Understanding Electricity

Electricity is a type of energy that powers many of the tools, devices, and products that are essential to our modern civilization. There are two main types of electricity (1) Current electricity and (2) Static electricity. Current electricity is the flow of sub-atomic particles (called electrons) through a conductor (such as copper wire). Current electricity is what powers all the electrical appliances we use every day. For a current flow to occur, there must be a closed loop (a circuit) around which the current can flow. Electrons orbit around the edges of atoms (the basic building blocks of all substances and elements). Static electricity is caused by friction (rubbing two objects or surfaces against each other). The rubbing dislodges electrons from one object onto the other causing a slightly positive charge on the first object and a slightly negative charge on the second object. Lightning during a thunderstorm or walking across a carpet and getting shocked when touching a metal door knob are both examples of static electricity. Some materials (such as copper metal) allow electricity to flow freely. Such materials are called conductors because they are good at conducting electricity. Materials (such as rubber or plastic) that do not allow electricity the pass easily through them are called insulators.

1. What is electricity?  
   a. A mysterious force of nature  
   b. A special kind of light  
   c. A type of energy we use to power many devices

2. Electric current is caused by the flow of:  
   a. Neutrons  
   b. Protons  
   c. Electrons

3. Static electricity is caused by:  
   a. Friction between two objects or surfaces  
   b. Bolts of lightening  
   c. Stationary electrons

4. To keep yourself from being electrocuted:  
   a. Keep yourself grounded at all times  
   b. Only use 3-pronged plug electrical products  
   c. Use adequate insulation when handling live wires

5. What is required for electric current to flow?  
   a. A closed circuit composed of conducting materials  
   b. A power source  
   c. Both of the above
Key to Primary Science Reading Comprehension – (Worksheet 6)

Read the scientific article below and circle the letter of the correct answers to the questions about it.

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