Introducing Variables

A Variable is something that can change to assume any value when you are programming.

You can use variables to control things like the score in a game and use it to understand when something has changed.

Keeping Score

Possible Uses

Scoring – FlappyBats counts how many obstacles you avoid.

High Score – keep a record of the high score on your game.

Timer – maybe you could create a timer to see how long the game runs.

Steps to Success for Scoring

1. Create a New Variable for keeping score.

2. Create a new sequence for the **MAIN CHARACTER** that starts on the green flag and has a Forever and an IF.

3. The condition needs to ask IF the X position of the character is the same as the X position of an Obstacle. Use

4. Add one to the score if the condition is met.

5. **NOTE** – you could create a separate instruction for each Obstacle Sprite, or could you try using
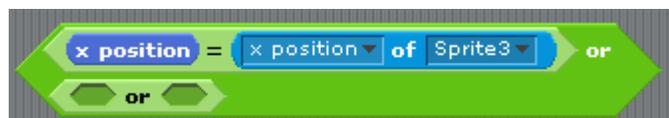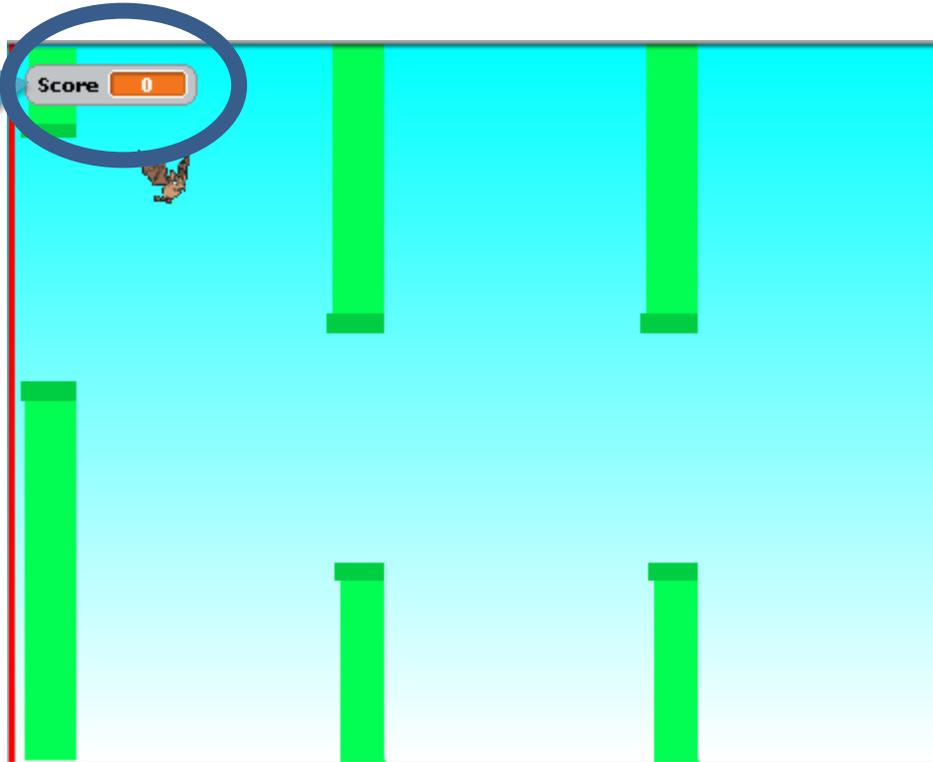

   and have a different instruction in each OR space.

Variable Display settings

Click on the new variable you created. What happens?

Double Click here

Score 0

1. Try dragging the variable to a different spot on the screen.

2. Where do you want the score to appear?

Variables can be displayed in 3 different ways:
- Small Number (with name label)
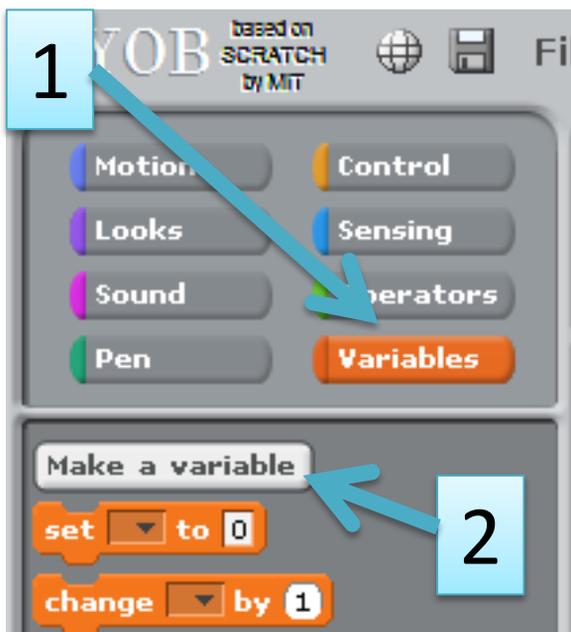- Large Number
- Slider

You can also move the variable where you want, or even hide or show it using the blocks.

Follow through this step by step to get your game to keep score

1. Click the 'Variables' Tab

2. Click Make a Variable
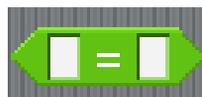
3. Name you variable something sensible, ie 'Score'

Variable name?

Score

● For all sprites   ○ For this sprite only

OK   Cancel

Found under the 'Variables 'Tab

set Score to 0   change Score by 1

Found under the 'Operators' tab

[ ] = [ ]

Found under the 'Motion' tab

x position

Found under the 'Sensing' tab

x position of Sprite1

4. Click your character Sprite

5. Note the following new Blocks

6. Turn the page to get an example of how to combine these together

Step by Step 2

Combine the new blocks in the following order to add some scoring to your game

1

1. Notice how I have changed the this instruction to make sure the game looks at where my obstacle is

Well done, you have created scoring for at least one of your obstacles, but what about the others? Copy the code and ensure that a point is added anytime the character passes any of the obstacles

Rather than copy the code, can you investigate using the block to combine all the scoring instructions Into one instruction. I.E, if X position = x position of Obstacle 1 **OR** X position = x position of Obstacle 2.