Name: _____ Date: _____ Class: _____

Elementary and Middle VOC Worksheet Answers

1. What does it mean when your LED light is on/off?

Answer: If your LED light is on, it means that the LED is wired correctly, but, more importantly, your breadboard has power. Engineers install LED lights on their breadboards so that if their circuit doesn't work, they can immediately identify if a lack of power is the problem.

2. Column 2 on the breadboard is connected to one leg of the sensor and the _____ row.

Answer: positive

3. Column 3 on the breadboard is connected to one leg of the sensor and the _____ row.

Answer: positive

4. Column 4 on the breadboard is connected to one leg of the sensor and a _____, which is connected to the _____ row.

Answer: resistor, negative

5. Column 5 on the breadboard is connected to one leg of the sensor and the _____ row.

Answer: negative

6. When the VOC sensor detects a pollutant, the Voltage across the resistor _____.

Answer: increases

7. A battery is connected to a light bulb in a circuit. There is a current (I) of 3 Amps in the wire. The light bulb has a resistance (R) of 2 Ohms. What is the voltage of the battery? (Use V = I x R).

Answer: V = 3 x 2

V = 6 Volts

8. A battery is connected to a light bulb in a circuit. There is a current (I) of 5 Amps in the wire. The battery has a voltage (V) of 10 Volts. What is the resistance (R) of the battery? (Use R = V/I).

Answer: R = 10 / 5

R = 2 Ohms

9. A battery is connected to a light bulb in a circuit. The battery has a voltage of 6 Volts. The light bulb has a resistance (R) of 3 Ohms. What is the current (I) in the wire? (Use I = V/R).

Answer: I = 6 / 3

I = 2 Amps