Year 4 Computer Science

Key Facts

Key Vocabulary:

coding writing instructions for a computer.

program a finished set of instructions.

sequence a set of actions or events that must be carried out in the same order every time.

debugging finding and correcting errors in programming code.

sprite programmable objects and character.

Links to prior learning:

Robot Mouse and Coding apps – Reception

Bee-Bots & Algorithms – Year 1

Algorithms & Scratch Jr – Year 2

Scratch – Year 3

Scratch

It is very important to follow instructions carefully to ensure the correct outcome. You must regularly run your program as you are writing it, to check it works. This might be after adding each new command. If it doesn't do as you wished, you should debug your program.
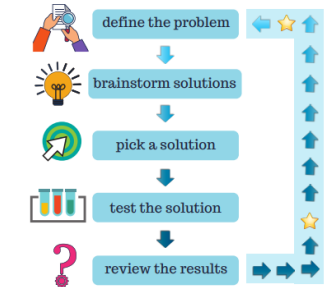
It is possible to change the "costume" of a sprite. This will change it's appearance. You can also change the colour of any sprite by the "Change colour effect" tool (found in the "Looks" section. The "Wait" command (found in the "Control" section) will cause the program to wait for the time entered. This command can slow your animation down. The "turn" command (found in the Motion section") will allow a sprite to spin. You must input the number of degrees you wish to turn.

Kodable and Bebras Challenge

Sequence, also known as an order of events, is a set of instructions. If the sequence, or order of the instructions, given to the computer is wrong, the program won't run correctly. Sequence is important in a computer algorithm because the correct order of steps is needed for the algorithm work. Conditional statements are "if, then" logic statements that enable a computer program to act differently each time it runs. Loops are essential for many of the repetitive tasks commonly required in programming. The main purpose of loops is to prevent repetitive code. Typing out the same code over and over increases programming time and likeliness for bugs.