Summer 1	**Lostwithiel Primary School**	**Year 1**
Computer Science - Programming	Computing Knowledge Organiser	Cherry Tree Class

Prior Learning:

During reception children will have used programmable toys using simple instructions.

Key Computing Learning:

Children will know what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Children will know that:

- Beebot is a type of programmable toy that can move in different directions.
- Beebot needs instructions about where we want it to go. We use the direction buttons on its back. Beebot can move forwards and backwards. Beebot can also turn left or right. If you press the left button once, Beebot will make a quarter turn.
- Beebot will only follow the instructions we give it.
- You can give Beebot instructions one at a time or link them up to make a sequence of moves.
- This sequence of instructions is called an algorithm.
- An algorithm can be recorded on paper or using arrow cards so that other people can follow them.
- Sometimes, Beebot might not go where you want him to. This means you might have a mistake or 'bug' in your algorithm. You will need to correct or debug the algorithm by checking and correcting it.
- When the Beebot has reached his destination, you must press the clear button to make him forget the old algorithm.
- There are lots of other objects around the home that need instructions to be able to work.

Software/Hardware Resources		Key Computing Vocabulary	
Ipads with the Beebot App installed Beebot floor robots 		Turn	Move in a circular direction
		Left	Turn one quarter turn left
		Right	Turn one quarter turn right
		Forwards	Move straight forward
		Backwards	Moving back in a straight line to where they just came from
		Route	To send or direct something
		instructions	Directions or ordersequen
		Sequence	A seried of connected instructions.
		Algorithm	A set of instructions for a computer
		debug	Correct a mistake in an algorithm

Computing Outcomes	Cross Curricular Links
Videos of the Beebot following the algorithms written will be saved to SeeSaw. Children will have simple written instructions for the Beebot.	**Geography:** Children will explore a map of the school grounds using beebot. They will develop their own algorithm to travel from a starting point to a given destination. They will program a given algorithm into Beebot and be able to predict it's destination by following the route.

Linked documents: Class Overview, Computing Whole School Progression document and Class Medium Term Planning.