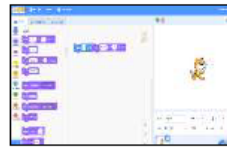


Year 5: Computing—Programming 1

The Basics of Scratch

-**What is Scratch?** Scratch is a website/ app that lets us code our own quizzes, stories, games and animations.

-Scratch helps us to learn how to use programming language, whilst also being creative and using problem-solving skills.



There are three main areas in Scratch:

-**The Blocks Palette** (on the left) contain all of the different blocks: puzzle piece commands which control the animation.



-**Code Area** (in the middle) is where the blocks are placed to create a program.



-**Stage with Sprite** (right) is where the output of the program is presented. The sprite is the character.



Attributes: There are three attributes of the sprite which we can change to make our animation: Code, Costumes, Sounds.

-Event Blocks:

Event blocks are coloured yellow and are used to sense different events that happen e.g., the green flag being clicked.



-Action Blocks: Action blocks include 'Motion' blocks, 'Sound' blocks and 'Looks' blocks. They make the sprite move, make sounds and change appearance.



KEY VOCABULARY:



Programming: the process or activity of writing computer programs.



Scratch: A free programming language and user interface where you can program your own interactive stories, games and animations.



Selection: Where a decision or selection must be made in a program.



Conditions: Statements created by the programmer to decide if an action in the program is true or false.



Algorithm: A set of rules to be followed in calculations.



Sequence: The order in which instructions occur and are processed.



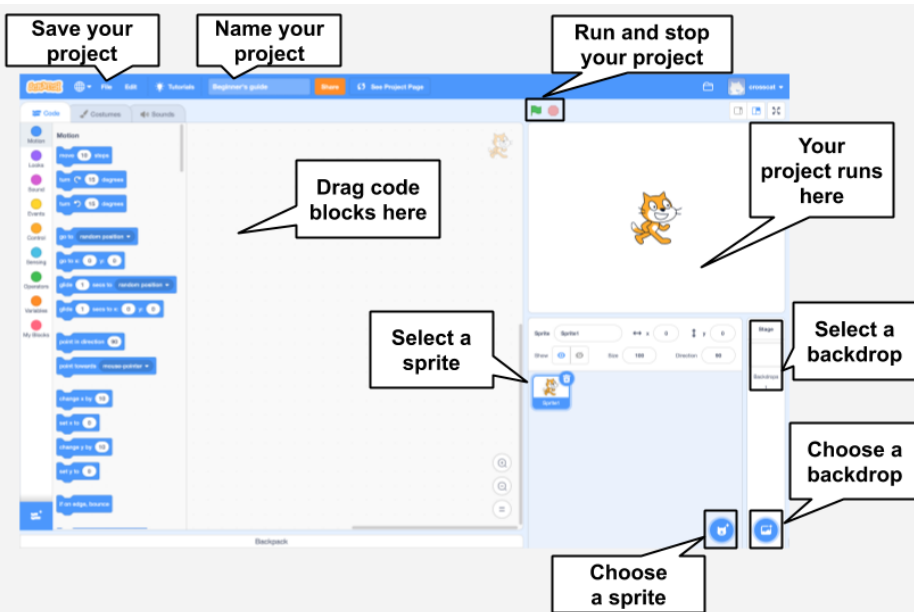
Trialling: A small-scale test before using the full program.



Debug: To detect and remove errors from a program.

THE MAIN WINDOW:

SELECTIONS AND CONDITIONS:



-Creating Conditions: The 'If-then' command block helps us to create conditions. It is one of the darker orange control blocks. Other blocks are placed inside the 'If-then' blocks to create conditions.

The 'senses' blocks (light blue) create the 'trigger' (e.g. when a certain key is pressed). We can change the trigger by pressing the downward arrow and selecting from the range of keys/ actions. The 'actions' blocks (e.g. motions, sounds, etc.) are then used to program what will happen when the 'senses' command is triggered.

-Different Outcomes: The 'If-then-else' command block helps us to write programs that have selections with two outcomes.

-Actions to be carried out if the condition is 'true' (if the conditions of the 'sense' command are met) are placed below 'then.' Actions to be carried out if the condition is 'false' (e.g. if any other key is pressed) go below 'else.'

-The 'forever' block means that the command will happen continually.

