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Pathfinder's Name

## Electricity

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(Instructor Required)

1. Explain and illustrate an experiment by which the laws of electrical attraction and repulsion are shown.

Experiment \_\_\_\_\_

Explanation \_\_\_\_\_

\_\_\_\_\_

2. Explain the difference between direct and alternating current, and demonstrate the uses to which each is adapted. Give a method of determining which kind flows in a given circuit.

Direct \_\_\_\_\_

\_\_\_\_\_

Alternating \_\_\_\_\_

\_\_\_\_\_

Method of determining kind of flow \_\_\_\_\_

\_\_\_\_\_

3. Connect a buzzer, bell, or light with a battery using a switch in line.
4. Make and run a simple electric motor from a kit or take apart a motor and identify the parts, and explain how it works.
5. Make a simple battery cell.
6. Demonstrate ability to replace fuses or reset breakers and demonstrate a National Electric Code (NEC) approved splice using insulated wires.
7. Show how you would rescue a person in contact with a live electric wire, and have a knowledge of the method of reviving a person insensible from shock.
8. Make a simple diagram of a lighting system of an automobile.
9. Make a diagram that properly shows the lights, switches, and convenience outlets controlled by each breaker in a house.

10. Read an electric meter correctly, and compute a residence bill at the rate charged in your community.

Meter reading = \_\_\_\_\_

Community rate = \_\_\_\_\_

Bill = \_\_\_\_\_

Date completed \_\_\_\_\_

Instructor's Signature \_\_\_\_\_