Learning How To Code Your EV3 – Using Your Computer

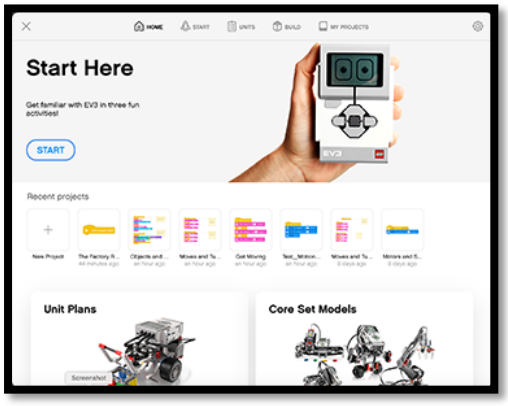
Grade Sheet - 40 pts.

Instructions:

In the previous assignment, you learned how to manually code the EV3 so that it could work its way through the "Maze" using all the sensors. Now, you will learn how to code your EV3 using your **computer**.

Open the "Lego Mindstorms Education EV3" app. icon from your applications folder.

Begin programming your robot. Before I have you engage in any large projects, I want you to rewrite the programs you did **Manually**, but now you will do it with your **Computer**.



The code you will be using resembles the Scratch "Block" based coding that you used earlier this year. I will not be providing you with lines of code...you have enough skills at this point to successfully program your robot. **"You no longer need me...you can figure it out!"**

Each time you complete a segment, call Mr. Harrington over to sign you off. You will be asked to show me both 1. The Program and 2. The Robot Completing the Task.

Note: Except for #1 Motion, Programs #2 - #6 must incorporate "If/Then" Statements.

Programming Your Robot With A Computer (40 pts.)		
1. Motion (5pts.)	Program your EV3 to successfully drive forward 1 second. Turn Around and Drive back to start.	
2. Touch Sensor (5pts.) *(The program must use an If/Then statement.)*	Program your EV3 so that it will drive forward, but when trigger is touched, it will turn right 2 seconds then back to straight again .	
3. Ultrasonic (5pts.) *(The program must use an If/Then statement.)*	The EV3 moved forward and stopped when its ultrasonic sensor came within 30 cm. of the cube.	
4. Gyro (5pts.) *(The program must use an If/Then statement.)*	The EV3 moved forward for a few seconds and then turned 45 degrees and moved forward for another few seconds.	
5. Front Arm Lift *(The program must use an If/Then statement.)*	The EV3's front arm lift closed down over the cube and then dragged it backwards for a few seconds. **Note**: Your Program must include the Ultrasonic Sensor!	
6. Color Sensor a. Stop! b. Go! *(The program must use an If/Then statement.)*	6a. Color Stop: The EV3's came to a stop when the color sensor crossed a color line. 6b. Color Go: The EV3 moved for a few seconds when the blue portion of the cube was placed in front of the color sensor.