



The Canadian Satellite Design Challenge Management Society presents...

The CanSat Kit

for

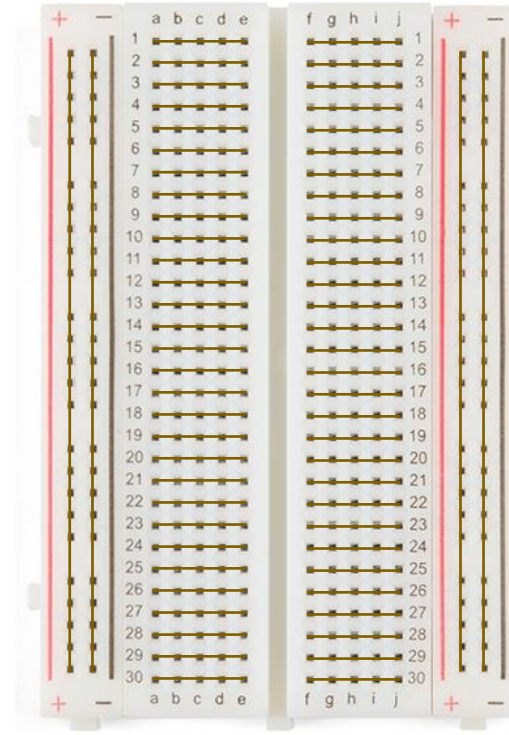
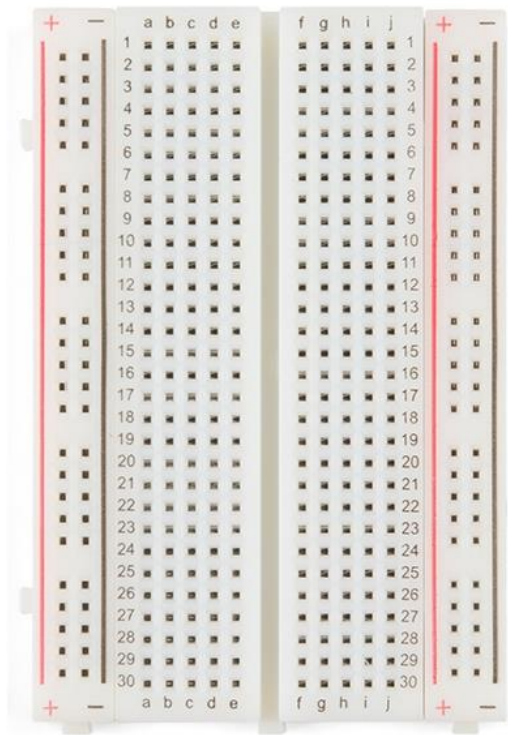
DUMMIES

Future Space Scientists & Engineers!

Tutorial #3: Blinks & Beeps

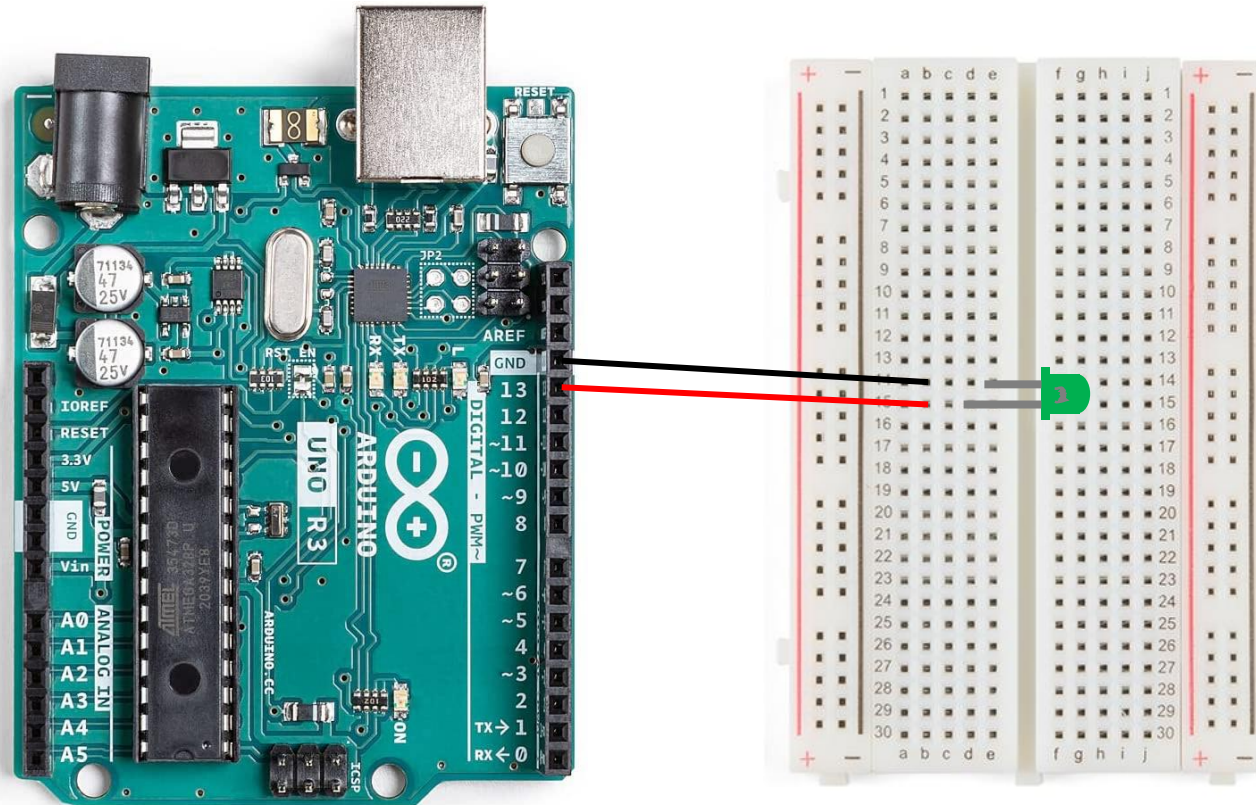
The Breadboard

The breadboard is used for prototyping your circuits – testing them out without needing to solder anything, to ensure that they work properly.

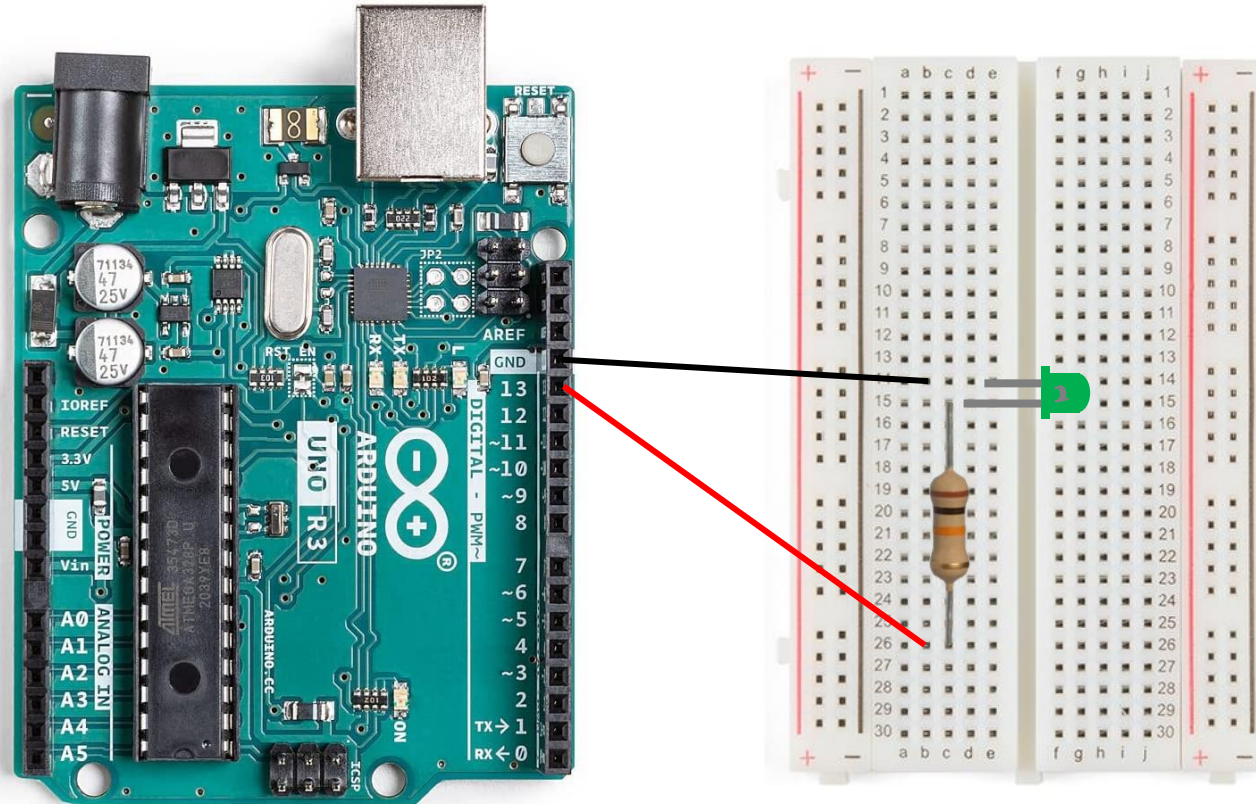


The connection paths are called “rails”.

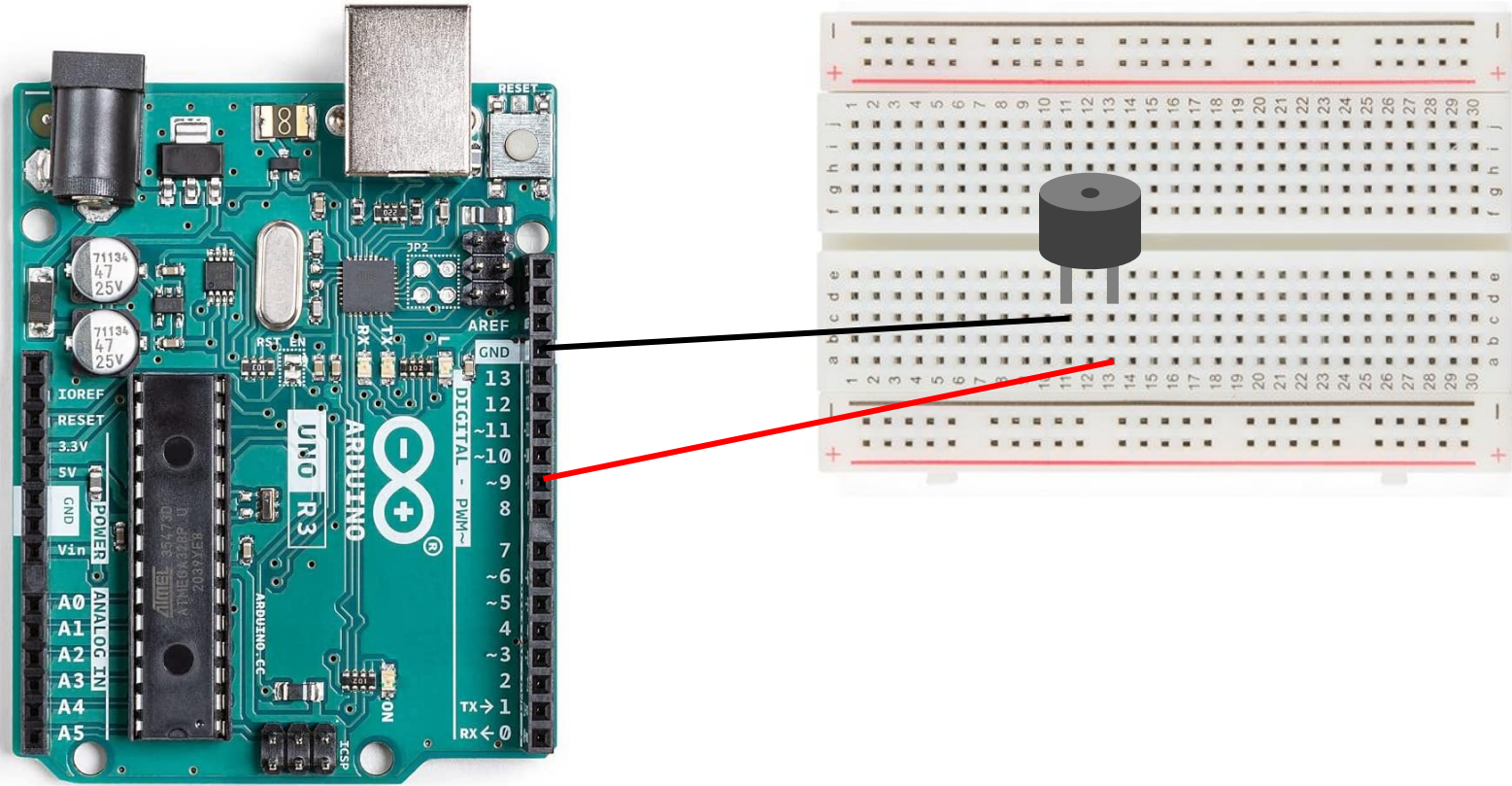
First Circuit: LED Light



LED Light with Resistor



Connecting the Buzzer



More Interesting Buzzer Code – Quick Beeps

```
const int Buzzer = 9; // buzzer connected to pin 9

// *****
//                               S E T U P
// *****

void setup() {
    pinMode(Buzzer, OUTPUT);           // Set buzzer -pin 9 as an output
    tone(Buzzer, 1000); // Send 1000Hz sound signal... ← Delete this line
}

// *****
//                               L O O P
// *****

void loop() {
    tone(Buzzer, 1000); // Send 1KHz sound
    delay(100);         // ...for .1 sec

    noTone(Buzzer);    // Stop
    delay(100);         // ...for .1 sec
}
```

More Interesting Buzzer Code – Ascending Notes

```
const int BUZZER_PIN = 9; // buzzer connected to pin 9

// *****
//                               S E T U P
// *****
void setup() {
    pinMode(BUZZER_PIN, OUTPUT); // Set buzzer -pin 9 as an output
}

// *****
//                               L O O P
// *****
void loop() {
    int x;

    for (x = 1000; x <= 4000; x += 100) {
        tone(BUZZER_PIN, x);
        delay(100);
    }
}
```


More Interesting Buzzer Code – Alarm

```
const int BUZZER_PIN = 9; // buzzer connected to pin 9

// *****
//                               S E T U P
// *****
void setup() {
    pinMode(BUZZER_PIN, OUTPUT); // Set buzzer -pin 9 as an output
}

// *****
//                               L O O P
// *****
void loop() {
    int x;

    for (x = 1000; x <= 4000; x += 1) ← Change from 100 to 1
        tone(BUZZER_PIN, x);
        delay(100); ← Delete this line
    }
}
```