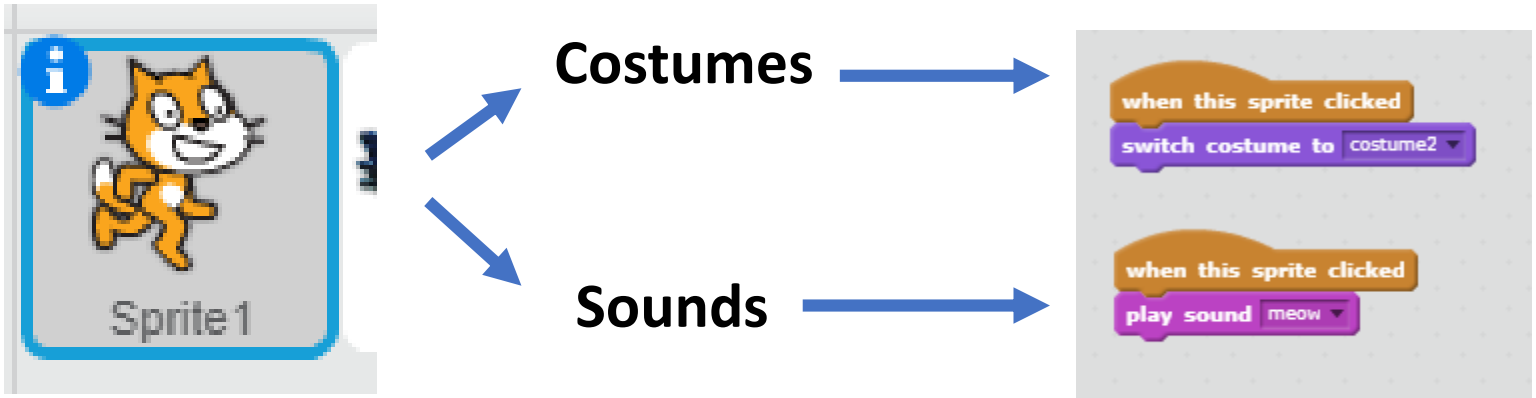
Welcome to Code Club!

Welcome back! And Week 1 Recap!

Anyone do any coding with Scratch or Python during the week? If so, what did you do?

Anyone have any questions from last week, or anything you've tried at home?

From last week's activity!



Sprites

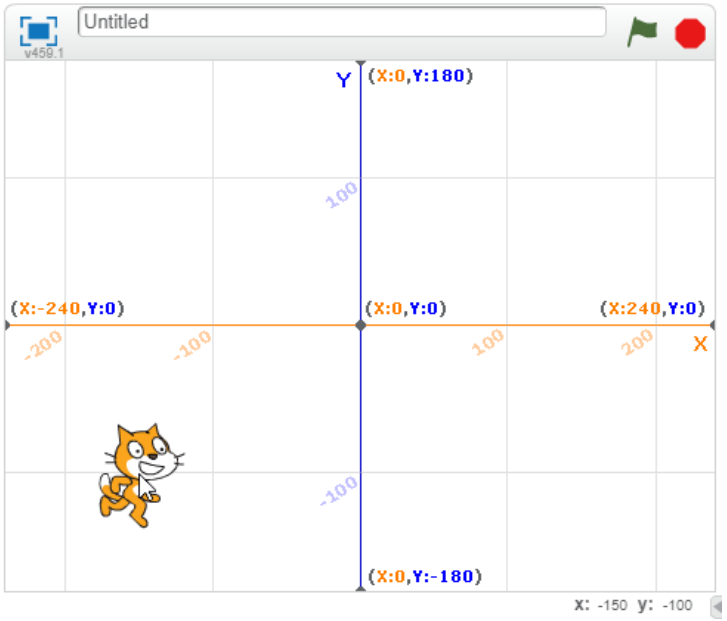
Scripts

Remember that Costumes, Sounds and Scripts are all **attached** to sprites.

Week 2

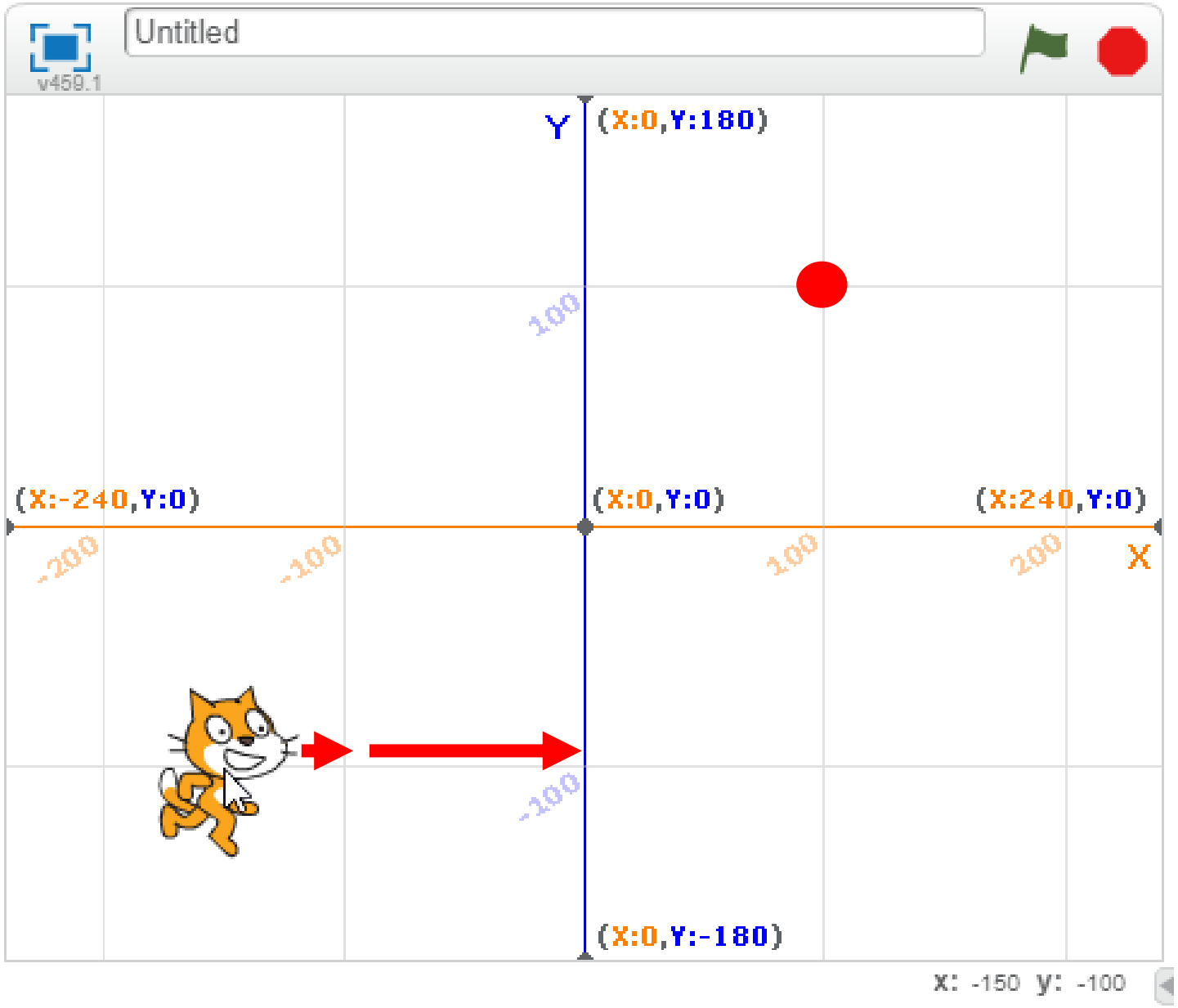
This week we're going to be looking at the 2nd Scratch Activity, and also introducing Python for those who want to move on from Scratch. Activity 2, "Lost in Space" focuses on:

Movement



The "Repeat" block

More about Movement – “coordinates”



Repeating actions (Loops)

The Repeat block lets you do actions over and over again, for a number of times, forever, or until something else happens

Actions, commands go in here

Python

Python is a text based programming language – no coloured blocks, you need to type it in by hand!

Python is more difficult to learn than Scratch, but much more powerful

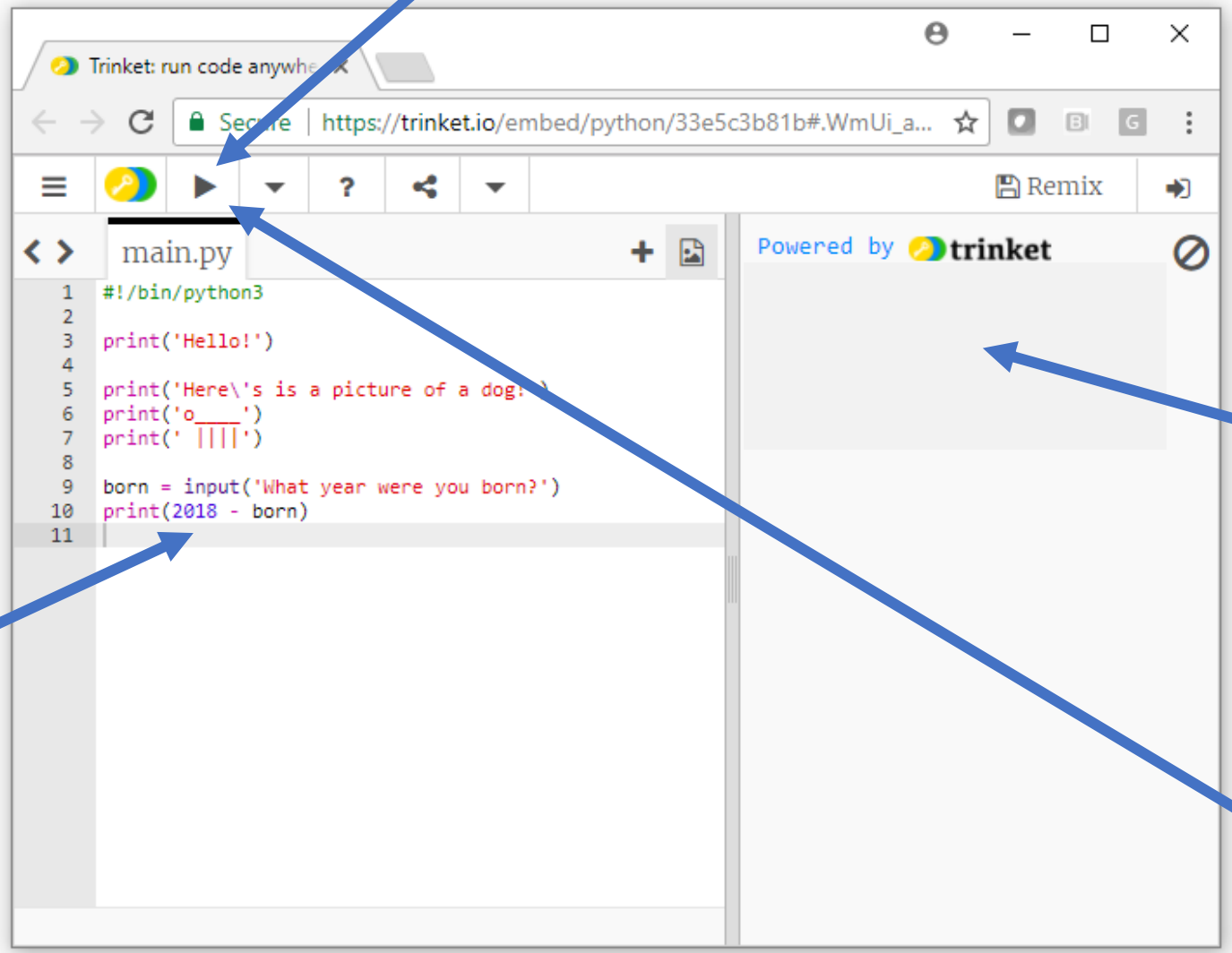
Python makes use of “Libraries” – these are pre-programmed pieces of code you can use in your own programs – but you have to tell Python to use them first.

We’re going to use a web browser based version of Python – called Trinket.io - to start with, and we’ll move to the full “Integrated Development Environment” (IDE), which is a text editor called “Idle”

The first Python activity focuses on “Output” – using `print()` to write out to the screen.

Python

Our first Python program



Press “Play” to run your program

Output appears here

Or “ERROR” if you get something wrong!

Type code in here

Press “Stop” when finished

Variables

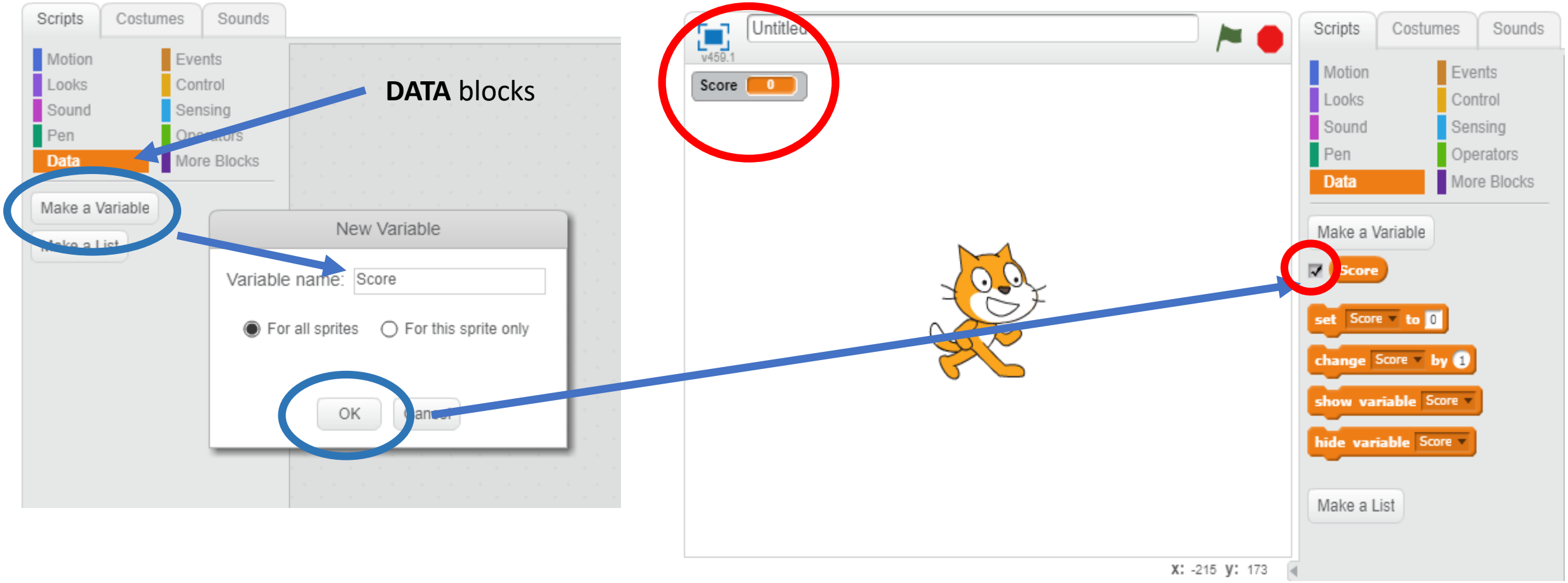
“Variables” are places in your program where you can store information such as:

- Numbers
- Words, letters, sentences
- If something is true or false

For example, your **Score** in a game

Variables

Making a new Variable in Scratch:



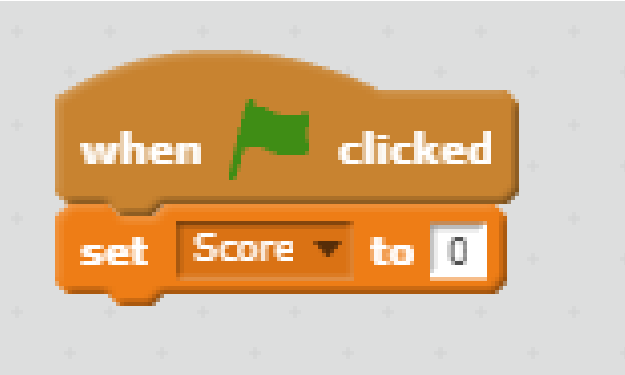
Making a new Variable in Python: `Score = 0`

NB – everything in Python is CASE SENSITIVE `Score` `score` `SCORE`

Variables

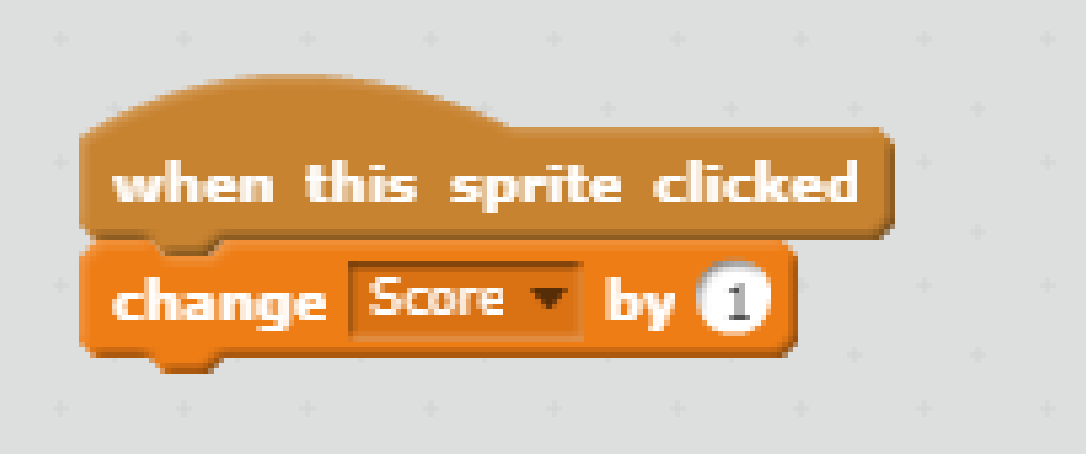
We can use the variable in our program (and in blocks), rather than the number

For example, lets set our Score to nothing (0) at the start of our program




```
Score = 0
```

Then we can add 1 to our score every time we get a point

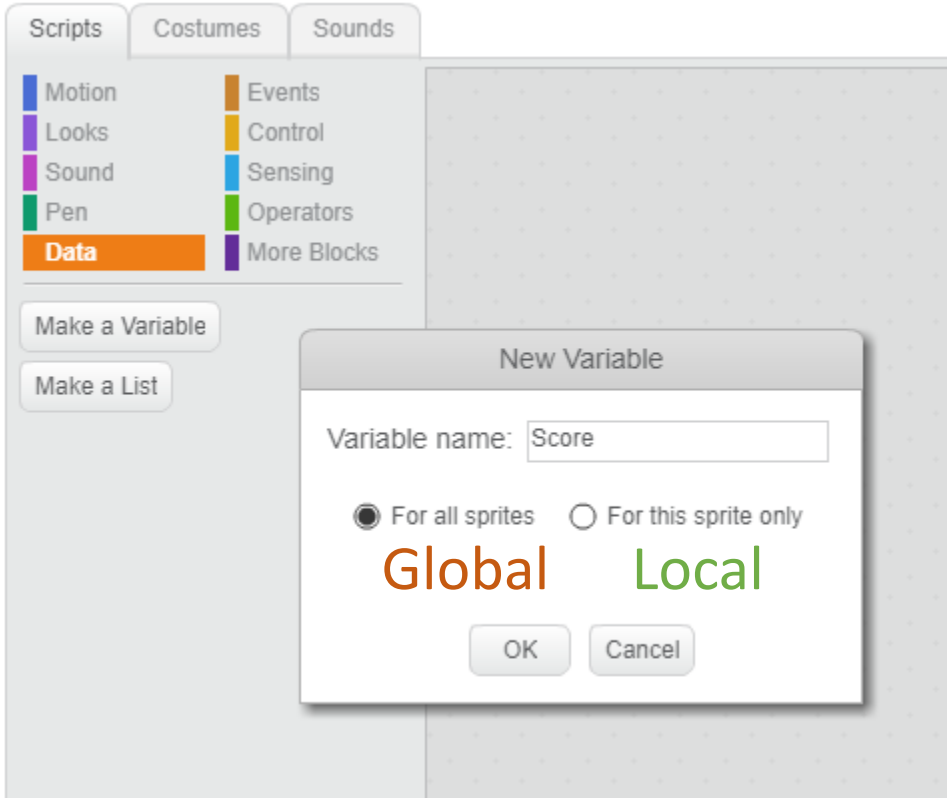



```
Score = Score + 1
```

Variables

Where we can use variables - “Scope”

Global (or public) Local (or private)




```
Score = 0
```
Global

```
print(Score)

def myFunction():
    footballs = 10
    print(footballs)
    print(Score)
```
Local

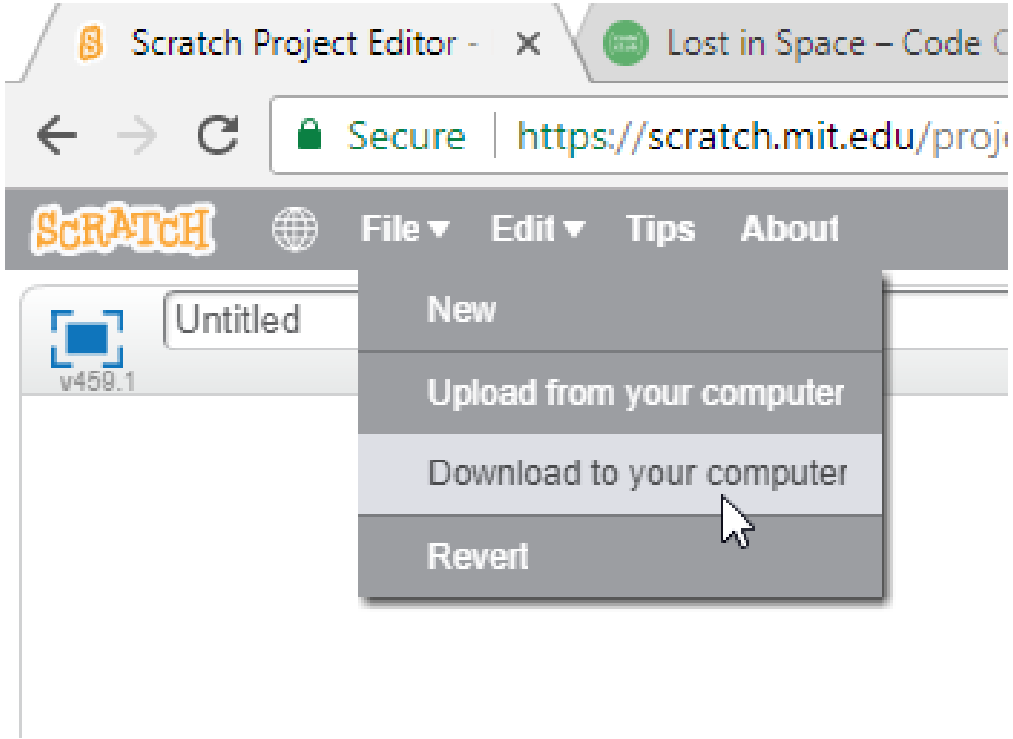
```
myFunction()

print(footballs)
```
ERROR!!!!

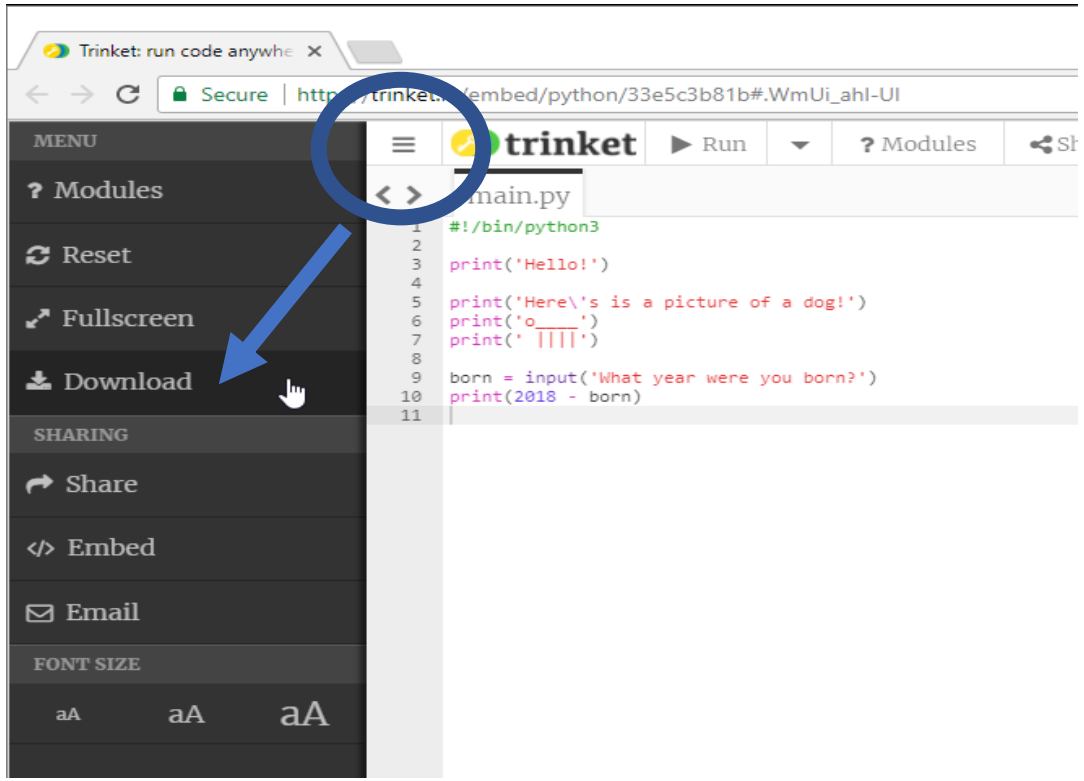
Saving your work!

Who forgot their USB stick?

Scratch



Python



NB: saves to “Downloads” by default!! Copy to USB!!!!

Today's Activity

Open up a new browser, and go to:

http://airyhallcode.club

Click on the link for the activity you want – Scratch or Python

Have a little read through, then use the code club website again to open up the Scratch program, or the Python Trinket IDE

Let's go!!!!!

For Next Week

http://airyhallcode.club

Try next week's activity in advance – any problems or questions bring them along to code club!

Save your work, and bring it in to show other members!!!

Check the code club website for the links!!!!

CODE CLUB