

Kato the Safety Cat's Electrical Safety Activity Book

Teacher's Guide

SUBJECT AREA: SCIENCE AND LANGUAGE ARTS

MOTIVATION:

Ask the students what the following expressions mean to them:

- "I'd rather be safe than sorry."
- "An ounce of prevention is worth a pound of cure."

LESSON DEVELOPMENT

Cover

- What is Kato holding in his left hand?
- What is written on the emblem on Kato's hat?
- In which picture are the children doing something unsafe?
- In which picture are the children doing something safely?
- What do you think this book will be about?

Discussion

Elicit from the students the electrical safety rules they know.

Page 2

- Who does Kato work for?
- Why is the boy climbing the fence of the electrical substation?
- What is written on the sign that is posted on the fence of the substation?
- Why should you stay away from electrical substations?
- What does the symbol on the bottom of the page represent?

Discussion

Have the students list the locations of various electrical substations in their community.

Page 3

- What happens in a boiler?
- Have students give examples of different fuels that are used in boilers (*e.g., gas, oil*).
- What is the purpose of a turbine?

Discussion

Discuss with the students where boilers are found (*schools, homes, ships, etc.*). Perhaps invite the school's custodial engineer to explain the purpose and workings of the boiler.

Page 4

- How is the electricity that is generated in the Power House sent to the substation?
- What changes take place in the size of the wires running from the Power House to your home?
- Why don't the birds that perch on wires get hurt? (Introduce the term electrocuted.)

Vocabulary

Electrocute—to kill by means of a strong electric shock.

Activity

Have the students draw a diagram showing the different stages of how power is sent from the Power House to their homes and schools. Ask them to label each part of this distribution system.

Page 5

- What could happen to the boy if he tries to get the kite out of the power lines?
- How could the boy become a perfect conductor of electricity if he climbs the pole?

Discussion

- Stress to the students that they should never climb utility poles or trees that have electrical wires going through them.
- Have the class discuss whether it is better to have electrical wires above or below the ground. (Explain the tremendous expense of putting the wires underground.)

Page 6

- Why are insulators used on utility poles?
- Why should you stay in your car if there is a downed wire on it?

Discussion

Explain to the students that they must stay away from any wire they see dangling from a utility pole or building. Tell them to call the electric company. Stress the importance of staying in a car until help arrives if a dangling wire is on it.

Page 7

- What could happen if you put a fork in a toaster that is plugged in?
- Have students list the different electrical appliances found in a kitchen.

Activity

Have the students make a list of everything they have learned so far in this book about electrical safety.

Page 8

- Touching an outlet with a hand in water would cause what?
- What do the dotted lines in the middle of the picture represent?
- When a light switch is turned on, what happens? (Elicit: completion of a circuit.)
- What is the boy doing in the bottom picture?

Vocabulary

Circuit—the path of an electric current.

Discussion

- Talk with the students about the job an electrician does. Stress the importance of using licensed electricians.
- If possible, invite a licensed electrician speak to the class about how to become an electrician and what the job entails.

Page 9

- What is electricity ready to do?
- What can happen if too many appliances are plugged into the same outlet?
- Why should you not use water on electrical fires?
- What should you do if there is a fire in your house?

Activity

Divide the class into three groups and have each group do an art project on one of the three danger symbols on this page.

Page 10

- Ask the students to explain in a paragraph what the sketch on the pad is about.

Discussion

Ask the students what objects should be kept away from power lines outside around the house. (*Ladders, tall pool cleaning tools, etc.*)

Page 11

- Why did Kato say, “This is an accident waiting to happen”?
- How could you get hurt using electrical equipment outside when it is raining?
- Why should you stay away from windows during electrical storms?
- Why should you never stand under a tree or near a utility pole during a storm?

Discussion

Stress to the children that they should not use electrical equipment if it is wet, if their hands are wet, or if they are standing in water.

Page 12

- What can happen to you if the insulation on the wiring you are using is worn away?

Vocabulary

Insulate—to separate a conductor of electricity from other conducting bodies by means of something that will not conduct electricity.

Conductor—something that transmits heat, electricity, or sound.

Discussion

Discuss with the students those materials that do not conduct electricity.

Page 13

- Why should you get out of the water if it appears that a storm is coming?
- What is a good thing to do before going swimming or boating? (*Elicit: listen to the weather report.*)

Activity

Have the students design electrical safety posters.

Page 14

Activity

After the students have completed the matching exercise, have them tell you the pages on which each danger symbol was explained in the book.

Page 15

Activity

Have the students write a story on how each one of them can be a “Danger Ranger.”

Page 16

Have the students complete Kato’s Electrical Safety Quiz. Once the quiz is completed, and the answers corrected, have them complete the safety certificates.