

Crafting Material assignment04

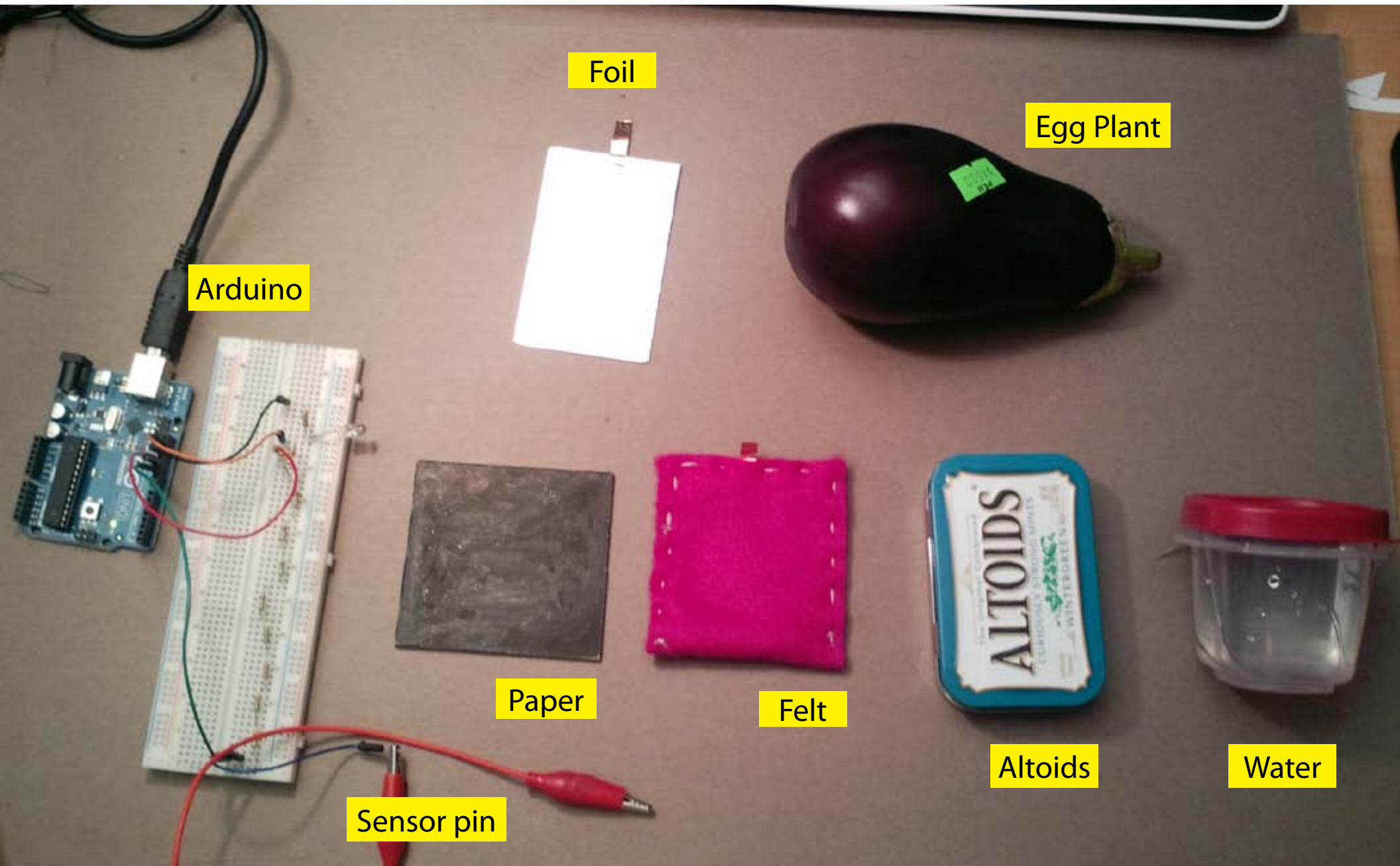
Everything, EverySensor

Woong Ki Sung

The goal of the experiment

The goal of the experiment is to investigate infinite possibilities to convert everyday materials into sensors, as well as learn the basics of sensors and Arduino programming.

Used Sensors



Foil

Egg Plant

Arduino

Paper

Felt

Altoids

Water

Sensor pin

Used Code

```
#include <CapSense.h>

CapSense noSen = CapSense(11,10);
void setup()
{
  pinMode(13, OUTPUT);
  Serial.begin(9600);
}

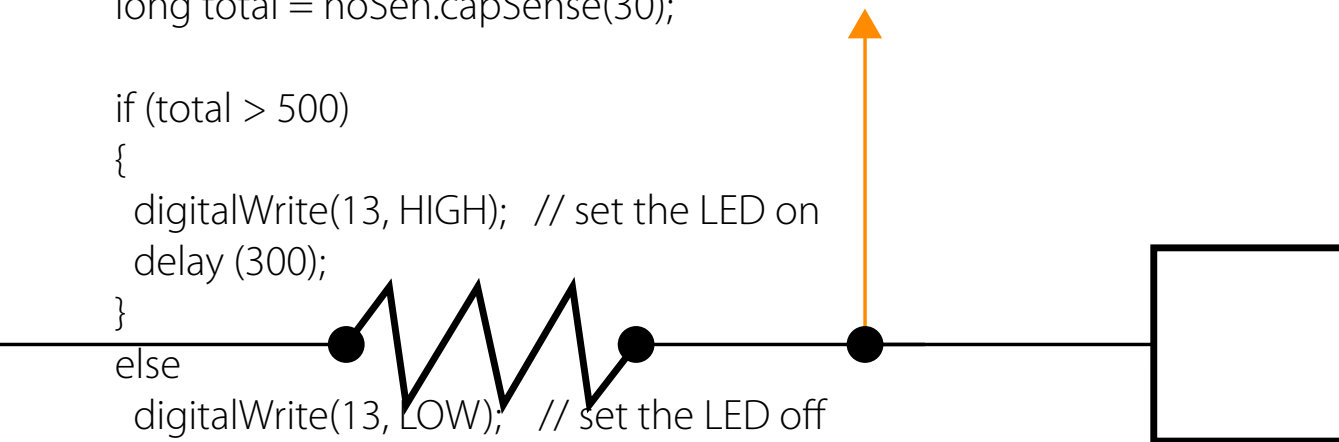
void loop()
{
  long total = noSen.capSense(30);

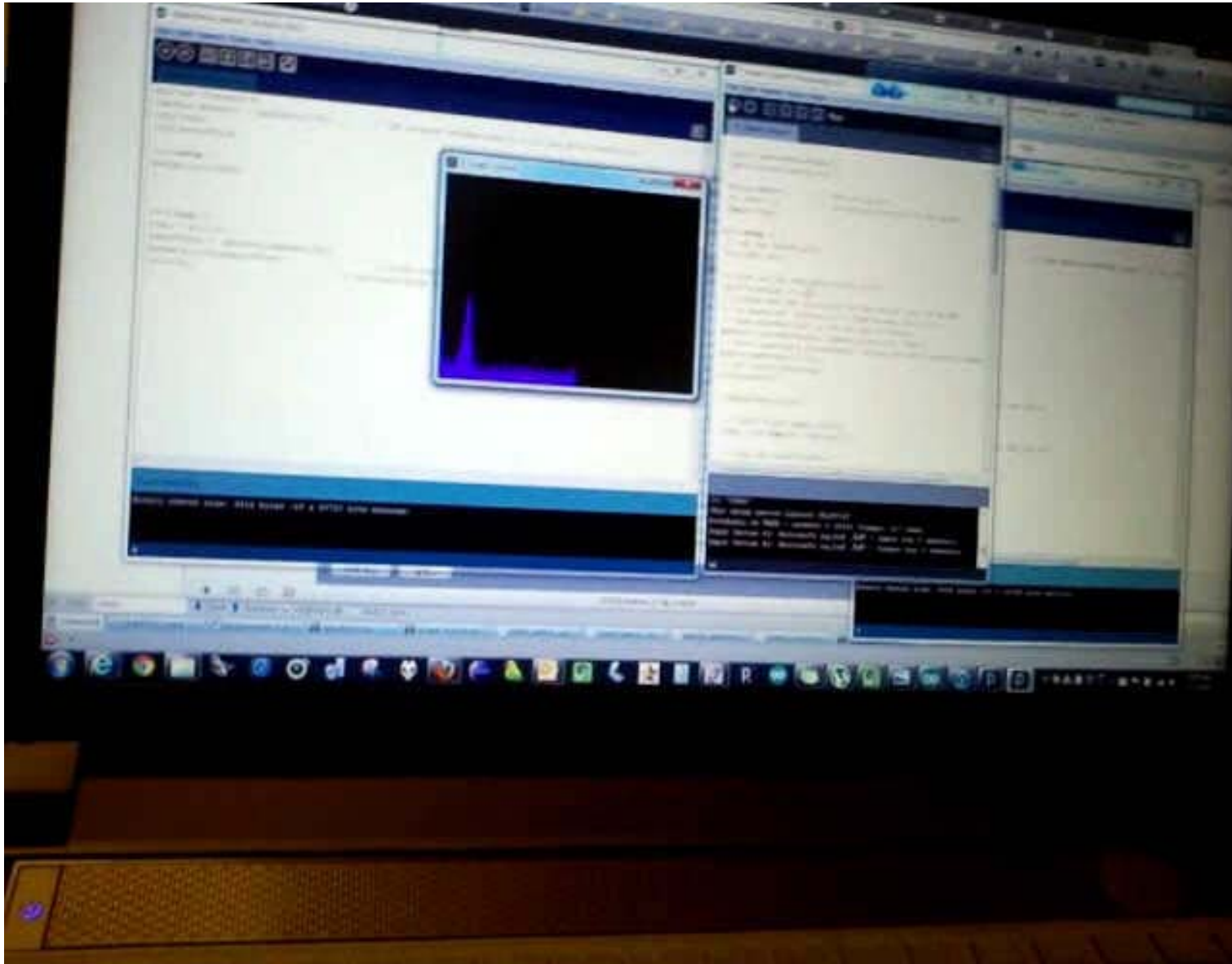
  if (total > 500)
  {
    digitalWrite(13, HIGH); // set the LED on
    delay (300);
  }
  else
    digitalWrite(13, LOW); // set the LED off

  delay(10); // arbitrary delay
}
```

Capacitive Sensor

The setting of a simple capacitive sensor was employed for the experiment. Although resistance sensors were also interesting, capacitive sensors were more attractive in that they can communicate with environment without physical contact.

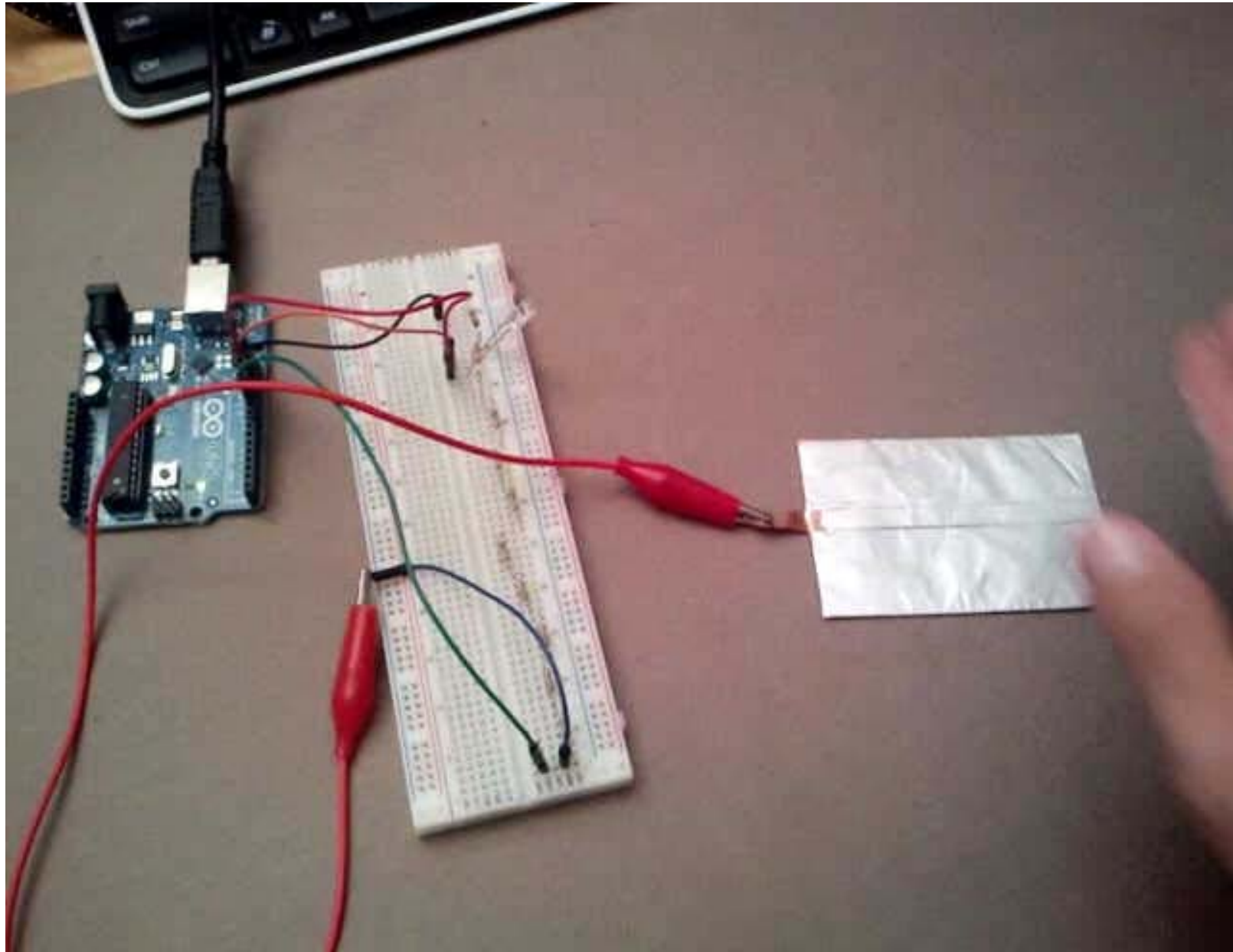




Used sensors :: Foil

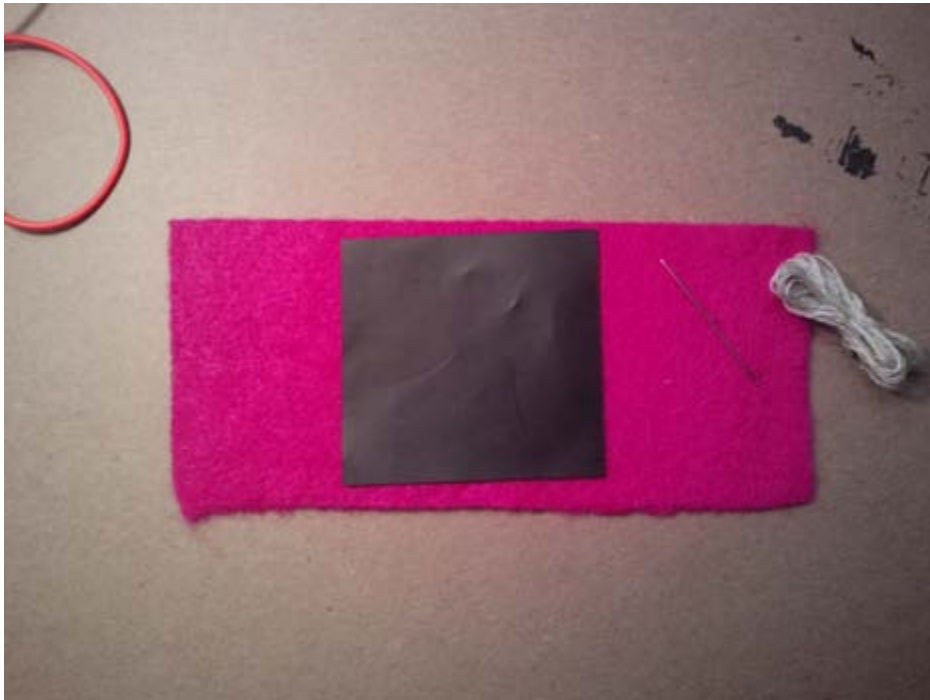
Double layered aluminum foil
8.5 x 5.5 cm

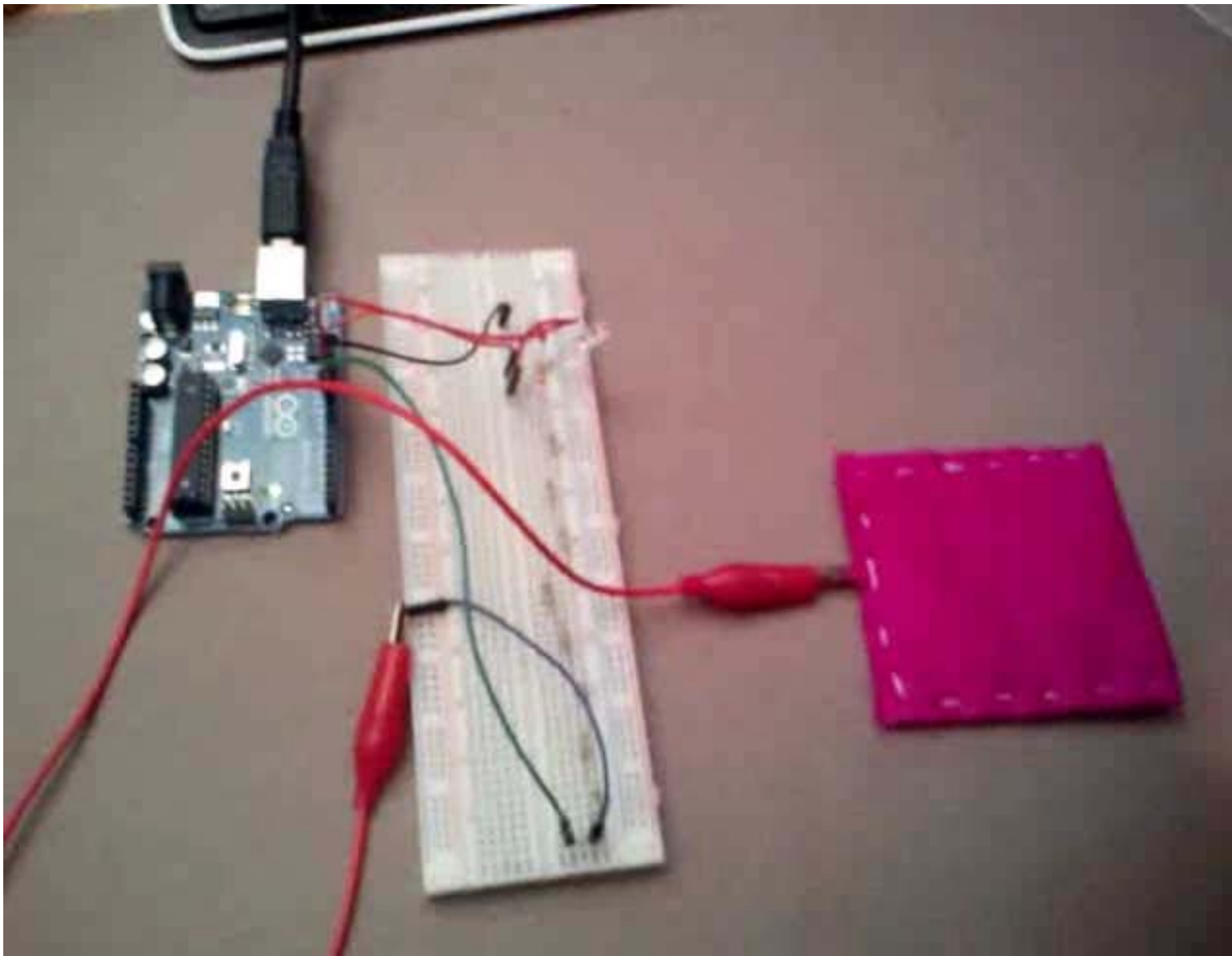




Used sensors :: Felt + conductive film

Double layered felt
Embedded conductive film
7.5x 6.5 cm



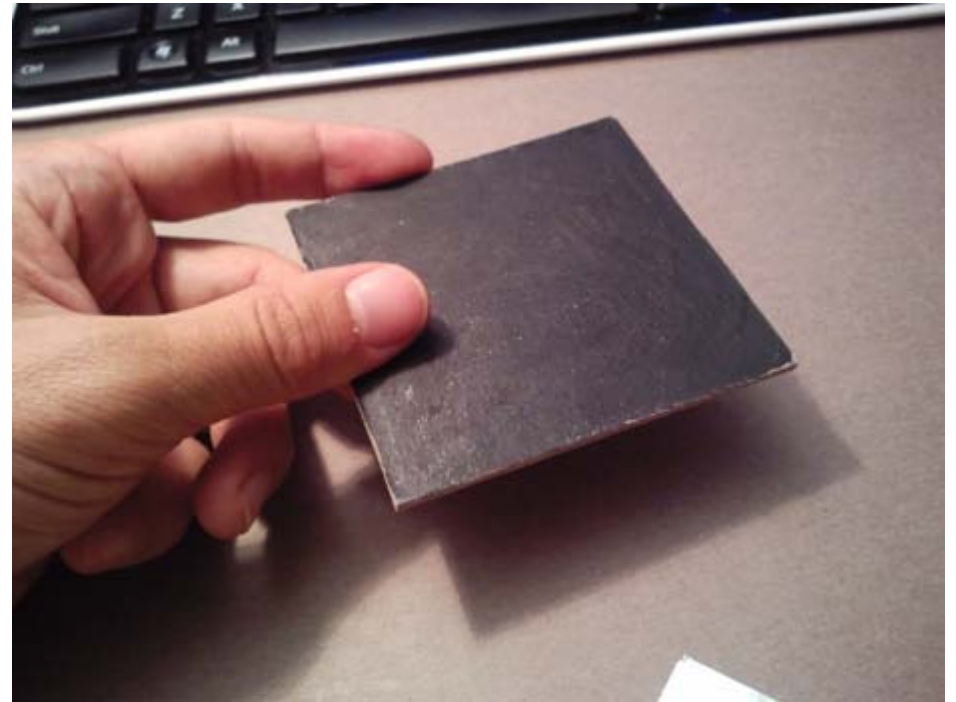


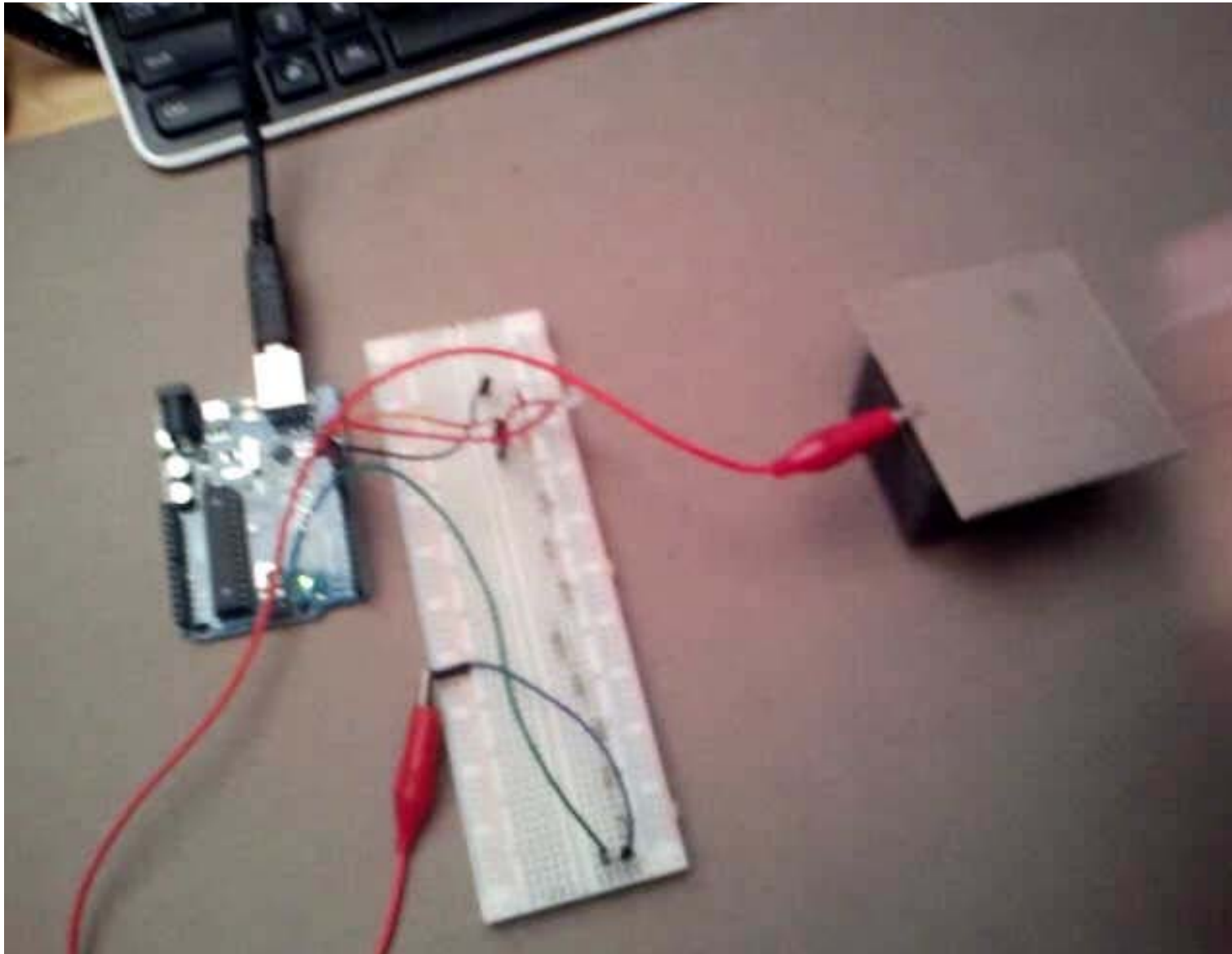
Used sensors :: Paper

2mm Cardboard

Conductive ink applied in the back

7.5x 6.5 cm





Used sensors :: Water

Water 100ml

Linked to the sensor pin with conductive string





Used sensors :: Egg Plant

\$2.00 from the Star Market

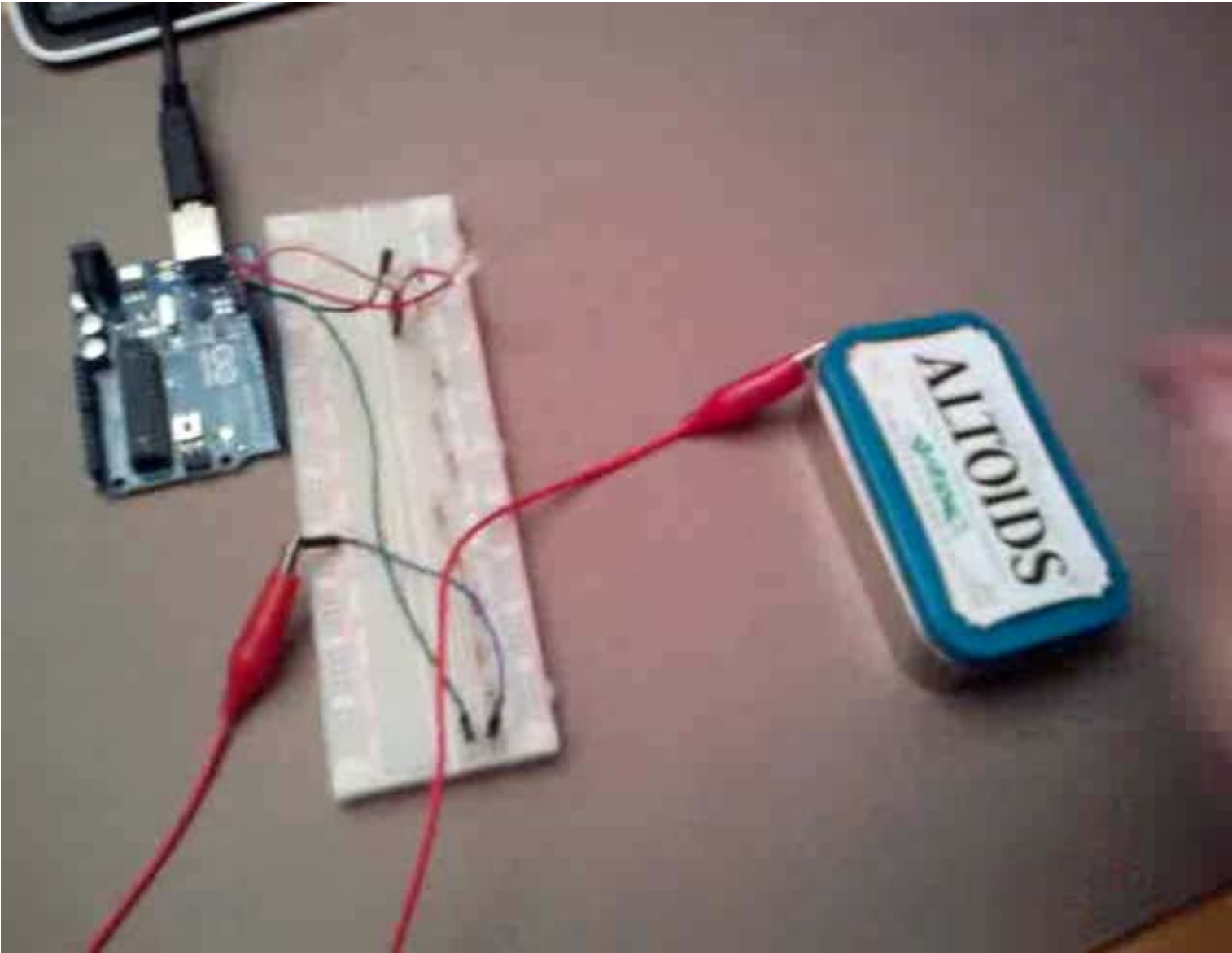




Used sensors :: Altoids

\$3.20 from the Star Market





Conclusion

Testing various material, it became obvious that almost everything can be used as a sensor. This statement seems to be poetic in that, by converting everyday materials around us, we can communicate and interact with them. Moreover, low-tech structure of the sensors used here also revealed the beauty of simplicity, drawing unexpected pleasure.

Application

A wide range of materials, which can be used as an capacitive sensors, have potentials to be used as simple but interesting interface. Once the basic setting of a capacitive sensor is prepared, it is expected that we can make various kinds of responsive environments with everyday materials in further projects.

nothing
more.

thank you