Medium term Plan for Computing		
Badgers Y1 and Y2 – Programming- Autumn 1		
Bee-Bots		**Hook:** Video- Real life robots Children will watch a video about robots in everyday life, looking at how they perform everyday tasks and how they help make the world run smoother. 
Topic Outcome: Children will be able to create instructions for a person or robot to follow Children will be introduced to computer errors and learn to identify and fix any errors in their instructions.		**Topic Reflection:** The children will use their knowledge of instructions, algorithms and debugging, to identify errors in given code. They will discuss why they know what error is causing the problem and how they will fix it.
	Statutory requirements:	**Vocabulary**
<u>EYFS</u> • To understand arrows and directions.  • Be able to follow simple instruction when broken down. • To be exposed to a variety of technology • Computational thinking within "Understanding the World"	<u>KS1 Statutory Requirements</u> • Understand what and algorithm is and how they are used. • To create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs. • Use technology safely and respectfully	Start End Next Command Error Instructions Program Algorithm debug  

<u>Previous Skills</u>	<u>Previous Knowledge</u>	<u>Previous Understanding</u>
Identify and list the steps of a known task in order Understand that we control computers by giving them instructions Understand what an algorithm is.	I know that a Bee-Bot only moves in specific ways. I know that for a problem to be solved a solution must be found. I know how to follow simple instructions	I understand that a robot or computer can perform tasks. I understand that how a Bee-Bot moves I understand that instructions have an order.

I can predict the outcome of a set of instructions		

	Learning Objective	Lesson Outcome	Badgers 1 / Otter 2 Success	Badgers 2 Success	Vocabulary
Lesson 1	LO: To create clear instructions to give direction	Explore how to give clear instructions by role-playing as robots and programmers	I can explain that robots can only do what they are programmed to do I can use simple commands to create instructions. I can carry out instructions	I can explain that robots can only do what they are programmed to do I can use simple commands to create instructions. I can carry out instructions I can follow multiple instructions at once.	command error instructions program algorithm
Lesson 2	LO: To explore commands through Bee-Bots	Explore programming through playing with Bee-Bots and their specific set of commands.	I can explain what each button on the Bee-Bot does. I can use Bee-Bot commands to create a set of instructions	I can explain what each button on the Bee-Bot does. I can use Bee-Bot commands to create a set of instructions I can check and correct instructions.	command error instructions program

Lesson 3	LO: To programme a robot using instructions	To programme Bee-Bots to follow a planned route through a maze	I can break down a task into steps. I can program a Bee-Bot to complete a task.	I can break down a task into steps. I can program a Bee-Bot to complete a task. I can check and correct instructions	command error instructions program debug
Lesson 4	LO: To create instructions to solve problems.	Explore how to solve problems by creating and testing Bee-Bot mazes	I can create a maze for a Bee-Bot to move through. I can solve the maze by programming a Bee-Bot.	I can create a maze for a Bee-Bot to move through. I can check that my maze can be solved by programming the Bee-Bot. I can change my maze if it cannot be solved.	command error instructions program debug algorithm
Lesson 5	LO: To identify and correct errors in instructions	Explore how to spot and fix errors in Bee-Bot instructions	I can check instructions to see if they work I can spot errors in instructions	I can check instructions to see if they work I can spot errors in instructions I can fix errors so instructions work properly/	command error instructions program

Endpoints:	Knowledge & Understanding: I know humans need to give robots instructions to follow I know a robot or computer will follow instructions exactly. I know instructions must be given in the correct language for the robot/computer to understand. I know that an algorithm is a set of instructions. I know that an algorithm must give ever step of a task. I understand that instructions must be given in a clear sequenced order. I understand that is an algorithm has an error then it does not give the expected results. I know that an error can be the result of sequencing issues, unclear instructions or missing steps. Skills: Recognise that robots are programmed by humans. Explain what they are trying to achieve. Write clear, sequenced algorithms for familiar tasks. Be able to use terms like 'start' 'end' and 'next to describe their steps Change their instructions into code. Begin to identify errors. Make suggestions on how to fix an error in their instructions.