Topic: Computing	Term: Summer 2	Year: 4	Duration: 6 weeks

Eden Park Primary School Knowledge Organiser

Prior Knowledge

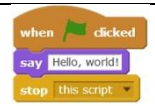
In year 2, you learnt:

- What an algorithm is
- How to create a sequence of commands to produce an outcome
- To create a code to produce an outcome
- How to use Scratch Jr. from using programming blocks to use, modify and create.
- To create quiz on Scratch Jr. as part of a programming project.

The Powerful Knowledge we will take away from this Learning Enquiry:

This enquiry is about expanding your knowledge and skill of Computer Science. You will create programs by planning, modifying, and testing commands to create shapes and patterns through a text-based programming language and a block-based programming language. You will look at the difference between count-controlled and infinite loops and use your knowledge to modify existing animations and games using repetition. Your final project is to design and create a game which uses repetition, applying stages of programming design throughout.

Our key vocabulary

Word	Meaning	Image/Example
Block-based programming Language	Block-based coding is a form of programming language where the developer issues instructions by dragging and dropping blocks.	
Outcome	A result or effect of an action.	Creating a code to make a shape. The creation of the shape is the outcome.
Modify	Make partial or minor changes to something. This could be to improve it or learn from it.	Changing parts of a code someone has already created.
Repeated Pattern	A pattern is the repeated or regular way in which something happens or is done.	
Sequence	Sequence is the order in which the statements are executed. The sequence of a program is extremely important as carrying out instructions in the wrong order leads to a program performing incorrectly.	Using a specific order of code blocks to make something turn and move.
Count-controlled loop	A count-controlled loop is so called because it uses a counter to keep track of how many times the algorithm has iterated.	If you wanted to code something to move 4 times, you would a counter-controlled loop.
Infinite loop	An infinite loop (sometimes called an endless loop) is a piece of coding that lacks a functional exit so that it repeats indefinitely.	To code something to turn continously, you would use an inifintie loop.
Procedure	An established or official way of doing something	If you want to achieve an outcome in coding, you will follow a procedure of codes.
Repetition	The action of repeating something that has already been said or written.	Repetition in a program means that **lines of code will be run multiple times**

Examples of Coding you will use

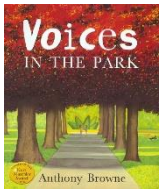
A controlled loop to programme a square

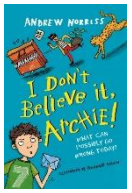
A controlled loop to programme a triangle

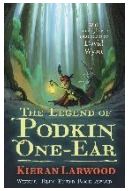
Example of a counter-controlled loop

Example of an infinite loop

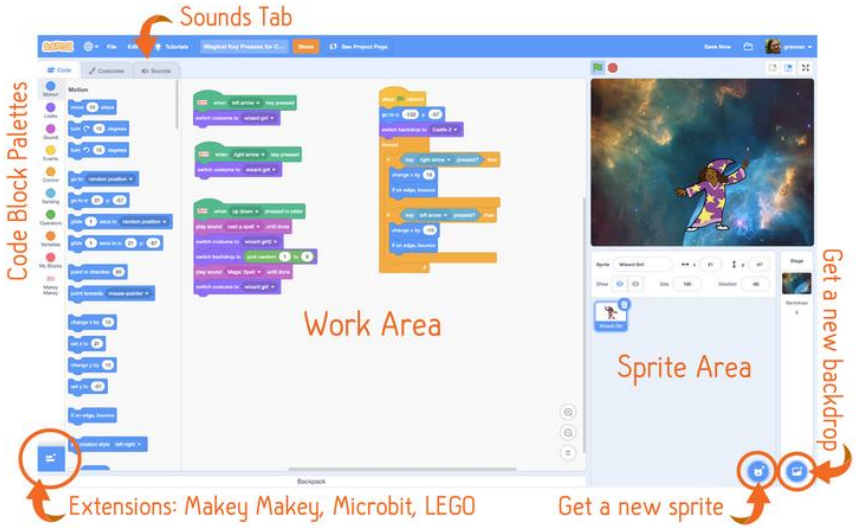
Focussed Literacy texts:







Guide of how to use Scratch!



Text Based Programming Software