Name_____ Date_____

Electric Current

Directions: *Complete the paragraphs using the terms listed below.*

chemical reactions	ohms	electric potential energy	
resistance	volts	electric current	
negative	positive	V	circuit

Life as we know it would be impossible without electricity. Think of the number of electrical devices we rely on every day: lights, refrigerators, computers, televisions, flashlights, car headlights, watches–the list is endless. All of these devices, and countless others, need a constant, steady source of electrical energy. This steady source of electrical energy comes from a(n) **1.** _____, which is the steady flow of electrons through a conductor.

This steady flow of electricity requires a closed path, or **2.** _____, through which to flow. Its basic elements are a conductor, such as wire, through which electrons flow and a source of electrons, such as a battery.

An electric current carries energy that comes from separating positive and negative charges. Negatively charged electrons "seek out" positively charged electrons to recombine. This can only happen if they travel through the circuit. In a circuit, the electrons flow from the **3.** _____ end to the **4.** _____ end.

A familiar source of electrons in electric circuits is a battery. The total stored electrical energy in a battery—the energy available to do work—is called **5.** _____. This energy is measured in units called **6.** _____, which is abbreviated **7.** _____. Batteries rely on **8.** _____ to separate positive and negative electrical charges. When the negative and positive ends of the charges are connected by a conductor, a circuit forms and the electrical energy is available to do work.

However, the electrons don't flow completely freely through the circuit. Depending on the material used for the conductor, the electrons have more or less difficulty flowing. The measure of how difficult it is for electrons to flow through a circuit is called **9.** _____. This is measured in units called **10.** _____.

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