

#3624

KNUCKLEHEAD'S ELECTRIC SAFETY VIDEO I

Grade Levels: 4-6

8 minutes

S. I. VIDEO SALES GROUP 1995

1 Student Activity Sheet



DESCRIPTION

Elementary students star in six short vignettes stressing electrical safety. Covers the dangers of power lines, damaged or frayed wires, electrical outlets, and electricity and water.

ACADEMIC STANDARDS

Subject Area: Science

- ◆ Standard: Understands basic concepts about the structure and properties of matter
 - Benchmark: Knows that objects can be classified according to their properties (e.g., magnetism, conductivity, density, solubility) (See Instructional Goal #1)
- ◆ Standard: Understands energy types, sources, and conversions, and their relationship to heat and temperature
 - Benchmark: Knows that electricity in circuits can produce light, heat, sound, and magnetic effects (See Instructional Goals #2, #3)

INSTRUCTIONAL GOALS

1. To explain where electricity is generated and how it travels.
2. To describe some dangers of electricity.
3. To list some safety rules involving electricity.

VOCABULARY

- | | |
|--------------|-----------------|
| 1. comedian | 8. diploma |
| 2. kook | 9. punk |
| 3. source | 10. beware |
| 4. generated | 11. electrocute |
| 5. extinct | 12. dweeb |
| 6. frayed | 13. switches |
| 7. sponsor | 14. sockets |

BEFORE SHOWING

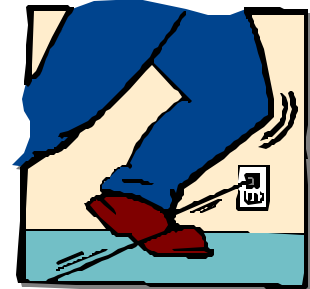
1. Introduce the word knucklehead.

- a. Write sentences using the word.
- b. Discuss appropriate and inappropriate uses of the word.
- c. Discuss possible reasons for using the word in the title of this video.
2. Discuss the importance of electricity.
 - a. What was life like without electricity?
 - b. How is electricity made?
 - c. Describe the inconveniences of a power outage.
3. Show a picture of an electricity-generating power plant.
 - a. Locate on a map the power plant closest to the local area.
 - b. Briefly explain the importance of power plants.
4. Distribute safety rules handout. (See STUDENT ACTIVITY SHEET.)

DURING SHOWING

Discussion Items and Questions

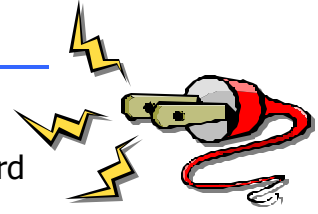
1. View the video more than once, with one showing uninterrupted.
2. Pause at the end of the "Frank N. Stein" section.
 - a. Show a picture of the legendary Frankenstein and point out the similarities in the spelling of the two names.
 - b. How fast does electricity travel through the power lines?
 - c. Why is it not safe to touch a bare wire?
3. Pause at the end of the "Dino Saur" section.
 - a. Why is it not safe to throw things at power lines?
 - b. Why is it not safe to climb telephone lines or trees near power lines?
 - c. Why is it dangerous to climb power station fences?
 - d. Why is it dangerous to come near a fallen power line?
4. Pause at the end of the "Lifeguard" section.
 - a. Describe what frayed wires look like and discuss why they are dangerous.
 - b. What kinds of frayed wires are commonly seen in the home? (Lamps, toaster, and other small appliances.)
 - c. What should be done if someone sees a frayed wire, separated cord, or wire fire?
5. Pause at the end of the "Outlet" section.
 - a. List some objects that are easy to insert into electrical outlets.
 - b. Why is it dangerous to put any thing other than a plug in an outlet?
 - c. What device is used to prevent young children from putting objects into outlets?
6. Pause at the end of the "Electra's Cool School" section.
 - a. What were some safety rules for children that Electra mentioned?
 - b. What are other ways that parents or babysitters can protect their children from the dangers of electricity?
7. Pause at the end of the section on Stacy and her brother.
 - a. Why is it dangerous to use electricity in a wet place?
 - b. What two things did Stacy's brother do that put him in danger?



- c. What are some other examples of mixing water with electricity?

AFTER SHOWING

Applications and Activities



1. Write the following sentences or phrases on strips of poster board to resemble captions. Hold each one up and discuss the meanings.
 - a. Guaranteed to knock you dead--Frank N. Stein.
 - b. I'm hooked on electricity.
 - c. The electricity you use does not come out of thin air.
 - d. Say, how is electricity like a runny nose? They both flow.
 - e. Hey, Frank, you crack me up; you're real nuts.
 - f. Yup, but actually, I'm nuts and bolts.
 - g. And that's the kind of shock you don't want.
 - h. Frank, you're a scream.
 - i. Doesn't Frank get you all charged up?
 - j. If you don't want to become extinct, just remember: stay away from power lines.
 - k. Remember, you can be your own lifeguard.
 - l. If you put your finger in there, you're going to have punk rocker hair.
 - m. If you put the wrong thing in there, you'll upset Smokey the Bear.
 - n. I'll murderize ya!
 - o. Then playing it safe around electricity will really be a snap.
2. Research or discuss the following:
 - a. At what speed does electricity flow through power wires?
 - b. How many miles of power lines are in an average-sized town?
 - c. Why are some power lines on poles and some underground?
 - d. Why do some outlets have two holes and others have three holes?
3. Research the path of electricity from the power plant to the school classroom. Illustrate this on a bulletin board, using yarn for power lines.
4. Using a digital camera, take pictures of electricity safety bloopers and display on a bulletin board.
5. Obtain a map of the local vicinity. Mark the location of the power stations in the area. Point out which are closer to the school and to the homes.
6. Plan a trip to the local power plant to see how electricity is made.
7. Invite an electrician to give a lecture about safety procedures with electricity.
8. Obtain strings of Christmas tree lights or outdoor decoration lights. Check for frayed wires.
9. Research science lab manuals or the Internet for procedures to set up a lemon battery.
 - a. Follow the procedure, then bring the two free ends of the wire in contact with the tongue.
 - b. Discuss what causes the slight tingle and metallic taste.

- c. A lemon battery produces only 7/10 of a volt of electricity. Compare this with a 220-volt socket.
10. Make a small brochure listing procedures for informing adults (parents, police, fire department, and power utility company) about fallen electrical power lines.
11. Using a long sheet of colored paper, make a wall-to-wall sized chart of electrical safety rules. Include those in the video and additional ones.
12. Set up an electrical safety poster contest.
13. Make electrical safety buttons.

RELATED RESOURCES

Captioned Media Program



- Energy: Working for Us #2606V
- How Does Electricity Travel? #2567V
- Overhead Lines: A Matter of Respect! #2096

World Wide Web



The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid-safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **FRANKENSTEIN'S LIGHTNING LABORATORY**

<http://www.miamisci.org/af/sln/frankenstein/safety.html>

Allows viewers to click on a character in the Atoms Family and learn about electrical safety rules inside and outside the home.

- **SCHOOL ELECTRICAL SAFETY**

<http://www.nesf.org/school/poster.html>

Contains ideas for electrical safety posters.

- **HOME ELECTRICAL SAFETY**

<http://www.nesf.org/home/index.html>

Includes a home electrical safety quiz, home safety FAQ, and home electrical safety check booklet.

- **POWER LAB**

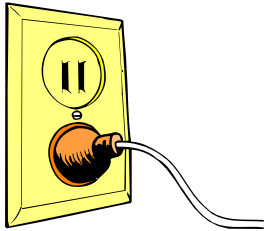
<http://www.edisonkids.com/>

Teaches about electrical safety through games and quizzes.

STUDENT ACTIVITY SHEET

- ELECTRICAL SAFETY RULES

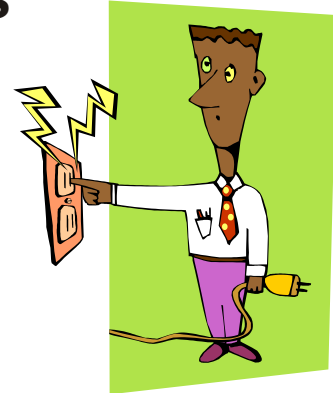
ELECTRICAL SAFETY RULES



Only plugs go into sockets.



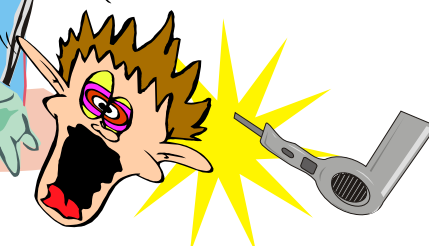
Never touch electrical switches when standing on a wet floor.



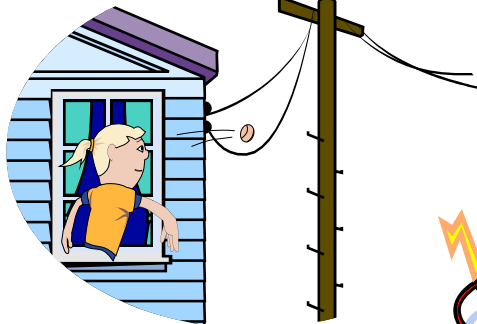
Don't climb trees near power lines.



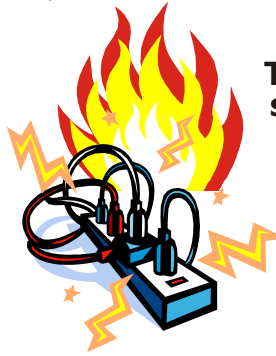
Never put your finger in an electric socket.



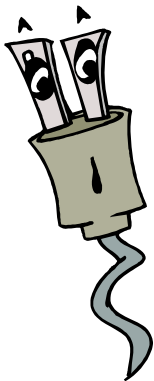
Don't use a hair dryer while you are still wet from a shower.



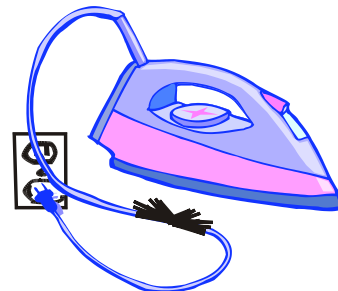
Never throw things at power lines.



Tell an adult if you see a wire on fire.



Keep children away from electrical things.



Leave frayed wires alone.



Don't let electricity get to the ground through you.