

Spring 1

Lostwithiel Primary School

Year 4/5
Maple Class



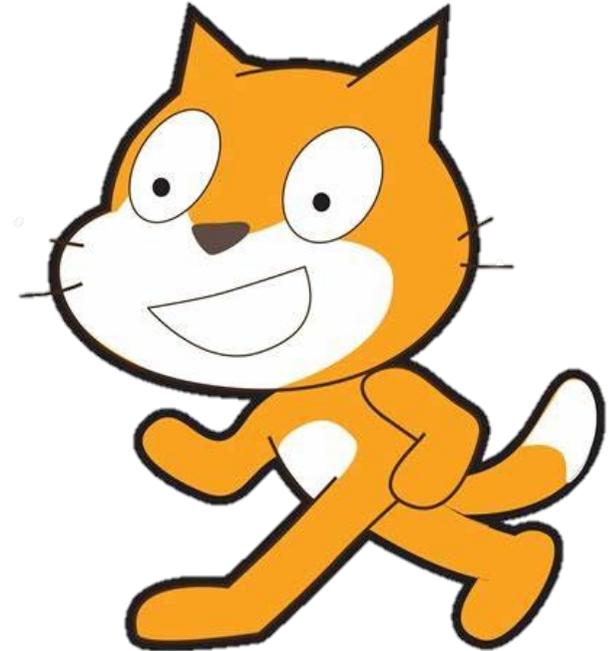
Computer Science - Coding/Scratch

Computing Knowledge Organiser

Prior Learning: In Year 1 and 2 children used a floor robot to explore programming by writing and testing self-written algorithms. In Year 2 they will have also used Daisy the Dinosaur App to begin coding. Year 3 children will have progressed to Hopscotch where they will have learnt how to use the loop command as well as using 'if' and 'when' to control their sprite. They will have written and debugged algorithms to draw 2D shapes using the pen-up and pen-down commands.

Key Computing Knowledge Y4:

- Know where to find tools in Scratch to be able to programme the sprite.
- Know how to create a background and sprite for a game.
- Know how to add inputs to control their sprite.
- Be able to use conditional statements (if... then) within their scratch game.
- Know that:
 - Algorithms can include selection (if) and repetition (loops).
 - Algorithms may be broken down into parts (procedures), and that each part contains its own algorithm (instruction).
 - It can be easier to plan, test and correct parts of an algorithm separately.
 - A program is a sequence of statements written in a programming language.
 - Programs can be created using visual tools.



Key Computing Knowledge Y5:

- Are able to use external triggers and infinite loops to control sprites.
- Know how to create and edit variables.
- Are able to use a variety of conditional statements to create wanted movement.
- Pupils should know that:
 - algorithms can be split (decomposed) into parts (called procedures) each of which has its own algorithm.
 - algorithms can include selection (if) and repetition (loops)
 - programmes are planned
 - values (variables) can select which procedure is performed.

Resources		Key Computing Vocabulary		
<ul style="list-style-type: none"> • Ipads • Scratch app 	sprite	A small image or character used in animated games.	conditional statement	A command used to perform an action only when other actions are complete.
	input	Any data sent to a computer for processing.	algorithm	A set of instructions designed to perform a specific task
	repetition	A sequence of instructions that is continually repeated until a certain condition is reached.	variables	A value that can change depending on conditions/information passed to a program
	output	Data generated by a computer.	procedures	A series of actions conducted in a certain order or manner.
	external triggers	Something outside of the computer software, such as a tap, shake or video sensing, which causes a change in the sprite's behaviour.		
Computing Outcomes			Cross Curricular Links	
<ul style="list-style-type: none"> • Create a maze game and a splat game for younger children to test 				

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

