EN1-06 Simple Robotics Hands-on Activity (September 23rd, 2016)

**Challenge 1: Drive the Motor forward 5 seconds and back 5 seconds**

Does it end up in the same spot as it started? Like EXACTLY the same spot?
How does the motor stop? What options are there for making the motor stop?
Challenge 1b: Drive the Motor forward until the touch sensor is pushed, then stop

Challenge 2: Use Touch Sensor to "toggle" direction of the motor

Hint: can you do this with one big "string" of code? (So, not infinite.) Can you use the "Run Continuously" option to shorten your code but still make it go forever?
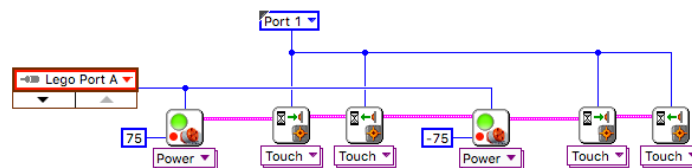
Challenge 2b: Can you do it with a while loop and two motor commands?
Challenge 2c: Can you do it with a while loop and only ONE motor command (*advanced!*)?

Challenge 3: The motor moves as fast as the light sensor reads

Challenge 3b: Each time the touch sensor is pushed, it updates the speed of the motor based on light value
Challenge 3c: Instead of the light value, can you read a second motor value and use that instead? What's the limitations of this as an input? Can you adjust/fix that?
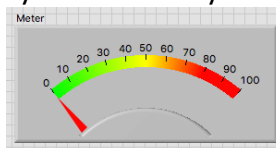
Challenge 4: Display sensor value on the EV3 Screen

How long does it stay on the screen? How can you make it stay longer, or update?
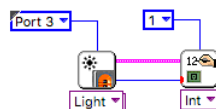
Challenge 5: Display sensor value on the LabVIEW Front Panel

Can you display value? Can you display meter? Can you display multiple values in a graph?

Challenge 6: Save collection of sensor data values (e.g. light value each time you click touch sensor) and export to file for analysis in Excel

Advanced! Hint: explore "Behaviors"