Connecting a Potentiometer to a Battery

A **potentiometer** is a variable resistor used to adjust voltage levels within a circuit. Here's how you can connect it to a **battery**:

Components Needed:

- **Potentiometer** (usually 3 pins)
- **Battery** (e.g., 9V battery or suitable for your circuit)
- **Wires for connections**

Steps for Connection:

1. **Identify the Pins:**
    - The potentiometer has **three pins**:
        - **Pin 1** (one end pin) is for the input voltage.
        - **Pin 2** (the middle pin, also called the wiper) is for the adjustable output voltage.
        - **Pin 3** (other end pin) is for the ground or common voltage.
2. **Connect to the Battery:**
    - **Pin 1** (input) connects to the **positive terminal** of the **battery** (e.g., 9V positive terminal).
    - **Pin 3** (ground) connects to the **negative terminal** of the **battery**.

3. **Adjustable Output:**

    - The **middle pin** (Pin 2) will provide an adjustable voltage between the battery's positive and negative terminals, depending on the rotation of the potentiometer. This pin can be connected to another component (e.g., an LED, sensor, or Arduino) to utilize the adjusted voltage.