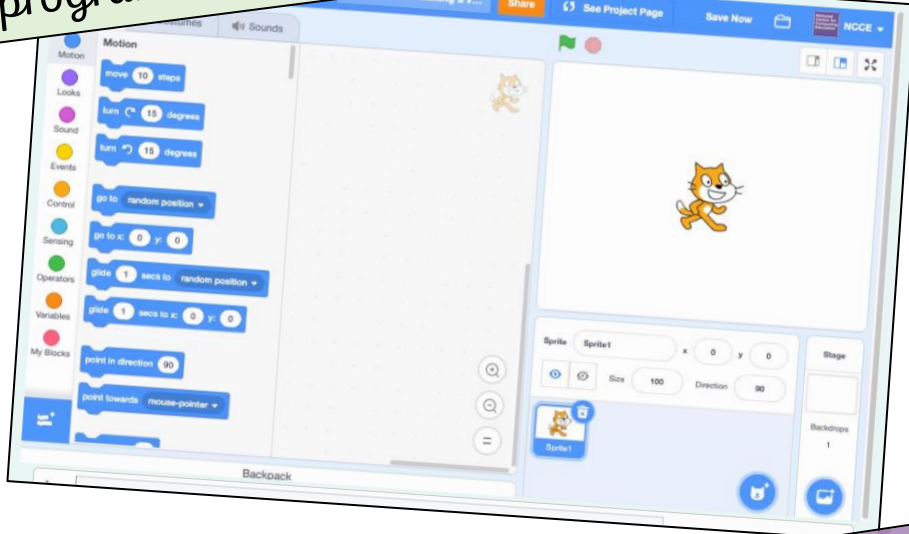




We will use scratch to learn about programming variables within games.



A variable is a placeholder in the memory of a computer. It can hold **one value** at a time.

Each variable in a program is **named**.

Write down the **name** and **value** of these variables.

Number

162

Name: Number
Value: 162

Favourite_food

Chocolate cake

Name: Favourite_food
Value: Chocolate cake

Key vocabulary	Definition
variable	In programming, a variable is a value that can change, depending on conditions or on information passed to the program
value	a value is a definite object. For example, the number 1
set	is an abstract data type that can store unique values, without any particular order.
event	an action or occurrence that can be identified by a program and has significance for system hardware or software
algorithm	an algorithm is a list set of instructions, used to solve problems or perform tasks
code	the set of instructions, or a system of rules, written in a particular programming language
program	a specific set of ordered operations for a computer to perform.
debug	the process of finding and fixing errors or bugs in the source code of any software.
evaluate	is the process that allows us to make sure our solution does the job it has been designed to do and to think about how it could be improved.



Naming variables

Just like drawers, variables are named so that you know what they contain.

To help when programming, variable names should be short and unique. They should contain underscores instead of spaces. For example, Home_team



Change a variable more than once

What would happen if this code snippet was run?

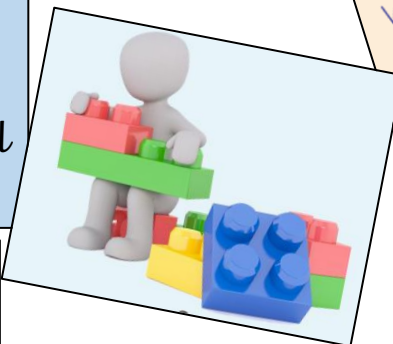
Could you use one change block instead?

What about this snippet?



We will create a 'catching' game that includes a score and at least three falling objects. The objects should fall at different speeds.

We will use algorithms to control our sprites

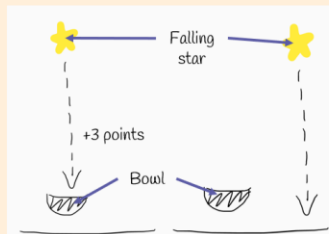


Algorithm for the falling star

The falling star moves down by eight from a random x position at the top of the screen.

If the sprite falls onto the bowl, change the score by three. It falls again from a random x position at the top of the screen.

If the falling star touches the screen bottom, it falls again from a random x position at the top of the screen.



We will explore how we can end our created game.

Improve your project

How could you improve your own project?

Run your code again and think about what you could add!

Remember: The overall objective of the game should remain the same — to catch objects.

After evaluating and improving our game, we will share it so someone else can play!



Fruit Catcher schoolbythesea



Fruit Catcher Penguin_Eee



Fruit Catcher JunilLearning



Banana OVERLOAD (v.1) RumbleCatGames