

Programming B – Repetition in Games



We are going to be creating our own games! We will be looking at instructions and how often they must be repeated to get a task completed. We will then be using the programming software 'Scratch' to design our games and create algorithms out of code to allow our characters to move.

A lot of games use repeated code such as forwards, backwards, left and right, to allow the characters to move around the game as the player presses certain keys on their keyboards.

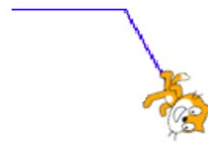
A



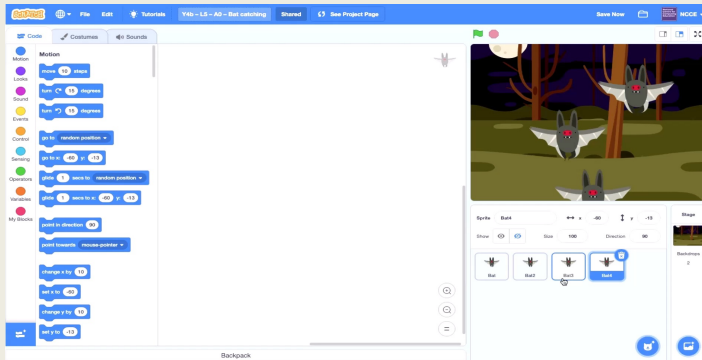
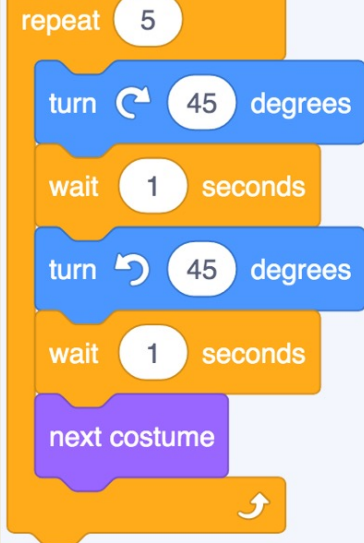
B



C



The code tells the character what to do, how long to do it for and when to stop. Everything you want the character to do has to be written as an algorithm, so it knows what to do!





NPA Knowledge Organiser: Year 4 Computing - Summer



Imagine you drop ten pencils on the floor. You need to pick up all ten pencils and put them back into the pot.

The code instructions would look like this...

Pick up pencil	}	Repeat ten times
Put in pot		

This is the basis of the algorithm for a sprite, you are giving them instructions to follow to complete a task.

WORD	DEFINITION
SCRATCH	Name of the software used to programme games and create different algorithms.
PROGRAMMING	The process or activity of writing computer programs.
SPRITE	A computer graphic which may be moved <u>on-screen</u>
BLOCKS	A large piece of text processed as one
LOOP	A <u>programmed</u> sequence of instructions that is repeated until or while a particular condition is satisfied.
DUPLICATE	One of two or more identical things.
MODIFY	Make partial or minor changes to (something).
ANIMATE	Bring to life.
COSTUME	The appearance of the sprite.
ALGORITHM	A process or set of rules to be followed by a computer.
VALUE	Another word for a number.