Newquay Primary Academy –Autumn Term 2 Sequence– Computing

	RECEPTION	YEAR 1 Programming A – Moving a robot	YEAR 2 Programming A – robot algorithms
	Prior knowledge…	**Prior knowledge…** In EYFS children have experienced using I pads and used various programs on the interactive white board.	**Prior knowledge…** Children have explored using commands to programme a floor robot and have begun predicting outcomes.
INTENT		Children will be introduced to early programming concepts. Learners will explore using individual commands, both with other learners and as part of a computer program. They will identify what each command for the floor robot does, and use that knowledge to start predicting the outcome of programs	This unit develops learners' understanding of instructions in sequences and the use of logical reasoning to predict outcomes. Learners will use given commands in different orders to investigate how the order affects the outcome. They will also learn about design in programming. They will develop artwork and test it for use in a program. They will design algorithms and then test those algorithms as programs and debug them.
VOCABULARY / STICKY KNOWLEDGE		Command, direction, sequence, program, left, right, forwards, backwards, turn, move, north, east, south, west	Sequence, outcome, algorithm, debug
SEQUENCE OF LESSONS		1. Internet safety - Online relationships - I can explain why it is important to be considerate and kind to people online and to respect their choices. 2. Buttons – To explain what a given command will do 3. Directions – To act out a given word 4. Forwards and backwards - To combine 'forwards' and 'backwards' commands to make a sequence 5. Four directions - To combine four direction commands to make sequences 6. Getting there - To plan a simple program 7. Routes - To find more than one solution to a problem	1. Internet safety 2. Giving instructions - To describe a series of instructions as a sequence 3. Same but different - To explain what happens when we change the order of instructions 4. Making predictions - To use logical reasoning to predict the outcome of a program 5. Mats and routes - To explain that programming projects can have code and artwork 6. Algorithm design - To design an algorithm 7. Break it down - To create and debug a program that I have written
OUTCOME / COMPOSITE		To design an algorithm to navigate their robot across a simple map.	To design an algorithm to navigate their robot across an obstacle course, collecting points by covering certain squares and losing points if they hit an obstacle.