

Kit Supplies

Each student kit should include the following:

1. 1 Arduino uno R3 board
2. 1 half size breadboard
3. 1 Arduino/breadboard holder
4. 1 4.7k ohm pull-up resistor
5. 2 male-male jumper wires
6. 1 male-female jumper wire
7. 1 waterproof DS18B20 digital temperature sensor (modified as shown)
8. 1 USB connector

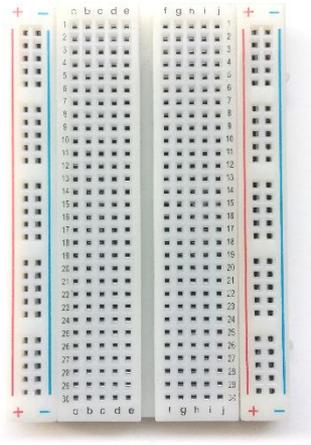
Students will also need

1. Laptop with Arduino IDE software and appropriate libraries (see separate instructions for “Preparing Student Computers”)
2. Arduino code for this lab (see SERC website for links to code)

A completed kit includes:



Arduino Board



Breadboard



Arduino/Breadboard Holder



Resistor



2x

Jumper Wires (2 x male/male, male/female)



Temperature Sensor



Temperature Sensor



USB AB cable

Materials – Where to purchase

1. Arduino uno R3 board

- Source: Adafruit (product ID: 50)
 - <https://store.arduino.cc/usa/arduino-uno-rev3>

2. Half size breadboard

- Source: Adafruit (product ID: 64)
 - <https://www.adafruit.com/products/64>
 - ~\$5.00 each

3. Arduino/Breadboard holder (1/kit)

- Source: Sparkfun (product ID: DEV-11235)
 - <https://www.sparkfun.com/products/11235>
 - \$3.95 each
- Source: Adafruit (product ID: 275)
 - <https://www.adafruit.com/product/275>
 - \$4.00 to \$5.00 each depending on quantity

4. Through-hole 4.7k ohm pull-up resistor

- Source: Adafruit (product ID: 2783)
 - <https://www.adafruit.com/product/2783>
 - ~\$0.75 / 25 pack

5. male-male jumper wires (2/kit)

- Source: Adafruit (Product ID: 758 / 1956)
 - <https://www.adafruit.com/?q=758>
 - ~\$4.00 / 40 pack; ~\$2.00 / 20 pack

6. Male/female jumper wires (1/kit)

- Source: Adafruit (Product ID: 826 / 1954)
 - <https://www.adafruit.com/product/826>
 - ~\$4.00 / 40 pack; ~\$2.00 / 20 pack

7. Waterproof DS18B20 digital temperature sensor and extras

- Source: Adafruit industries (Product ID: 381)
 - <https://www.adafruit.com/products/381>
 - ~\$10.00 each

8. A-B USB connector

- Source: Adafruit (Product ID: 62)
 - <https://www.adafruit.com/product/62>
 - \$3.95 each

• Materials available on SERC website

- Arduino IDE software
- Arduino code

• Student/Professor provided

- Laptop with IDE software