

Bill Nye – Electricity – Answer Key

- 1) What is electricity? **Electricity is the flow of electrons.**
- 2) What is another name for a closed path? **Another name for a closed path is an electrical circuit.**
- 3) What word means 'go around'? **Circuit means 'go around'.**
- 4) What did Bill say was similar to the flow of electrons? **He said the flow of electrons is similar to the flow of water.**
- 5) What can you do to batteries to make them last longer? **You can make batteries last longer by keeping them in the refrigerator.**
- 6) Briefly explain how an electric train works. **Electricity enters the motor in the train via one of the rails and exits the train using the opposite rail.**
- 7) Define conductor. **Conductors are materials that allow electrons to move freely.**
- 8) Define insulator. **Insulators are materials that don't allow electrons to move freely.**
- 9) Define resistor. **A resistor is a material that allows only some electrons to go through it.**
- 10) Define pressure. **Pressure is the force pushing water or electrons.**

11) Define amps. **Amps are the number of electrons flowing through a wire.**

12) What is the combination of volts and amps called? **The combination of volts and amps are called watts.**

13) Compare a battery to a hotdog. **A battery contains a rod with a can around it. Similarly, a hotdog contains a hotdog with a hotdog bun around it. In a battery, between the rod and can are goopy chemicals called electrolytes. Similarly, a hotdog has ketchup, mustard and relish between the hotdog and the bun.**

14) Up to how many volts of electricity can an electric eel produce? **An electric eel can produce up to 800 volts of electricity.**

15) What does AC stand for? **AC stands for alternating current.**

16) What does DC stand for? **DC stands for direct current.**

17) What does PC stand for? **PC stands for popcorn.**

18) What do all plugs have in common? **All plugs have two prongs because electricity has to flow in a loop. Electricity will enter a device through one prong and exit using the other.**