



Computing

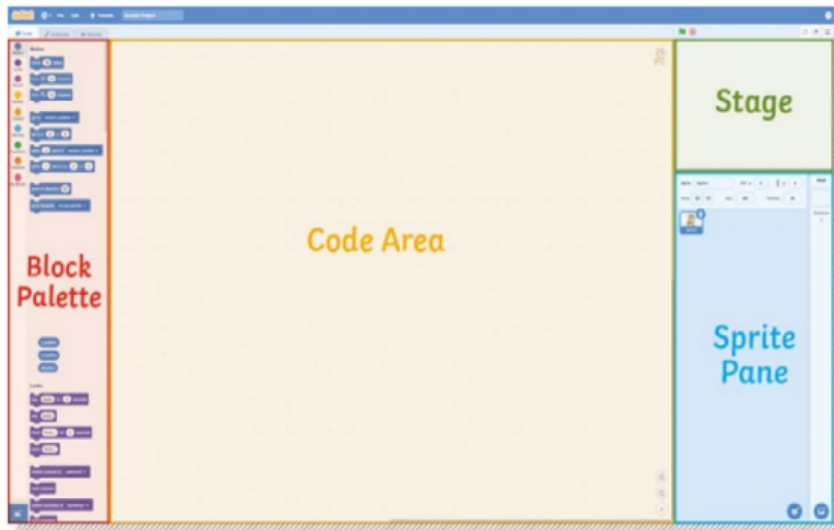
Coding

Lent 1

What Is an Algorithm?

Algorithms on a computer are exactly the same as everyday **algorithms**. They are a set of **sequenced** instructions or rules for solving a problem or completing a task in a logical order.

Scratch Interface



Key Vocabulary

algorithm	A set of sequenced instructions or rules for solving a problem or completing a task in a logical order.
debug	To find, remove or correct errors in a computer program.
deconstruct	To break down existing algorithms into smaller parts to see what they want to do.
sequence	The order in which a set of instructions is performed or carried out.
costumes	A way to change the appearance of a sprite.
backdrop	An image that can be shown on the Stage .
variable	A piece of data that can be recorded in the memory of Scratch. A variable can be altered and changed.
consequence	What happens as a result of actions or choices made within the game.
repetition	When a command or process is repeated.




Scratch Blocks

There are nine categories of blocks in Scratch. Blocks are shaped like puzzle pieces as they fit and connect together vertically to create an **algorithm**.

Block Categories

Each block category has its own set of coloured blocks, which each have their own function.

- 
 Motion
- 
 Sensing
- 
 Looks
- 
 Operators
- 
 Sound
- 
 Variables
- 
 Events
- 
 My Blocks
- 
 Control

Key Blocks



This block starts an **algorithm** when the green flag is clicked.



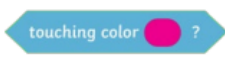
This block uses the input of a specified key to begin an **algorithm**.



This block makes the code inside the loop repeat continuously.



This block determines the outcome of a condition.



This block detects if a sprite is touching a specific colour.



This block changes the **backdrop** to one from the drop-down menu.

Scratch Paint Editor



Select - This cursor can be used to move an object, resize and rotate it.



Brush - This tool allows you to draw.



Fill - This tool allows you to fill in an object.



Line - This tool is used to draw straight lines.



Reshape - This tool can be used to bend or change shapes.



Eraser - This tool allows you to remove any drawings you have made.



Text - This tool can be used to type words onto a backdrop.



Circle - This tool allows you to draw circles or ovals.



Rectangle - This tool allows you to draw squares or rectangles.