

Title: Cato's Hike Programs: Cato's Hike		Year: 5 Duration:
Teaching Ideas	Subject	National Curriculum Objectives
<ul style="list-style-type: none"> <li>• Show app – what do you think the character is doing? what is a hike?</li> <li>• Children to give instructions for a mini hike around the classroom with possible task e.g. retrieve something from a bookcase. Blindfold children and discuss ambiguous instructions – Explain that when your mind can't process its own decisions it will get stuck – instructions must be perfect to succeed – this is the same for algorithms.</li> <li>• Children to complete first levels of cato's hike and use this opportunity to reinforce basic functions/usability of app.</li> <li>• Children to complete levels with repetition and selection being used.</li> <li>• Recap hiking around the classroom task – explain that this time we will use variables. For example when you step on something blue this must cause something to happen (e.g. turn right automatically) create a maze and children to navigate it using variables.</li> <li>• Children to complete cato's hike levels with variables, selection and repetition.</li> </ul>	<p>Computing</p> <p><u>Algorithm</u> – an instruction/direction which achieves a goal</p> <p><u>Program</u> – when a algorithm/instruction is inputted on a digital device</p> <p><u>Variable</u> – command that changes depending on another instruction.</p> <p>Repetition – programming certain codes to repeat to create more efficient algorithms</p>	<ul style="list-style-type: none"> <li>• Use logical reasoning to detect and correct errors in algorithms.</li> <li>• To use repetition in programs</li> <li>• To use selection in programs</li> <li>• To solve problems by decomposing them into smaller parts</li> <li>• Work with variables</li> </ul>

Title: Pixel Press Programs: Pixel Press Floors		Year: 5 Duration:
Teaching Ideas	Subject	National Curriculum Objectives
<ul style="list-style-type: none"> <li>- Introduce Pixel Press app and the idea of creating their own game. Floors is a 'platformer' style game, meaning players guide a character through obstacles to the end of the level. The app allows children to design their own platform game either by hand (on a paper sketch sheet) or within the app itself. Children design three levels within the app using glyphs (graphical symbol which is used to represent a character) from the sketch guide. Once completed they can use the iPad camera to scan their sketch sheet (if drawn by hand) for it to be analysed and added into the app. The app then allows children to design their level with different themes, colours and options.</li> <li>- Key factor of the game – is to create a game level using the glyphs, ensuring that each level is more fun and challenging.</li> <li>- Model using Pixel Press to create a level using the glyphs. Emphasise the importance of precision drawing on the sketch sheet. Allow children to guide you in the creation of a basic algorithms to design the level</li> <li>- Explain that play testing is an important part of game design and now that one obstacle is drawn, we should test to see if it works. Click the "Play" button to show how to test the level.</li> <li>- Use the 'How to Videos' to build upon children's skills and continual development of their levels</li> <li>- Once levels are to playable point, they should have other children play test and provide feedback. Adjustments can be made using the Floors in-app editor.</li> </ul>	<p>Computing</p> <p><u>Resources</u></p> <ul style="list-style-type: none"> <li>- I-Pads with Pixel Press app</li> <li>- Sketch Guide – <a href="http://www.projectpixelpress.com/printed-free-sketch-guide">http://www.projectpixelpress.com/printed-free-sketch-guide</a></li> <li>- How to Videos</li> </ul> <p><u>Key vocab</u></p> <p><b>Algorithm</b> – an instruction/direction which achieves a goal</p> <p><b>Program</b> – when an algorithm/instruction is inputted on a digital device</p> <p><b>Repetition</b> – programming certain codes to repeat to create more efficient algorithms</p>	<ul style="list-style-type: none"> <li>• To use repetition in programs</li> <li>• To use selection in programs</li> <li>• To solve problems by decomposing them into smaller parts</li> <li>• Use logical reasoning to explain how some simple algorithms work.</li> </ul>