Autumn 1

Lostwithiel Primary School

Year 2

Computer Science - Programing

Computing Knowledge Organiser

Oak Tree Class

Prior Learning:

Move the floor robot one-step at a time to create a sequence of moves. Give the floor robot a sequence of instructions (algorithm) to travel a specified route one move at a time. Give and follow instructions, which include straight and turning commands, one at a time (with and without a computer). Simply record and carry out an algorithm describing what happened. Link up to eight moves together in one continuous algorithm. Debug (correct) mistakes by working backwards. List other objects in the home, which follow instructions e.g. washing machine.

Key Computing Knowledge:

- By pressing the arrow button, the floor turtle is programmed to make one quarter turn (either left or right depending on the direction of the arrow pressed).
- By pressing the arrow button twice, the floor turtle is programmed to make a half turn.
- By pressing the arrow button three times, the floor turtle is programmed to make three quarters of a turn.
- An algorithm can program the floor robot to move in one continuous movement by entering all instructions and then 'Go'.
- The floor robot's destination can be predicted by picturing the algorithm before it starts.
- You can debug an algorithm by watching it carefully and finding the point it behaves unexpectedly.
- Algorithms can be recorded on paper so others can follow them.
- Algorithms can be written as instructions for a screen sprite.
- 'Repeat' (loop) will command the sprite to repeat the last move.
- 'When' command will command the sprite to start moving after a click or jump.
- An algorithm can be written as a short 'story' for a sprite.
- Algorithms can be edited and refined to ensure it is a clear sequence of commands.

Software/Hardware Resources

BeeBot Robot

Daisy The Dinosaur App

Key Computing Vocabulary

algorithm	Set of instructions.	**turn**	Move in a circular direction.
debug	Correct mistakes.	**half**	When something is split in two equal parts.
repeat	To do again.	**quarter**	When soemthing is split in four equal parts.
when		**predict**	A sensible guess.
forwards	Moving in front from a starting point.	**destination**	Where something is travelling to.
backwards	Moving behind from a starting point.	**sprite**	A computer graphic which moves.

Computing Outcomes

1. Children will save a photograph of their written algorithm, including a range of movements, as well as a film saved to Seesaw of the floor robot completing the route programmed.
2. Children will save their programming of Daisy Dinosaur.

Cross Curricular Links

Geography - Use simple compass directions (North, South, East, West) and locational and directional language (ie, near and far; left and right) to describe the location of features and routes on a map.

Maths – Use mathematical vocabulary to describe position, direction and movement including movement in a straight line.

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