Key Vocabulary…

Term	Definition
Algorithm	A set of step-by-step instructions.
Code	A set of program instructions.
Command	An instruction for a computer to perform a specific task.
Sprite	A character in Scratch that can be coded.
Stage	The stage is the background of the project. The stage can have different costumes
Code block	Code blocks are used to create code in Scratch. They fit together like jigsaw pieces to create programs
Costume	A costume is a different appearance for the same sprite. A sprite can have more than one costume.
Loop	A set of instructions that repeats until a condition is met. Loops make code simpler because they remove unnecessary steps.
Variable	A variable is like a box that the program uses to store a value. The content of the box can change. A variable can only store one value at a time.
Conditional Statement	A set of rules that IF a condition is met then an action is performed.

Picture This…

This is a sprite that can be coded in Scratch.

The stage is the area the sprite moves in.
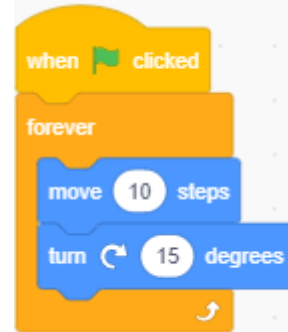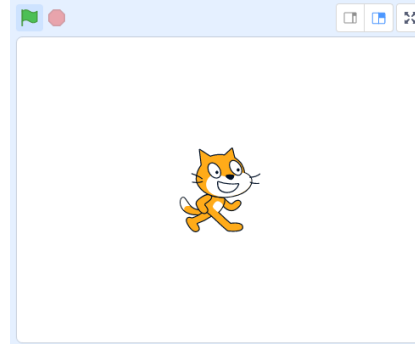
A script that is used to animate a sprite.

```
when [flag] clicked
forever
  move 10 steps
  turn (C) 15 degrees
```

Always Remember…

Most people think a variable contains numbers, but they can also contain text or True and False values.

Coding helps with maths skills, because games often work using coordinates.

The order in which code blocks are created is important to make sure a program works.

If and If else blocks are used to make decisions in Scratch.

The repeat command, carries out an instruction a set number of times but a forever command will keep going until stopped by the user.

Questions

1. Define the term variable.
2. Define the term algorithm.
3. Which command is used to create a decision?
4. Which command is used to get an output?
5. Which command is used to create a loop?
6. Which command is used to start a program?
7. Explain what a sprite is.
8. Why should passwords not be shared?

Deeper Learning…

Scratch is an excellent tool for helping you to learn mathematics.
For example, Scratch teaches Cartesian coordinates.
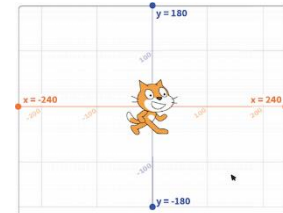
Activity – Create a game in Scratch where the sprite will be fed an item of food and each time increase the score.

Key Vocabulary…

Name	Purpose
Spreadsheet	Software package that allows you to perform calculations and create charts.
Cell Cell/reference	An address on a spreadsheet which looks like a little box. There are over 17 billion cells on a spreadsheet so we need to be able to identify them with an address. This is known as a cell reference and looks like this: A1 R18
Formatting	Making the contents of a cell look or behave differently. This can be changing the colour of the font, backgrounds. This can also be changing the contents of a cell from numbers to currency.
Formula	A way of performing a calculation on a spreadsheet. = A1 * B1
Functions	A set of instructions that will perform maths tasks on a spreadsheet.
Modelling	Changing variables in a spreadsheet to see how it affects the result/answer.
IF statement	A logic test performed using a spreadsheet.
Conditional formatting	Changing the appearance of the cell, depending on the input.

Picture This…

	A	B	C	D	E	F
1	Exam Marks					
2	First Name	Surname	Maths	English	Science	Total
3						
4	Teresa	Wood	63	45	89	197
5	Tanya	Smith	32	34	12	78
6	Arthur	Shelby	91	82	89	262

Spreadsheet in value view

H11				fx		
	A	B	C	D	E	F
1	Exam Marks					
2	First Name	Surname	Maths	English	Science	Total
3						
4	Teresa	Wood	63	45	89	=C4+D4+E4
5	Tanya	Smith	32	34	12	=C5+D5+E5
6	Arthur	Shelby	91	82	89	=C6+D6+E6
7						

Spreadsheet in formula view

IF statement

1	Pupil	Score	
2	Mark	10	=IF(B2>12,"Pass","Fail")
3	Simon	12	=IF(B3>12,"Pass","Fail")
4	Harold	17	=IF(B4>12,"Pass","Fail")
5	Edward	11	=IF(B5>12,"Pass","Fail")

Always Remember…

Spreadsheets can accept three different data types in them.
- Numbers
- Text
- Formula

Never write more than one data type in the cell at any one time.

CPUs are very quick but not good at remembering information. They need help from something called RAM which holds the information for it.

Conditional formatting changes the appearance of the cell, depending on the value entered.
Greater than 150
Less than 150
Equal to 150

Personal information is any information that can be linked back to you.

Questions/Tasks

1. Define the term data.
2. What is the purpose of formatting data?
3. Define the term personal data.
4. Which formula function adds up values?
5. Which formula function finds an average?
6. Which formula function finds the biggest value?
7. Which formula function finds the smallest value?
8. What symbol do you start a function with?

Deeper Learning…

Spreadsheets are excellent tools to model different situation by asking "What if…? ".
The way to do this is by using an IF statement which performs a logic test.

Logic test - = if (A1 > 12, "Pass", "Fail")

If condition TRUE - "Pass"
If condition FALSE .. "Fail"

Businesses use this to indicate whether a change will positively or negatively impact the business.

Activity – Complete the table that calculates how much a charity shop will receive from the government with gift aid.