting' information as a trigger.</li> </ul>	Use Scratch to control events with trigger functions (broadcast)
	<b>Control</b>	<ul style="list-style-type: none"> <li>Use IF THEN ELSE conditions to control events or objects.</li> </ul>	Use Scratch to allow chn to see the use of If ELSE statements

	<b>Sensing</b>	<ul style="list-style-type: none"> <li>• Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions.</li> </ul>	Chn to learn how to transfer properties from mouse pointer <a href="#">Espresso Coding</a>
	<b>Variables and lists</b>	<ul style="list-style-type: none"> <li>• Use lists to create a set of variables.</li> </ul>	Introduce Year 6 children to Python coding language to show how lists can be used for variables to make things such as quizzes or creating graphics.
	<b>Operators</b>	<ul style="list-style-type: none"> <li>• Use the Boolean operators  <code>() &lt; ()</code>  <code>() = ()</code>  <code>() &gt; ()</code>  <code>()and()</code>  <code>()or()</code>  <code>Not()</code>            to define conditions.</li> <li>• Use the Reporter operators  <code>() + ()</code>  <code>() - ()</code>  <code>() * ()</code>  <code>() / ()</code>            to perform calculations.  <code>Pick Random () to ()</code>  <code>Join () ()</code>  <code>Letter () of ()</code>  <code>Length of ()</code>  <code>() Mod ()</code> This reports the remainder after a division calculation  <code>Round ()</code>  <code>() of ()</code>.</li> </ul>	Using Boolean operators, the children will create programs that can count, choose random numbers within given ranges and use calculations to control other functions such as creating an interactive bar chart <a href="#">Discovery Coding</a> - Level 6 Shape-shifting

<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>• Collaborate with others online on sites approved and moderated by teachers.</li> <li>• Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems.</li> <li>• Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder.</li> <li>• Understand the effect of online comments and show responsibility and sensitivity when online.</li> <li>• Understand how simple networks are set up and used.</li> </ul>	<p>Use Explain Everything on the iPads to collaborate between small groups of children and see the power in working together.</p> <p>Use Class Story and children's posts to generate constructive feedback, allowing discussion of appropriate comments etc.</p> <p>Discuss and draw diagrams of simple networks that the chn may encounter e.g. at home or in school.</p>
<p><b>Communicate</b> This concept involves using apps to communicate one's ideas.</p>		<ul style="list-style-type: none"> <li>• Choose the most suitable applications and devices for the purposes of communication.</li> <li>• Use many of the advanced features in order to create high quality, professional or efficient communications.</li> </ul>	<p>Use PowerPoint as a journal to demonstrate what they have learnt during sections of work, using screenshots, video clips and voice recordings.</p>
<p><b>Collect</b> This concept involves developing an understanding of databases and their uses.</p>		<ul style="list-style-type: none"> <li>• Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.</li> </ul>	<p>Use databases to collect data on real-life events or occurrences (related to Citizenship?).</p>