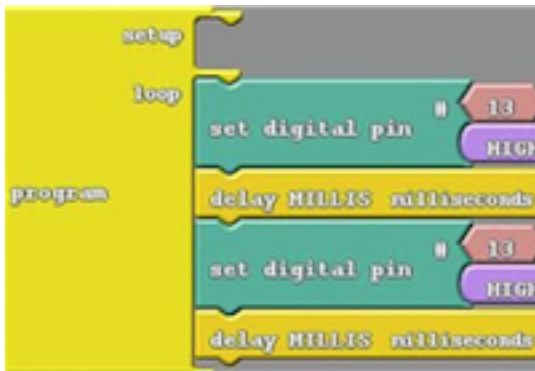# Visual Programming with the Genuino 101

For many students and teachers making the transition from visual programming languages like Scratch to text based programming languages like Arduino can be challenging! Ardublock a visual program builder for Arduino might be just the tool you and your students need to bridge the void!

Step 1

Quick Check
1. You will need an Arduino Board like a Genuino 101
2. You will need to have installed the Arduino IDE, visit bit.ly/genuinosetup for all the instructions

Step 2

Download Ardublock
1. Visit http://bit.ly/Ardublock and download the latest version of Ardublock (It should begin automatically)
2. Open Arduino and click on File >> Preferences and open the 'Sketchbook location' by clicking on Browse

Step 3

Install Ardublock

Within the folder you have opened:
1. Click on Arduino
2. Create a folder called tools (lower case)
3. Within the tools folder create a new folder called ArduBlockTool (case sensitive)
4. Within the ArduBlockTool folder create a new folder called tool
5. Paste the Ardublock file (ardublock-xxxxx.jar) you have downloaded into the final folder (tool) you created

Step 4

Beginning with ArduBlock

Now that you have installed the program you are all set!

1. Open Arduino
2. Click on Tools >> Ardublock Now you are set to create your first sketch, let's make your board blink!
3. Click on Control and then drag the Program block as the base for your code
4. Using blocks in the Control and Pin sections replicate the block structure to your left

Step 5

Uploading your code

You have now completed your first lines of block Arduino code!

1. Click on Upload (The Arduino IDE should open)
2. Make sure your Arduino Board is connected and both your board and port is selected in the tools menu
3. Click Upload and you should be blinking

Bridging the Gap

You will have noticed that when you click upload in Ardublock and Arduino opens the block code has been transformed in to text based code. This is a great intervention point to help students see what their block based coding translates to. Now:

1. Learn more about Arduino Code with this Tutorial
2. Take a look at http://innovationtoolbox.intel.com.au/

This guide was produced with information from:

Alternative Arduino Interfaces - learn.sparkfun.com

This lesson uses Ardublock, a visual program builder for Arduino, to help transition from visual programming languages to text based programming languages