Assembling & Programming Your EV3
Grade Sheet - 40 pts.

First: Parts Check

I will give you a handout showing all the parts that should be in each tray. Please circle and notify me of any missing parts – there are a number of features that you will not be able to create unless you have all the parts. Circle the parts that are missing – and initial the handout. I will get the part for you. <u>After this class, you will be held responsible for any missing parts.</u>

Student checked and reported any missing parts.	5pts.

Step #1: Build Your Robot

Open your box and find the step-by-step guide that will show you how to assemble your "EV3." The instructions are color-coded – you will find them simple and clear.

- First: Assemble the Cuboid
- Second: Assemble the EV3

Step #2: Program Your Robot

The base structure of your robot is complete. You will now learn how to program your robot. There are two ways that you will code your EV3. First is to hand code the Brick directly. Second is to eventually code it with your computer. Let's start by learning how to hand code the actual robot. Click on this link to access a Tutorial Explaining How To Manually Program Your EV3: *Pull the slider and begin the video at 1:06.*
https://www.youtube.com/watch?v=6e2Z87KAzMw&t=189s

To Begin...Click the center button on your EV3 to turn it on. Now, apply the skills you learned above by programming your EV3 to perform the following tasks (*When you succeed, call me over so that I can sign your gradesheet*).

1. **Program Motion**

Motion Program your EV3 to successfully drive forward 1 second. Turn Around and Drive back to start.	5pts.

5. **Program Touch Sensor**

Touch Sensor The EV3's will drive forward, when trigger is touched, it will turn right in a circle for 2seconds then drive straight for 1 second.	5pts.

# Now Apply The Skills You Learned Above To The Following Sensors:

(These programs and images can be found in your Lego Assembly Manual and on the class website.)

Ultrasonic Sensor

Ultrasonic Sensor (p.47) The EV3 moved forward and stopped when its ultrasonic sensor came within a few inches of the cube.	5pts.

Gyro Sensor (p.53) The EV3 moved forward for a few seconds and then turned 45 degrees and moved forward for another few seconds.	5pts.
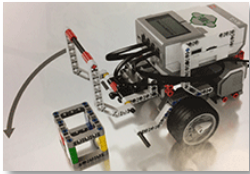
Install Front Arm Lift (p. 68) The EV3's front arm lift closed down over the cube and then dragged it backwards for a few seconds.	**5pts.**

Light Sensor

Color Sensor Down: The EV3's came to a stop when the color sensor crossed a color line. (p.72)	**5pts.**
Forward: The EV3's move for a few seconds when the blue portion of the cube was placed in front of the color sensor. (p.76)	**5pts.**