Subject: Computing

Assessment Y1/2

Unit 1.5 Maze Explorers

KS1 Programmes of Study
Program of study
Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, 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.

Additional guidance
Purpose of study
A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.
Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Attainment targets
By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Knowledge, skills and concepts
In this unit, the children will aim:

- To understand the functionality of the direction keys.
- To understand how to create and debug a set of instructions (algorithm).
- To use the additional direction keys as part of an algorithm.
- To understand how to change and extend the algorithm list.
- To create a longer algorithm for an activity.
- To set challenges for peers.
- To access peer challenges set by the teacher as 2Dos.

Key Questions

- What is 2go?
- How do I undo a mistake on 2go?

Key Vocabulary
Algorithm, challenge, command, direction, instruction, left, right, route, undo, unit

Cultural Capital

Key Assessment Opportunity

- **Write a set of instructions (algorithm) to move a beetbot from one place to another.**

Assessment Task **Write a set of instructions (algorithm) to move a beetbot from one place to another.**	**Year 1 WTS** - With support, children can explain the possible ways to make their turtle move. When looking at a program they can 'read' the code one line at a time but might not be able to envision the bigger picture of the overall effect of the program.	
	Year 1 EXS - Children can explain the possible ways to make their turtle move in the different levels of 2go. - When looking at a program they can 'read' code one line at a time and make good attempts to envision the bigger pictures of the overall effect of the program. - Children will start to make good attempts to work out why the turtle may have moved incorrectly.	
	Year 1 GDS - Children can explain the possible ways to make their turtle move in the different levels of 2go - When looking at a program they can 'read' the code one line and envision the bigger picture of the overall program - When presented with an example they can often work out where the turtle will end up at the end of the program and when they are incorrect they are able to work out why	
	Year 2 WTS - Children can explain the possible ways to make their turtle move in the different levels of 2go - When looking at a program they can 'read' the code one line and envision the bigger picture of the overall program - When presented with an example they can often work out where the turtle will end up at the end of the program and when they are incorrect they are able to work out why	
	Year 2 EXS - Children can explain that an algorithm is a set of instructions to complete a task - They have turned algorithms of more than one step into code - Children show an awareness of the need to be precise in their designs so that algorithms can be successfully translated into code - Children can use a planning format on paper before implementing on screen within 2code.	
	Year 2 GDS - Children can explain and give examples that an algorithm is a set of instructions to complete a specific task - They can create complex and logical algorithms of several steps that accomplish the aim of the task that can be easily utilized to create executable code. - Children show awareness of the need to be precise in their designs so that algorithms can be successfully translated into code.	

Assessment notes / evaluation – include SEN / PP next step learning and areas that need more focus

Year 1	Working below expectations	Working within Expected Standard	Working above expected
Target	**14 – 20%** **(no more than 2 children)**	**80 %- 86%**	**20%**
Term 1			
Term 2			
Term 3			

Year 2	Working below expectations	Working within Expected Standard	Working above expected
Target	**14 – 20%** **(no more than 2 children)**	**80 %- 86%**	**20%**
Term 1			
Term 2			
Term 3			