Year 1 – Maze Explorers

Meeting Criteria	Higher Attainer
Knowledge • To explain that an algorithm is a set of instructions. • To understand the functionality of the direction keys. • To understand how to create and debug a set of instructions (algorithm). • To understand how to change and extend the algorithm list. • To know that any unexpected outcome is due to the code that they have created and make logical attempts to try to fix this code rather than attributing it to a fault with the computer understanding the instructions. • To explain the possible ways to make their turtle move in the different levels of 2Go. • To begin to understand refinement of instruction. **Skills** • To work out what is wrong when the steps are out of order in instructions. • To create a longer algorithm for an activity. • To plan their moves several steps at a time towards the goal rather than one step at a time. • To 'read' the code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. • To be able to sometimes work out where the turtle will end up at the end of the program and when they are incorrect, make good attempts to work out why. • To use simple direction keys in conjunction with a number pad (add a unit of measurement) to move an on-screen character to specific locations on a screen. • To demonstrate that their sequence of buttons relates to their thinking of how to solve a problem of getting character from point A to point B. • To successfully use diagonal direction keys combined with number pad to refine their solution for solving a problem. • To make a screen character 'sprite' navigate to a specific place using 2Go. • To use the 'list' feature in 2Go to generate an algorithm to solve a given problem. • To test their instructions until they finally make an algorithm which works. • To create increasingly longer and more complex algorithms, including number of units moved and diagonal controls. • To debug an algorithm and then change it to perform an intended outcome.	• Children can anticipate several steps with ease. • Children challenge themselves by creating their own complex challenges. • Children choose to plan their moves several steps at a time towards the goal.

• **To use alternative algorithms to achieve the same outcomes.** **Vocabulary** Know, understand and accurately use the following words/phrases: • **direction** • **challenge** • **arrow** • **undo** • **rewind** • **forward** • **backwards** • **right turn** • **left turn** • **debug** • **instruction** • **algorithm**	