



# LED Temperature Indicator

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Curriculum: ETM

# Idea

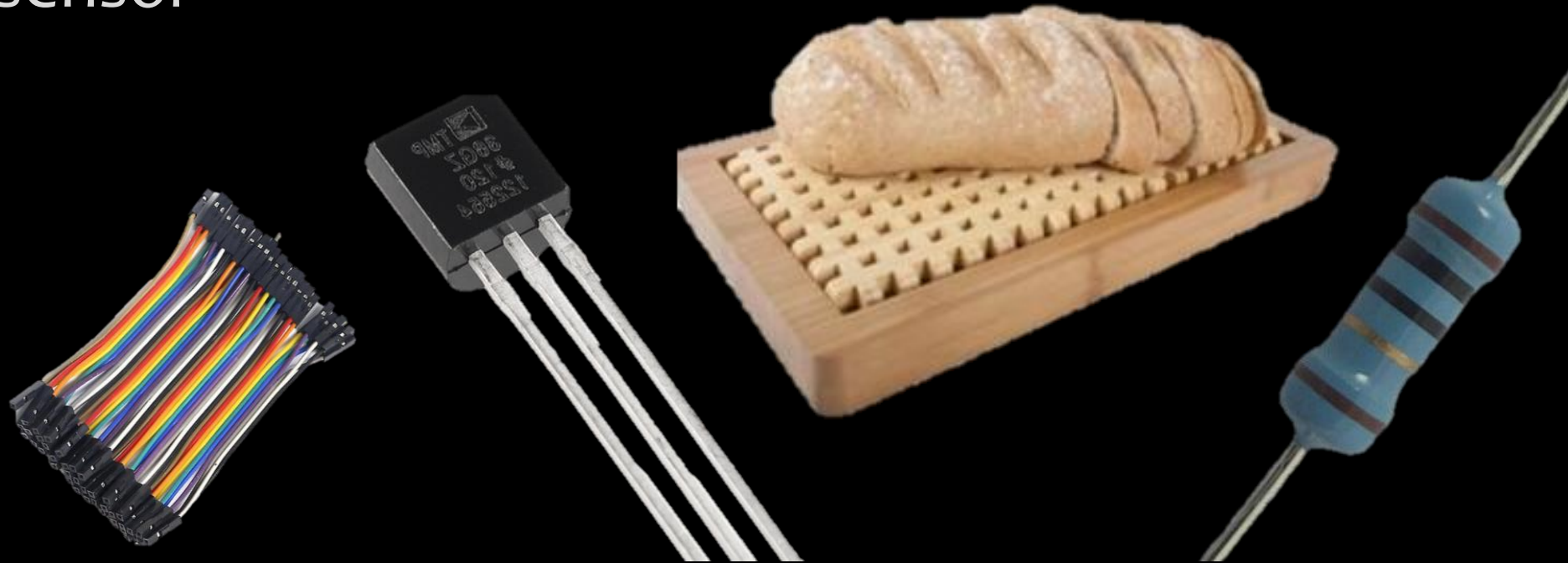
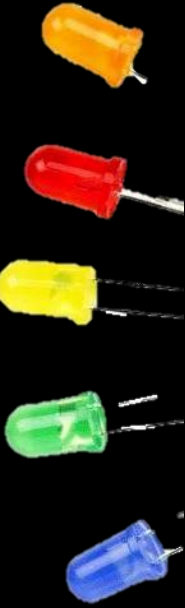
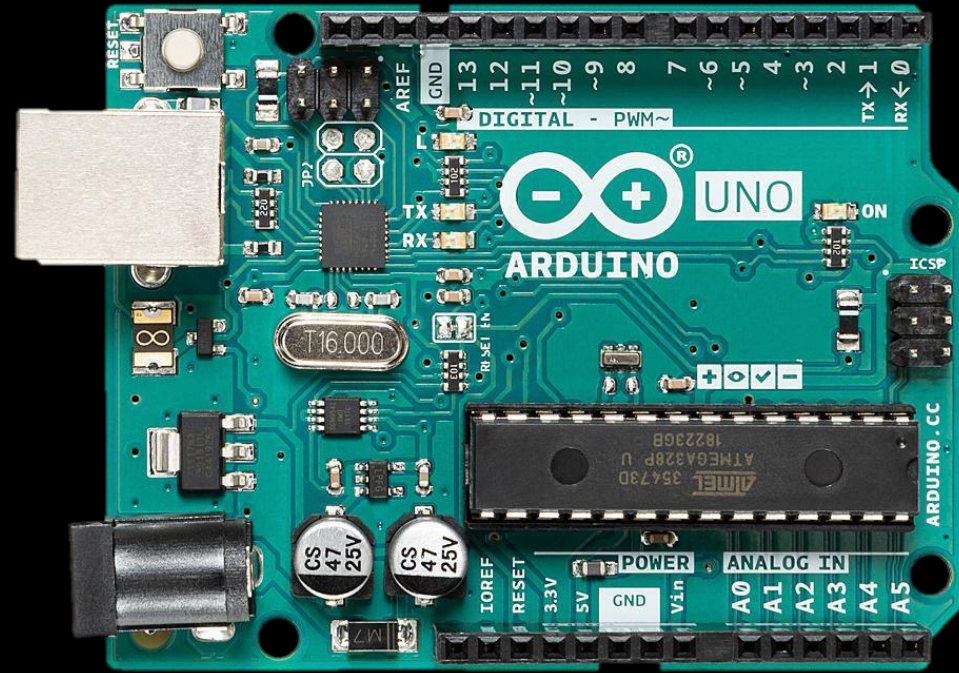
- Implementing a circuit that can measure the ambient temperature.
- Visual indicator of temperature using LEDs.
- Temperature graph for precisely reading the temperature.



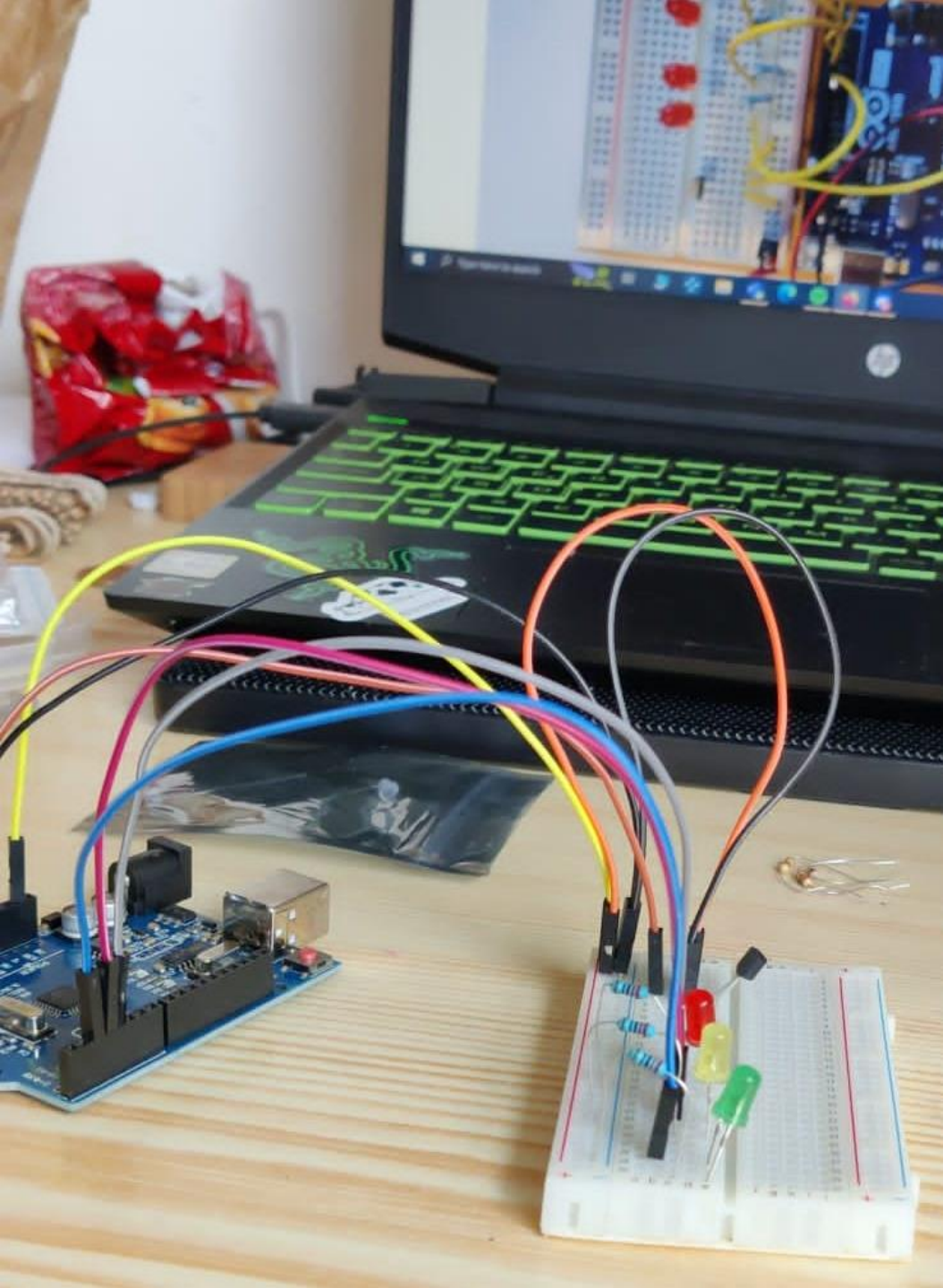


# Components

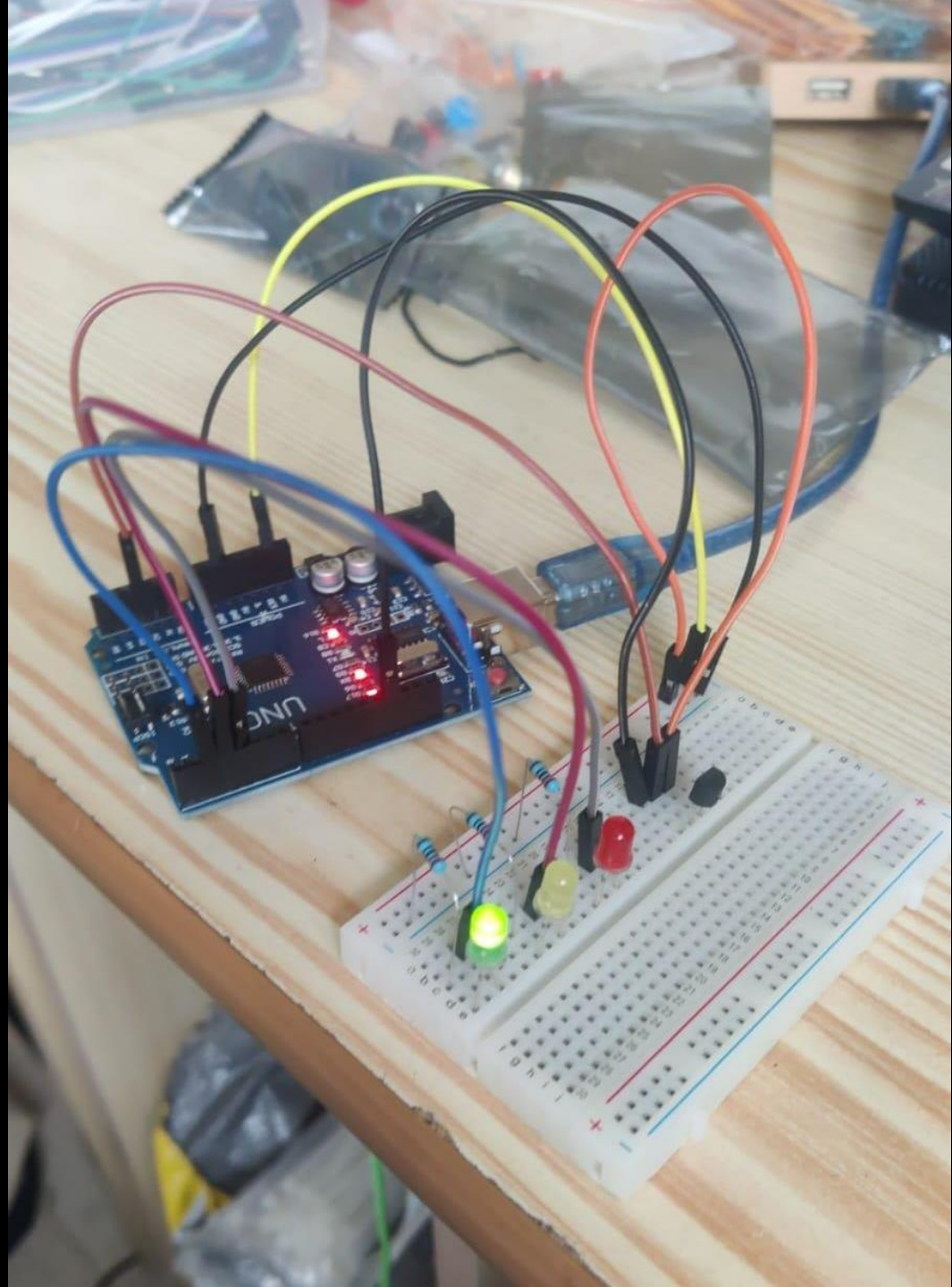
- Three different color LEDs
- Three resistors
- Temperature sensor
- Breadboard
- Arduino
- Some cables







# CIRCUIT







# Implementation

- After building the circuit, **Arduino IDE** is used to make it functional.
- We set an ambient temperature of **25.9 degrees Celsius** (such that the LEDs stay off unless sensor is heated).
- **LOW** temperatures is  $2^{\circ}\text{C}$  higher. When achieved, the **green** LED turn on.
- **MID** temperature is  $2^{\circ}\text{C}$  . It turns on the middle **yellow** LED.
- **HIGH** temperature is  $2^{\circ}\text{C}$  . This will turn on the **red** LED.

When the temperature lowers, the LEDs turn off one by one.

- On a computer, a **graph** of the voltage output of the sensor and temperature can be seen.



# THANK

# YOU !

