

Electricity Basics Video – Answer Key

- 1) What is at the center of an atom? **The nucleus is at the center of an atom.**
- 2) What type of charge does a proton have? **Protons have a positive charge.**
- 3) What type of charge does a neutron have? **A neutron has no charge.**
- 4) Where are protons and neutrons located? **Protons and neutrons are located in the nucleus.**
- 5) What type of charge does an electron have? **Electrons have a negative charge.**
- 6) Where are electrons located? **Electrons are located outside the nucleus.**
- 7) What is a battery? **A battery is a chemical device capable of converting stored chemical energy into electrical energy.**
- 8) What are the two ends of a battery called? **The two ends of the battery are called the positive terminal and the negative terminal.**
- 9) Which end of the battery do the electrons leave from? **Electrons leave from the negative end.**
- 10) What are the names of materials that allow electrons to move freely? **Conductors are materials that allow electrons to move freely.**
- 11) What is the most common metal used in wires? **Copper is the most common metal used in wires.**
- 12) What is a short circuit? **A short circuit occurs in a circuit when the current finds a shorter path to follow back the positive terminal of the battery. This path almost always has a lower resistance than the other path. Because of the lower resistance, the current rises, and a fire may result.**

13) What does the letter V stand for on a battery? **The letter V stands for voltage.**

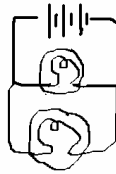
14) What should you never experiment with? **You should never experiment with wall outlets.**

15) What is a circuit? **A circuit is a path where electric current can flow.**

16) What are two things the light bulb does in the circuit? **A light bulb provides resistance to the flow of electrons and it converts electrical energy into light and heat energy.**

17) What does a switch do? **A switch is a device for turning an electrical current on and off.**

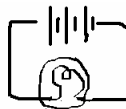
18) Draw the parallel circuit.



19) Define parallel circuit. **A parallel circuit is a circuit where the electrons have multiple paths to follow.**

20) What is one advantage of using parallel lighting? **One advantage of using parallel lighting is that it is easy to see when a light bulb no longer works because all the other light bulbs are still on.**

21) Draw the series circuit.



22) Define series circuit. **A series circuit is a circuit where the electrons only have one path to follow.**