

Year 7 Scratch Knowledge Organiser

What is programming

Programming is writing computer code to create a program, in order to solve a problem. Programs consist of a series of instructions to tell a computer exactly what to do and how to do it.

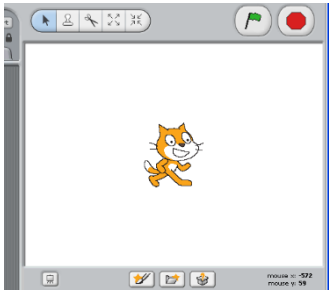
Sprite

A sprite is a character or object that can be created and coded in Scratch



Stage

The **stage** is where a Scratch project is physically run, so when one plays a game, the **stage** is the window in which it is run.



Scratch's coordinate system uses **2 coordinates**, "**X position**" and "**Y position**", to determine the location of a sprite on the stage. The "**X position**" value determines the horizontal location of the sprite and the "**Y position**" value determines the vertical location or height.

COMPUTATIONAL THINKING

DECOMPOSITION

BREAK DOWN DATA AND PROBLEMS INTO SMALLER PARTS

PATTERN RECOGNITION

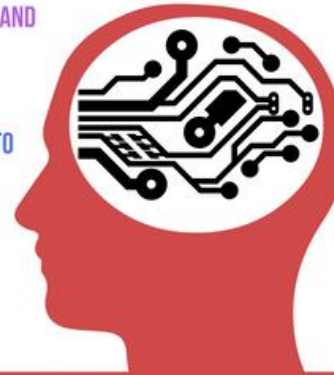
OBSERVE PATTERNS AND TRENDS IN DATA

ALGORITHMS

DETERMINE WHAT STEPS ARE NEEDED TO SOLVE A PROBLEM

ABSTRACTION

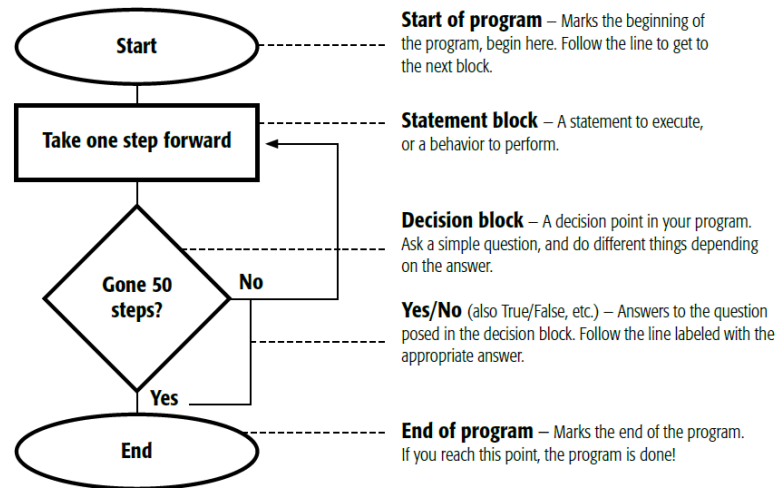
REMOVE DETAILS AND EXTRACT RELEVANT INFORMATION



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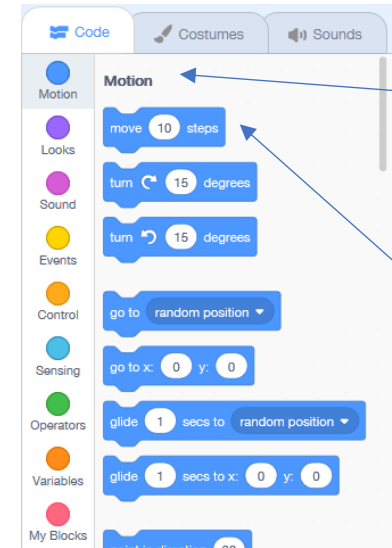
Flowcharts

We use flowcharts to help us put instructions in order.



Code Block

Blocks are colour coded into different sections and are used to program the sprites



Shown are some of the '**Motion**' blocks such as '**move 10 steps**'

Sequences

You program a **sprite** by joining two or more **blocks** together. You must make sure the order of events is correct when building sequences.

What will the sequence below do to the sprite?



ANSWER: