Electricity

Brief Description: Have you ever wondered what makes the lights work? In this session you will learn just that! Youth will explore the basic principles of electricity by completing three activities. The culminating project will be using potatoes for power.

Grade Level: K-2

Materials List:
Electricity 1 - Magic of Electricity 4-H Curriculum
Acres of Adventures 4-H Curriculum
Science Kids - Static Electricity Experiment- sciencekids.co.nz/experiments/staticelectricity.html

Anticipatory Set- (Static Electricity Experiment)
2 inflated balloons with string attached, your hair, aluminum can, woolen fabric
Plugging In
Flip Chart, marker
Bright Lights
D- cell battery, flashlight bulb, aluminum foil
Potato Power
3 potatoes, 3 paper clips, 3 copper pennies, 4 alligator clip test leads, 2.5 LCD clock or 1.5 volt LED

Book Suggestions:
Switch On, Switch Off by Melvin Berger
When Charlie McButton Lost Power by Suzanne Collins

Time Needed: 1 hour

Nebraska 4-H Learner Outcome:
Youth will develop positive interests and attitudes about science and science related careers.
Youth will develop science skills and abilities.

Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture.

The 4-H Youth Development program abides with the nondiscrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.

Lesson:

Anticipatory Set: Static Electricity Experiment (Science Kids)

- This activity can be done in large groups, small groups or individually. It is a great way to get them thinking about electricity.

Activities:

1) Read *Switch on, Switch Off or When Charlie McButton Lost Power* 15 minutes

2) Plugging In 15 minutes
   -Magic of Electricity Manual page 6
   ●Brainstorm a list of your favorite activities. List at least 10; put a check mark next to those that need electricity to work. Remember if the activity uses batteries it is using electricity.

3) Bright Lights 15 minutes
   -Magic of Electricity Manual page 10
   ●During this simple activity youth will explore the connection that is needed to make a light bulb light up.

4) Potato Power 15 minutes
   -Acres of Adventure Manual page 66
   ●Let groups create and test circuits using potatoes. You can extend this lesson by experimenting with various types produce.

Reflection:

Think-Pair-Share: Think of one thing you discovered about electricity from this session and one question that you still have. Pair up with a friend and share.

Wrap-Up:

Share examples of 4-H Electricity projects from your county.

Extension:

3 Penny Batteries
https://www.youtube.com/watch?v=rIdPfDHeROI
Invite a local electrician to come and present to your group

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