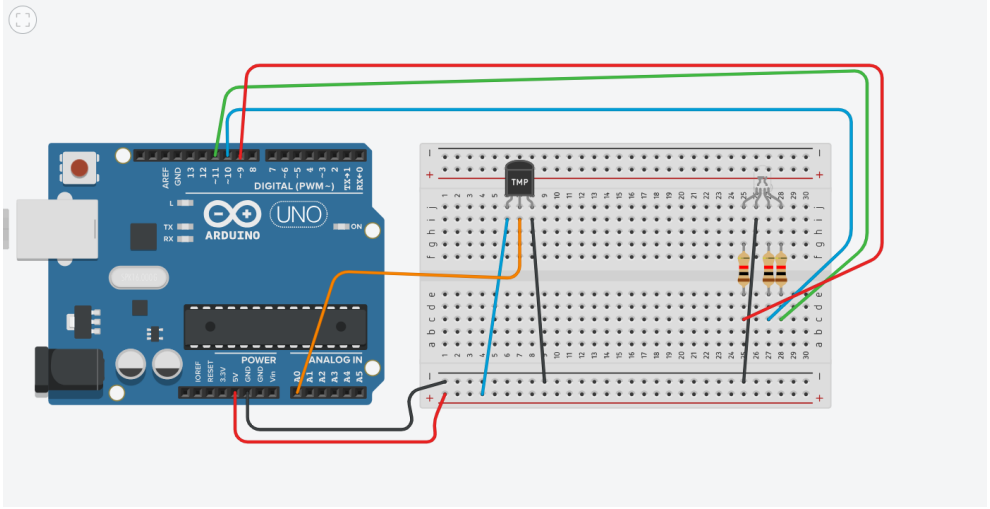
```
// Include the libraries we need
#include <OneWire.h>
#include <DallasTemperature.h>

// Data wire is plugged into port 2 on the Arduino
#define ONE_WIRE_BUS 2

// Setup a oneWire instance to communicate with any OneWire devices (not just Maxim/Dallas temperature ICs)
OneWire oneWire(ONE_WIRE_BUS);

// Pass our oneWire reference to Dallas Temperature.
DallasTemperature sensors(&oneWire);

/*
 * The setup function. We only start the sensors here
 */
void setup(void) {
  // start serial port
  Serial.begin(9600);
  // Start up the library
  sensors.begin();
}

/*
 * Main function, get and show the temperature
 */
```

```
void loop(void) {
  // call sensors.requestTemperatures() to issue a global temperature
  // request to all devices on the bus
  Serial.print("Requesting temperatures...");
  sensors.requestTemperatures();  // Send the command to get temperatures
  Serial.println("DONE");
  delay(1500);
  // After we got the temperatures, we can print them here.
  // We use the function ByIndex, and as an example get the temperature from the first sensor only.
  float tempC = sensors.getTempCByIndex(0);

  // Check if reading was successful
  if (tempC != DEVICE_DISCONNECTED_C) {
    Serial.print("Temperature for the device 1 (index 0) is: ");
    Serial.println(tempC);
  } else {
    Serial.println("Error: Could not read temperature data");
  }

  if (tempC < 8) {
    analogWrite(9, 51);
    analogWrite(11, 102);
    analogWrite(10, 255);
  } else {
    if (tempC < 18) {
      analogWrite(9, 51);
      analogWrite(11, 255);
```

```
      analogWrite(10, 51);
    } else {
      if (tempC < 28) {
        analogWrite(9, 255);
        analogWrite(11, 255);
        analogWrite(10, 0);
      } else {
        analogWrite(9, 255);
        analogWrite(11, 0);
        analogWrite(10, 0);
      }
    }
  }
  delay(100);
}
```


AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM~)
L
TX
RX
ARDUINO
UNO
ON
POWER
IOREF
RESET
3.3V
5V
GND
GND
Vin
ANALOG IN
A0
A1
A2
A3
A4
A5
TMP