

## Force Sensitive Resistor



**What It Does:** The Force Sensitive Resistor (FSR) is a sensor that changes its resistance when pressed. The change in resistance can be measured by the Arduino and can be used to determine the force applied to it.

**What It Tells You:** The greater the value reported by the FSR, the harder it is being pressed. The sensor will report 0 if untouched. While it is possible to convert this value to a physical unit such as pounds, we have not done this in our exercise.

**Required Connections:** The FSR should be wired up as a resistor divider with a 1K resistor. It should be powered by 5V and the junction between the FSR and the resistor should be connected to an Analog Input. See the lab documentation for more details.

### Using the FSR in Scratch:

Use a *value of sensor* block to read in from the selected Analog Input. Adjust the pull down menu in the block to select the proper pin.

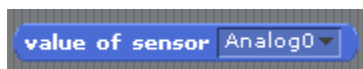


Figure 1: Read Data from Analog Input 0

Also, it will be helpful to store the reading into an appropriately named variable.

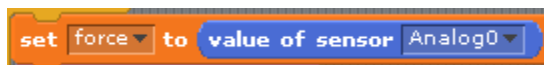


Figure 2: Read Sensor Measurement into a Variable

In the example below, the value of the sensor is read in and displayed on the right panel using the *say* block. We also use a *join* block to place the phrase "Force: " in front of the sensor readings.

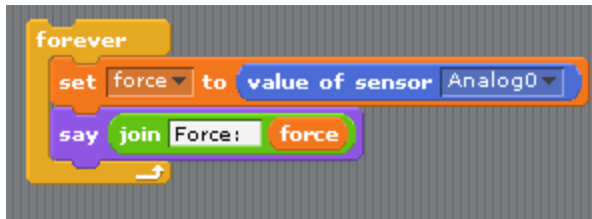


Figure 3: Reading the FSR Value from the Arduino'

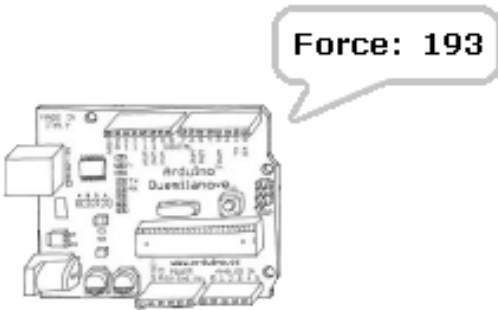


Figure 4: Arduino Printing Out "Force: " and the Value of the Sensor