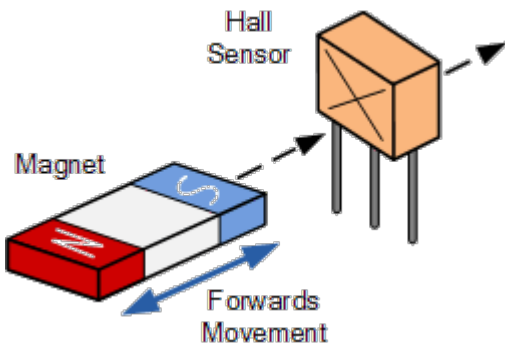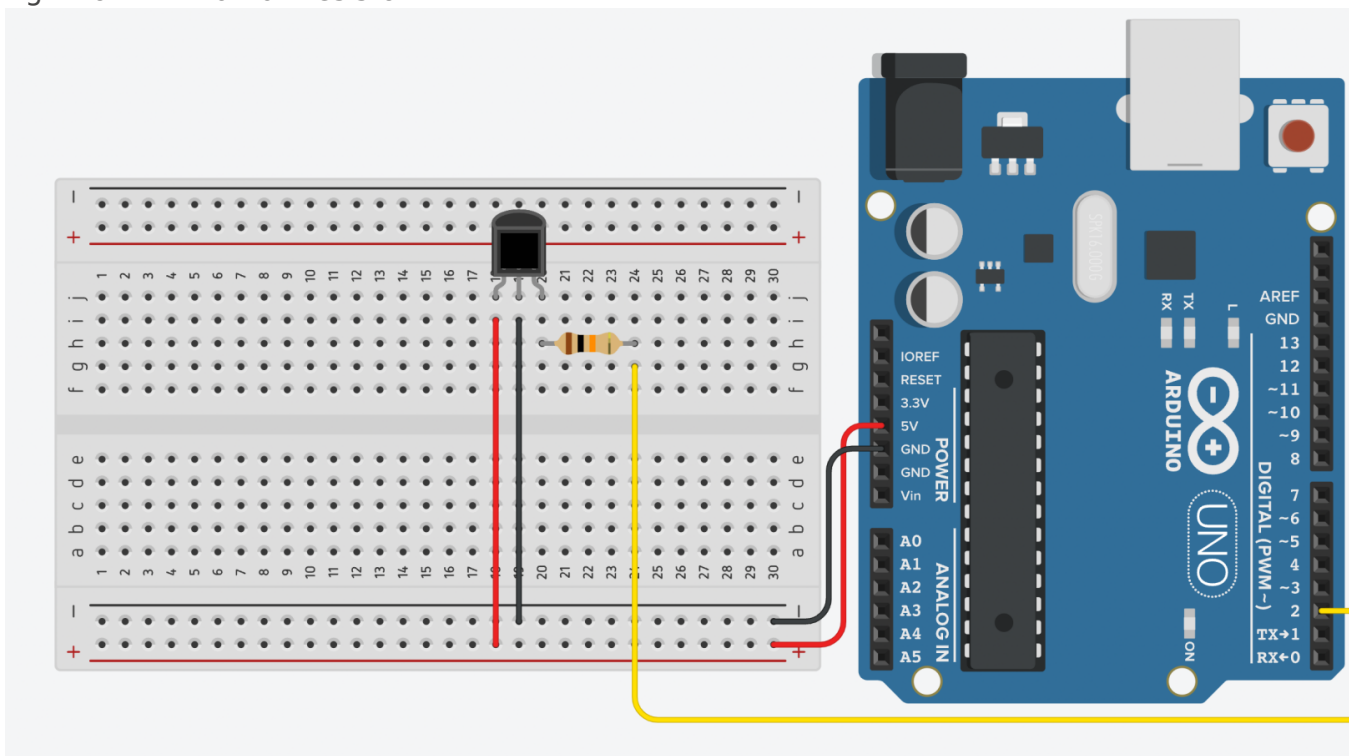# How to use a Hall Effect Sensor

What is a Hall Effect Sensor?

The hall effect sensor is a type of magnetic sensor which can be used for detecting the strength and direction of a magnetic field produced from a permanent magnet or an electromagnet with its output varying in proportion to the strength of the magnetic field being detected.

Wiring

1. left to 5V (Power)
2. middle to GND
3. right to PIN2 via 10K resistor

Getting started

The following code uses `digitalRead()` to get a integer (1/0) representing the detection of magnet.

```cpp
const int hallSensorPin = 2;  // Hall Effect sensor connected to digital pin 2
int hallSensorState;         // Variable to store the state of the sensor

void setup() {
  Serial.begin(9600);          // Start serial communication at 9600 baud
  pinMode(hallSensorPin, INPUT);    // Set the Hall Effect sensor pin as an INPUT
}

void loop() {
  hallSensorState = digitalRead(hallSensorPin); // Read the state of the sensor
  Serial.println(hallSensorState);

  delay(100);
}
```