

Year 5 Programming Making Games Knowledge Organiser

Key Learning	Self-Assessment		
	WT	A	WA
Can use selection if touching another sprite then... do something			
Can move a sprite with the mouse			
Can use selection – if on the edge bounce block			
Can understand the point in direction tools			
I can use nested loops to make sprites move			
I can make and use a simple variable			
I can create and use a procedure that helps run code over and over, so I don't have to re-write it			
I can make a sprite move by using selection within a nested loop when the arrow key is pressed			
I understand the difference between the x and y axis and effectively use this knowledge to create a falling sprite			

New key words we will use in year 5 Programming Making Games

Variable – A way in which computer programs can store, retrieve or change data, such as a score, the time left, or a user's name

Selection – A programming construct which one section of code or another is executed depending on whether a particular condition is met.

Abstraction – is the process of filtering out – ignoring - the characteristics of patterns that we don't need in order to concentrate on those that we do.

Sensing – such as detecting if touching, or ask

Procedure - is a piece of code that can be run over and over again, which is useful as it prevents us from having to re-write the same code multiple times.

Key words and prior learning from year 4 programming units

Count-controlled loop - this is used in a program when we need to repeat something a number of times

Input – this is an event that triggers an action/code block

Costumes – the way a sprite looks – these can be used to show movement

Broadcast – an input that can be used to trigger events

Quadrant x and y axis – x axis is the horizontal line and the y axis is the vertical line which divide the plane into four sections called quadrants which provide coordinates

Set point – a script that will command a sprite to reset its position on the stage or to reset a variable if a count is used to display a score or lives lost in a game

Continuous loop – controls a program to run the same instruction continuously until it is interrupted

Selection/condition – where a section of code is run only if a condition is met. In programming, there are occasions when a decision needs to be made. Selection is the process of making a decision. The result of the decision determines which path the program will take next

If..then..Statement – used in programming as part of the selection code to trigger a specific path within the program depending upon a decision being made. IF Condition A is True, THEN carry out Action A






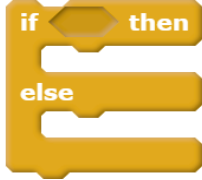



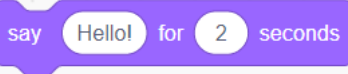


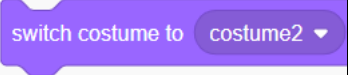

Who uses skills like these?



- Computer game makers
- Artificial intelligence programming - e.g. how to find links that a human might miss, or advertising products we may be interested in
- digital marketing
- App makers
- Systems engineers

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These are human command algorithms and how they look as Scratch Code blocks, highlight which once you are confident to use in Scratch

Algorithm Level	Scratch blocks Code Level	Algorithm Level	Scratch blocks Code Level	Algorithm Level	Scratch blocks Code Level
Start together		Pause until		If or when	
Space key touched Press space key Use space key		Pause		If or when Else	
Character clicked Start when character clicked		Always loop Loop always 'Move'		Ask Question "Whats is your name?" Answer	
"Hello" for 2 seconds		Do 3 times "Hello"		Set 'my variable' to 0 e.g. start variable at 0	
Change what the character looks like		Loop until		Change 'my variable' by +1 e.g. increase speed by +1	