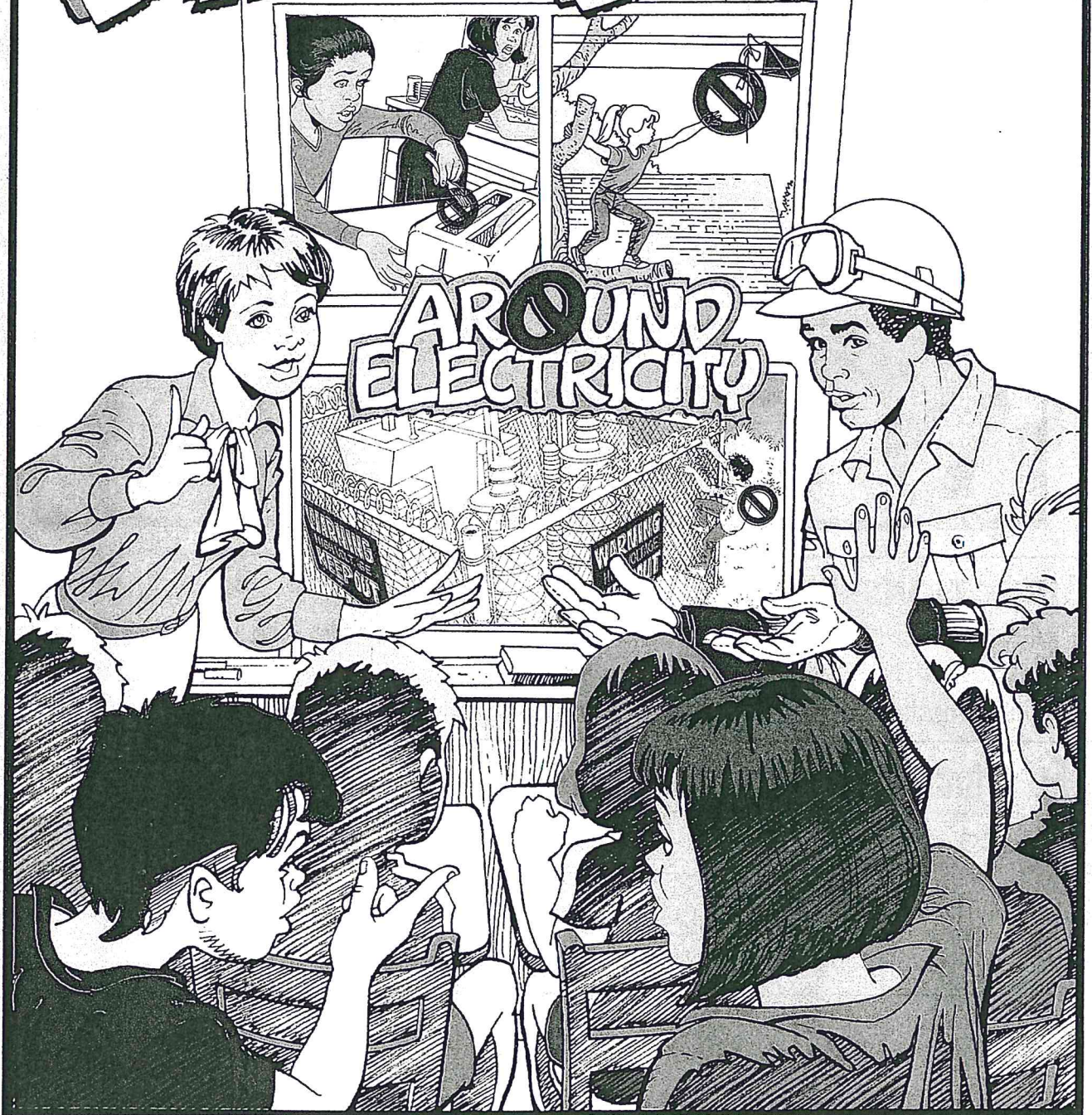


STAY SAFE

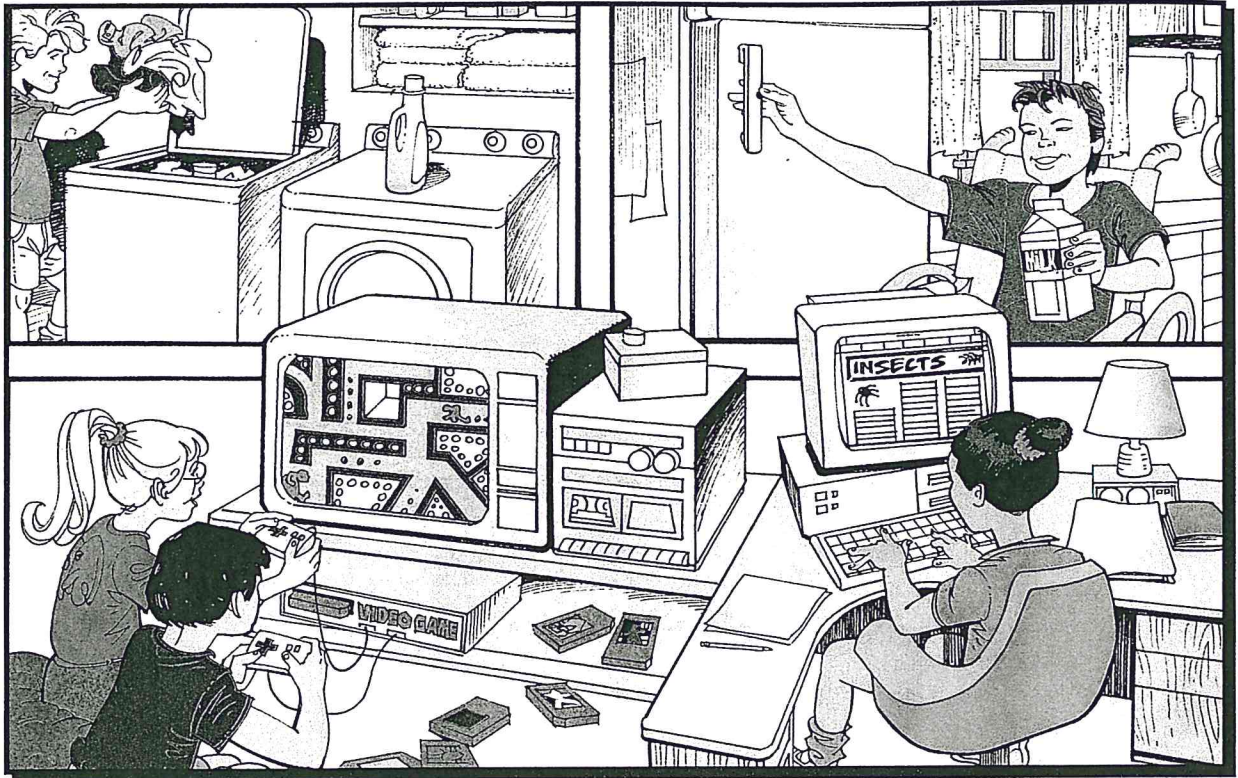


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www.duke-energy.com/publicsafety/schools

You Use Electricity Every Day



DIRECTIONS:

1. On the chart, write down all the electric appliances you used yesterday. (A few are shown to get you started.)
2. Put checks in the boxes to show when you used them.

ELECTRIC APPLIANCES	MORNING	AFTERNOON	EVENING
Lights			
Refrigerator			
TV			



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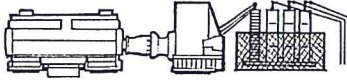
How Electricity Gets To Us

DIRECTIONS:

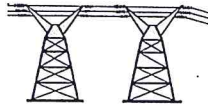
Use the words in the box at the bottom of the page to complete the story. The first letter is filled in for each word to help you get started.

Electricity is produced

at a **p**_____.



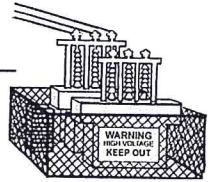
P_____ on tall towers



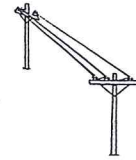
carry very high

voltages of electricity over long distances to **s**_____

where **t**_____ reduce the voltage (strength).



Then electricity travels over smaller power lines



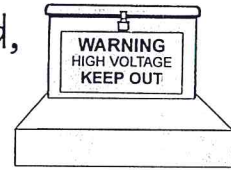
to **t**_____ on poles



and on the ground,

where the voltage is reduced again so we

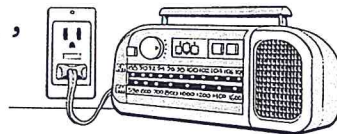
can use it safely.



Finally, electricity flows through wires into our **h**_____

and to **o**_____ ,

where it waits to be used.

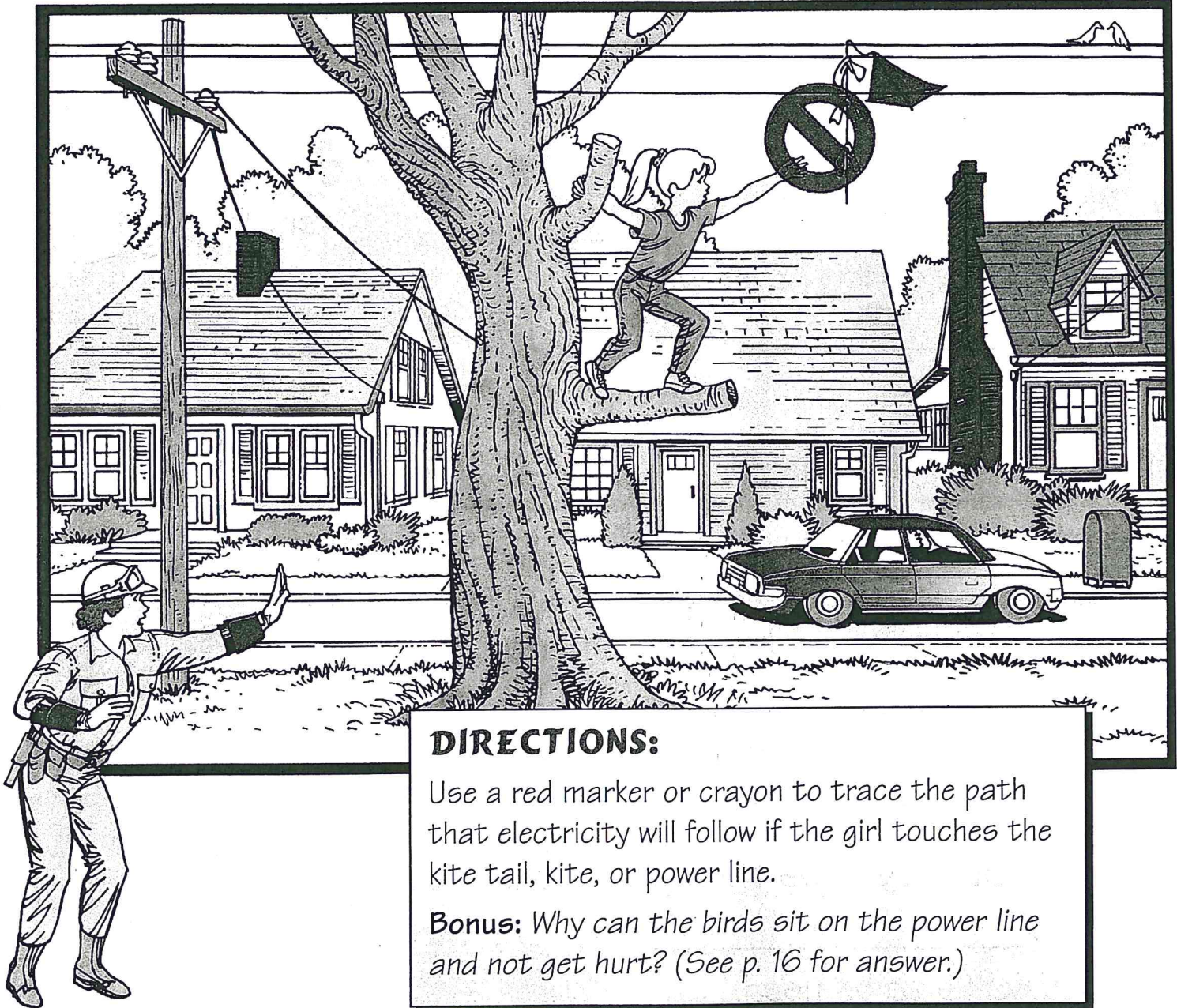


HOMES
TRANSFORMERS

OUTLETS
SUBSTATIONS

POWER LINES
POWER PLANT

If You Are Careless, Electricity Can Hurt You



DIRECTIONS:

Use a red marker or crayon to trace the path that electricity will follow if the girl touches the kite tail, kite, or power line.

Bonus: Why can the birds sit on the power line and not get hurt? (See p. 16 for answer.)

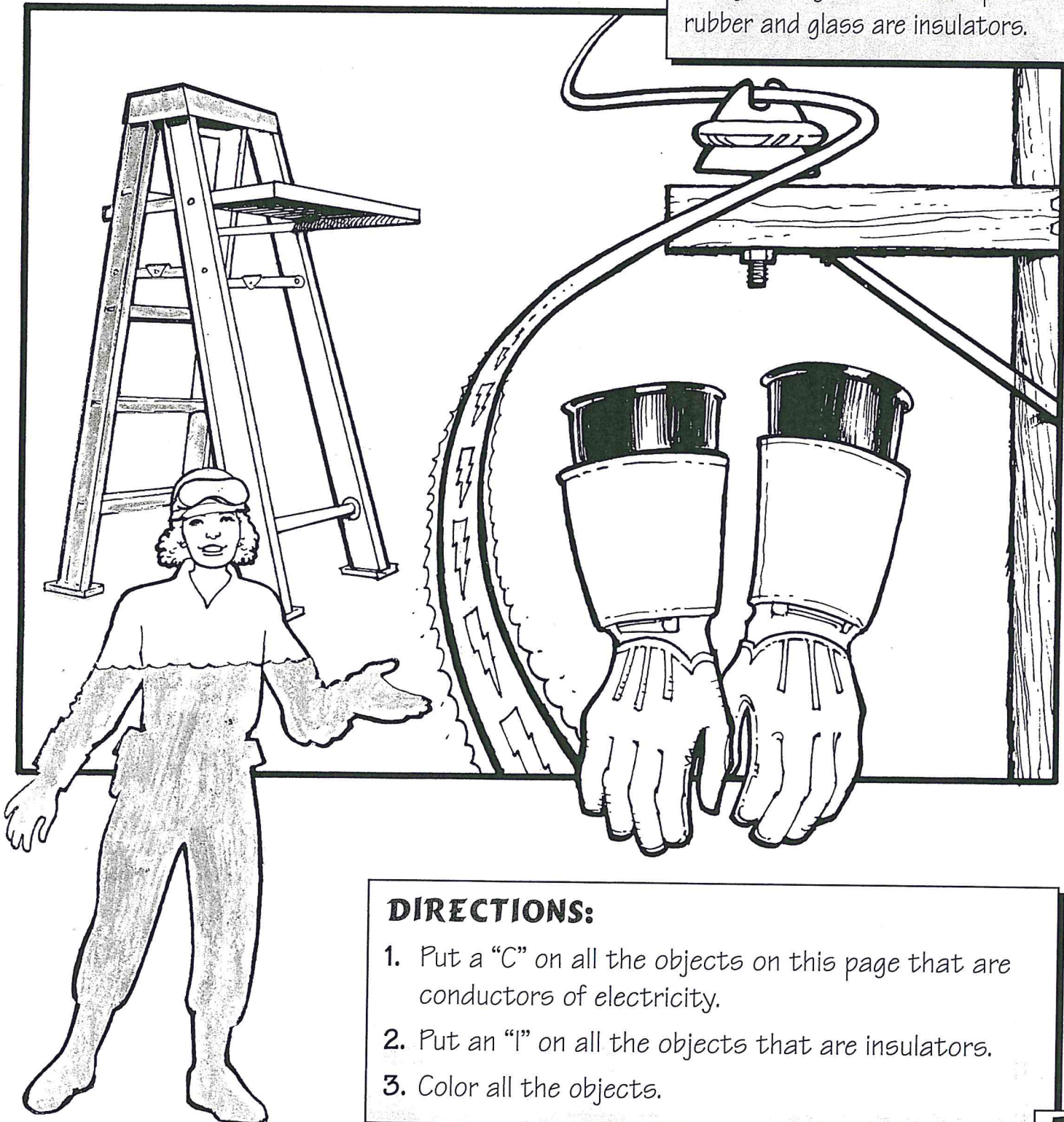
Electricity will always take the easiest path to the ground.

If you touch electricity and the ground (or something that is touching the ground) at the same time, you become the easiest path. Electricity will flow through you. You could be seriously hurt or even killed.

Your Body Can Conduct Electricity

Electricity flows easily through conductors.

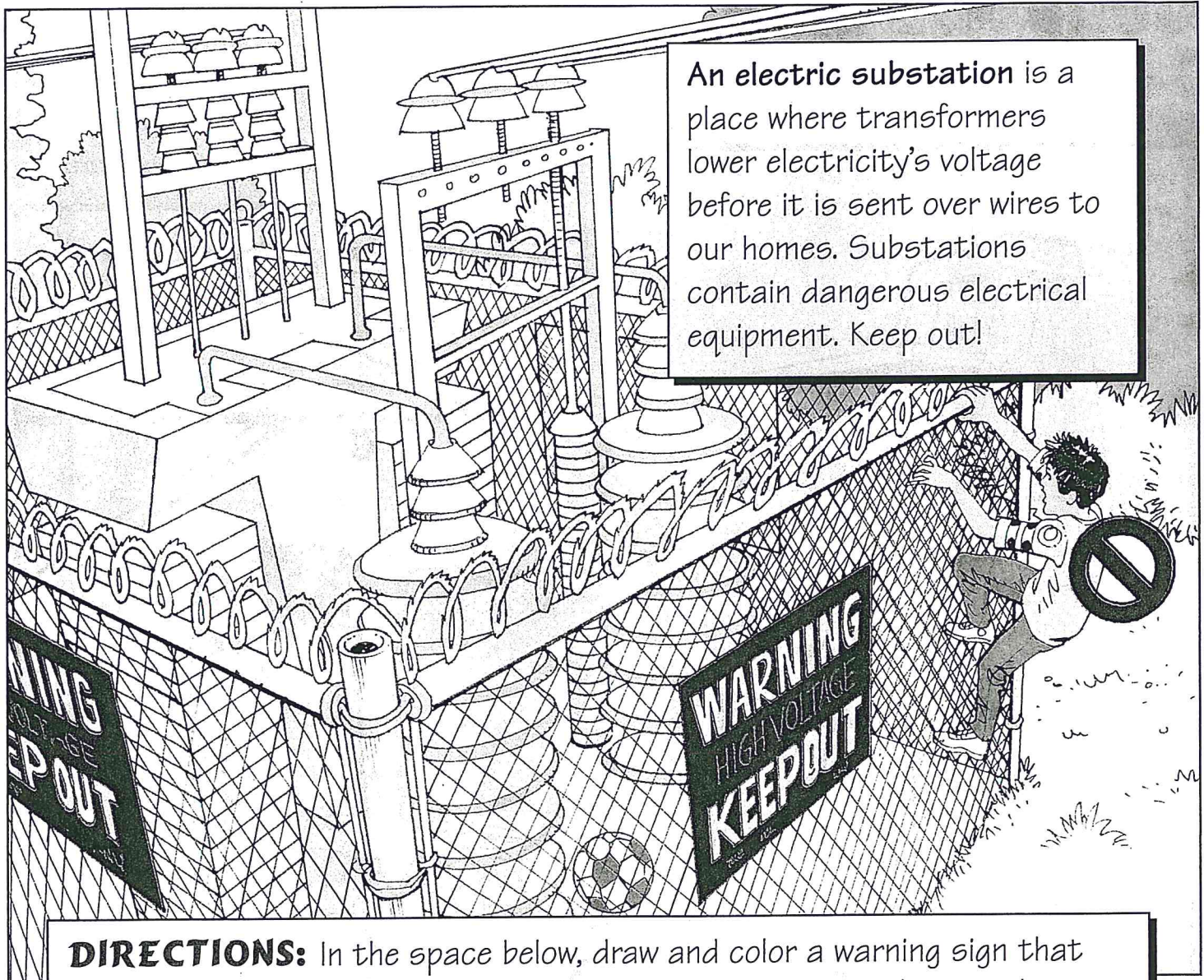
Metal and water are conductors. People are good conductors of electricity because our bodies are 60% water. Electricity cannot flow easily through insulators. Special rubber and glass are insulators.



DIRECTIONS:

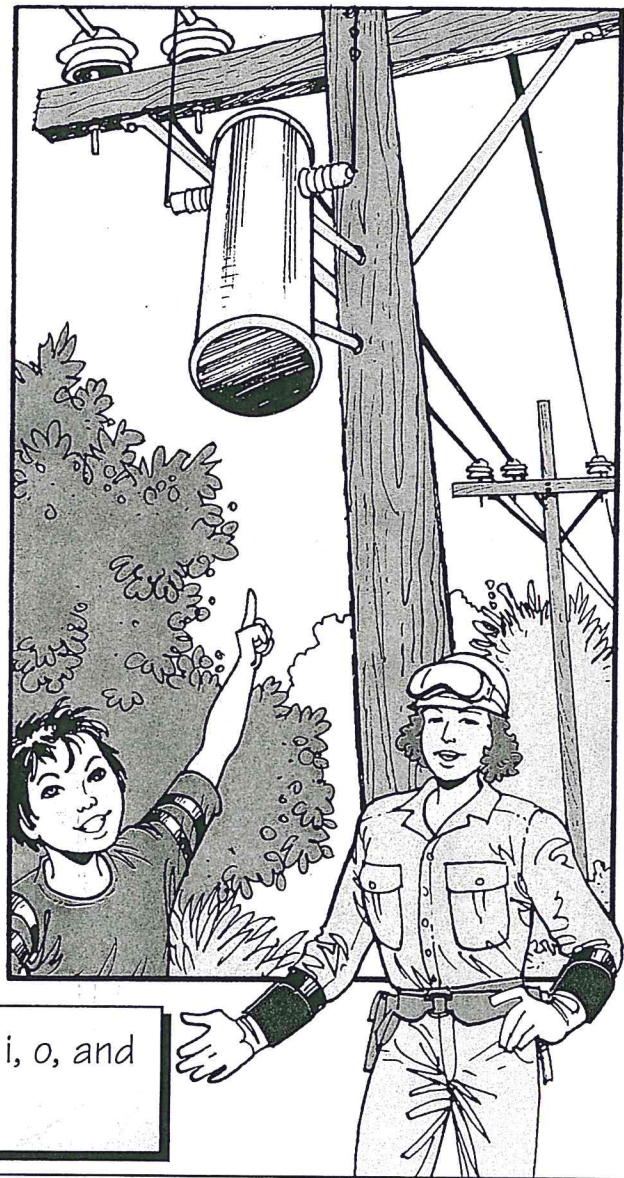
1. Put a "C" on all the objects on this page that are conductors of electricity.
2. Put an "I" on all the objects that are insulators.
3. Color all the objects.

Think Safety!



DIRECTIONS: In the space below, draw and color a warning sign that will keep people away from electrical dangers. Make a sign that can be understood in any language. (Hint: Use pictures instead of words.)

Don't Play Near Transformers

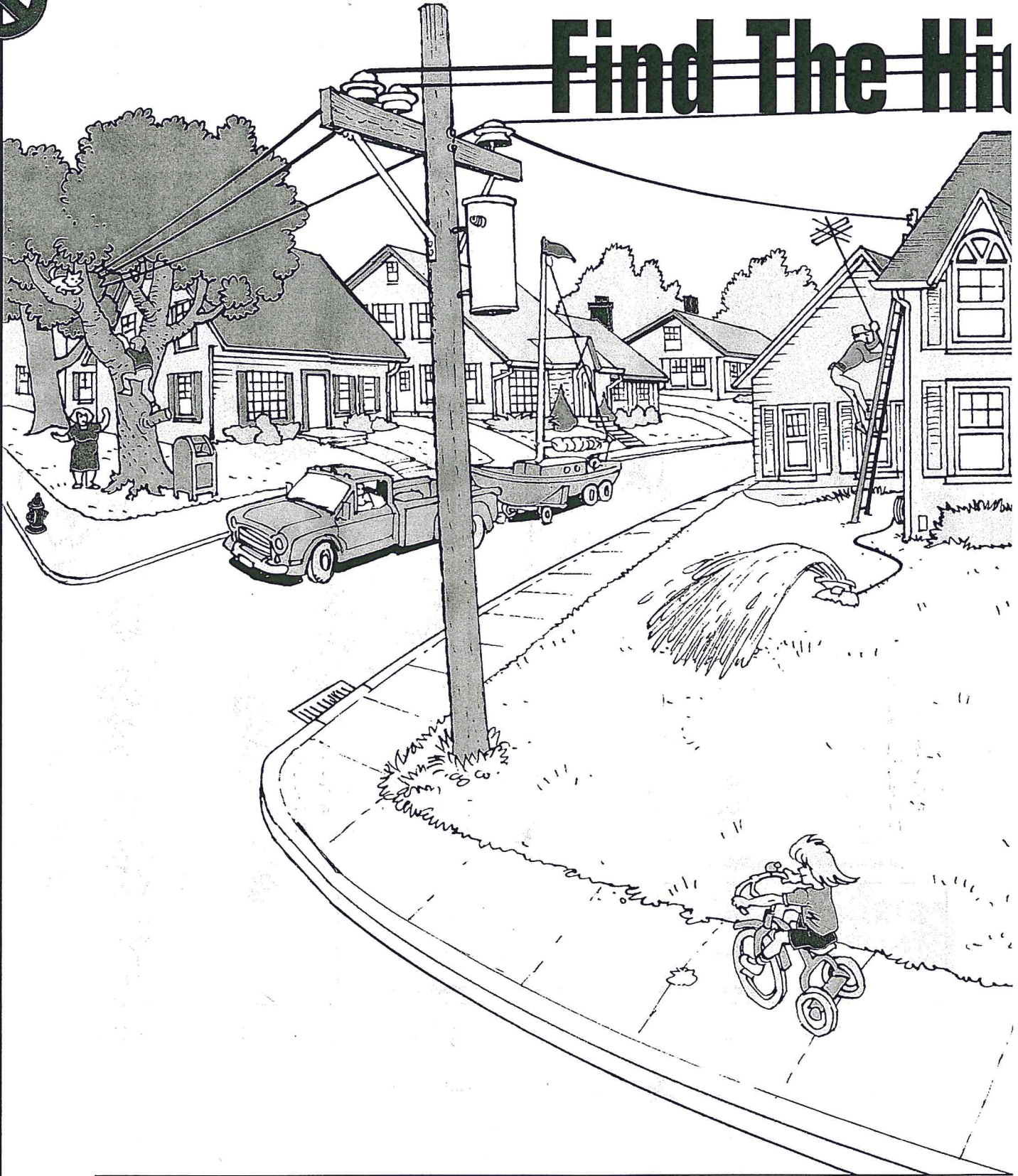


DIRECTIONS: Add the vowels (a, e, i, o, and u) to complete the words in this story.

Transf__rmers change electr__city's voltage. If distribution w__res are under-gr__und, electricity goes to a pad-mounted transf__rmer. If wires are overh__ad, electricity goes to a pole-mounted tr__nsformer. Transformers carry a l__t of el__ctricity.

Don't pl__y on or near transform__rs. If you see one that is dam__ged or unlocked, tell an adult or call your el__ctric ut__lity.

Find The Hidden



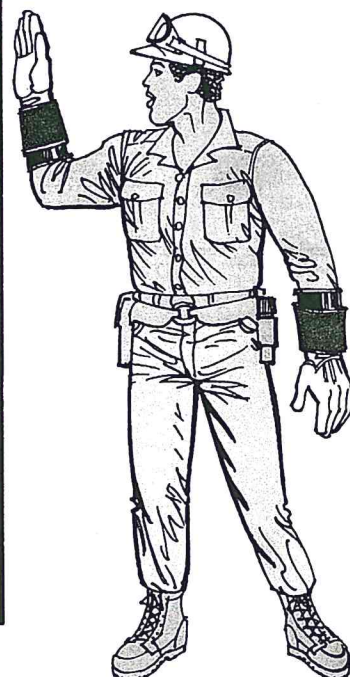
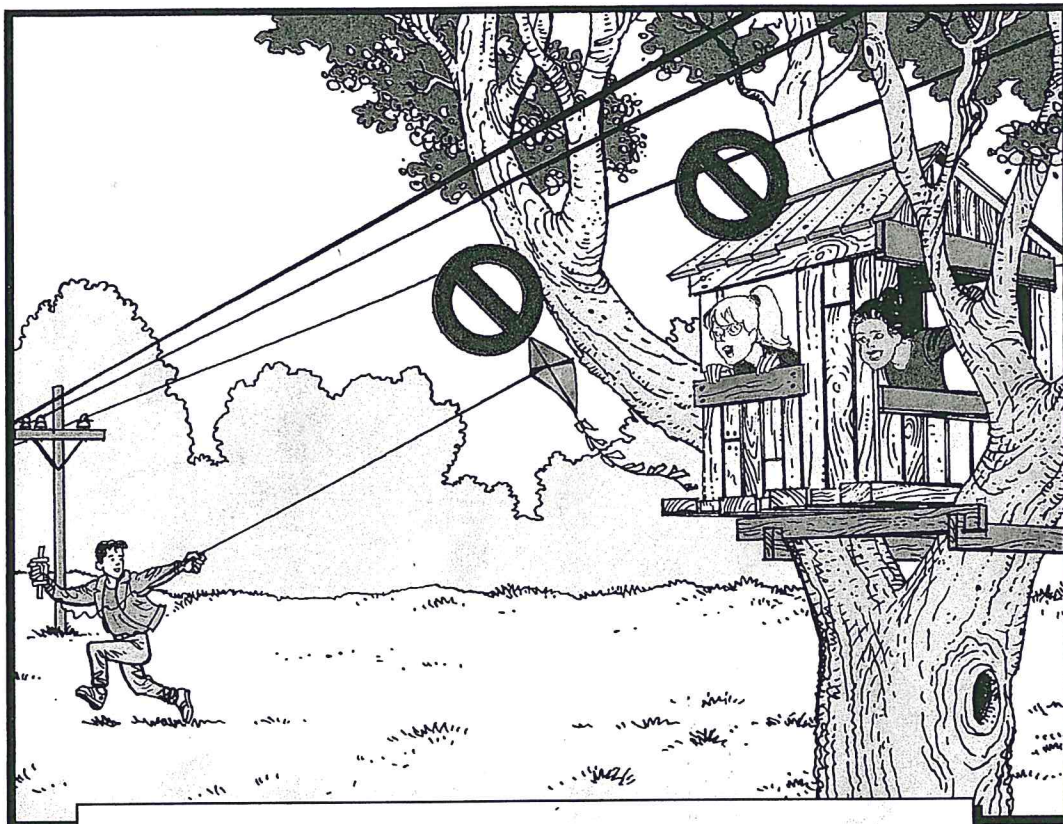
DIRECTIONS: Find the six electrical dangers in the scene.
Bonus: Circle the dangers that are most like the hidden dangers.

den Dangers



is picture. Put danger symbols on each one you find.
o happen in the neighborhood where you live.

Don't Play Near Overhead Lines

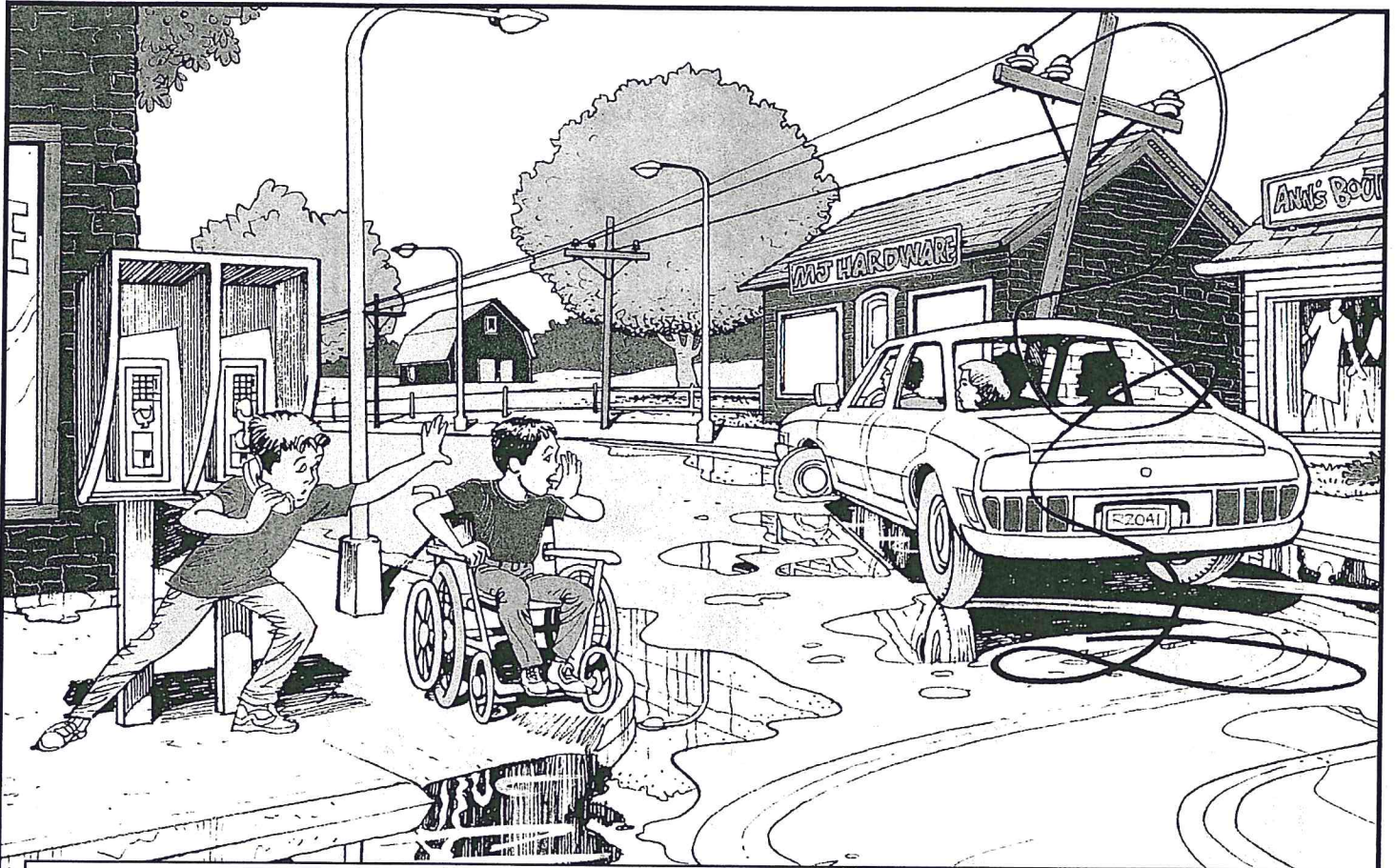


DIRECTIONS: Answer the following questions.

1. What will happen to the boy if the kite gets caught in the power lines?

2. What is dangerous about this tree house?

When Live Wires Fall



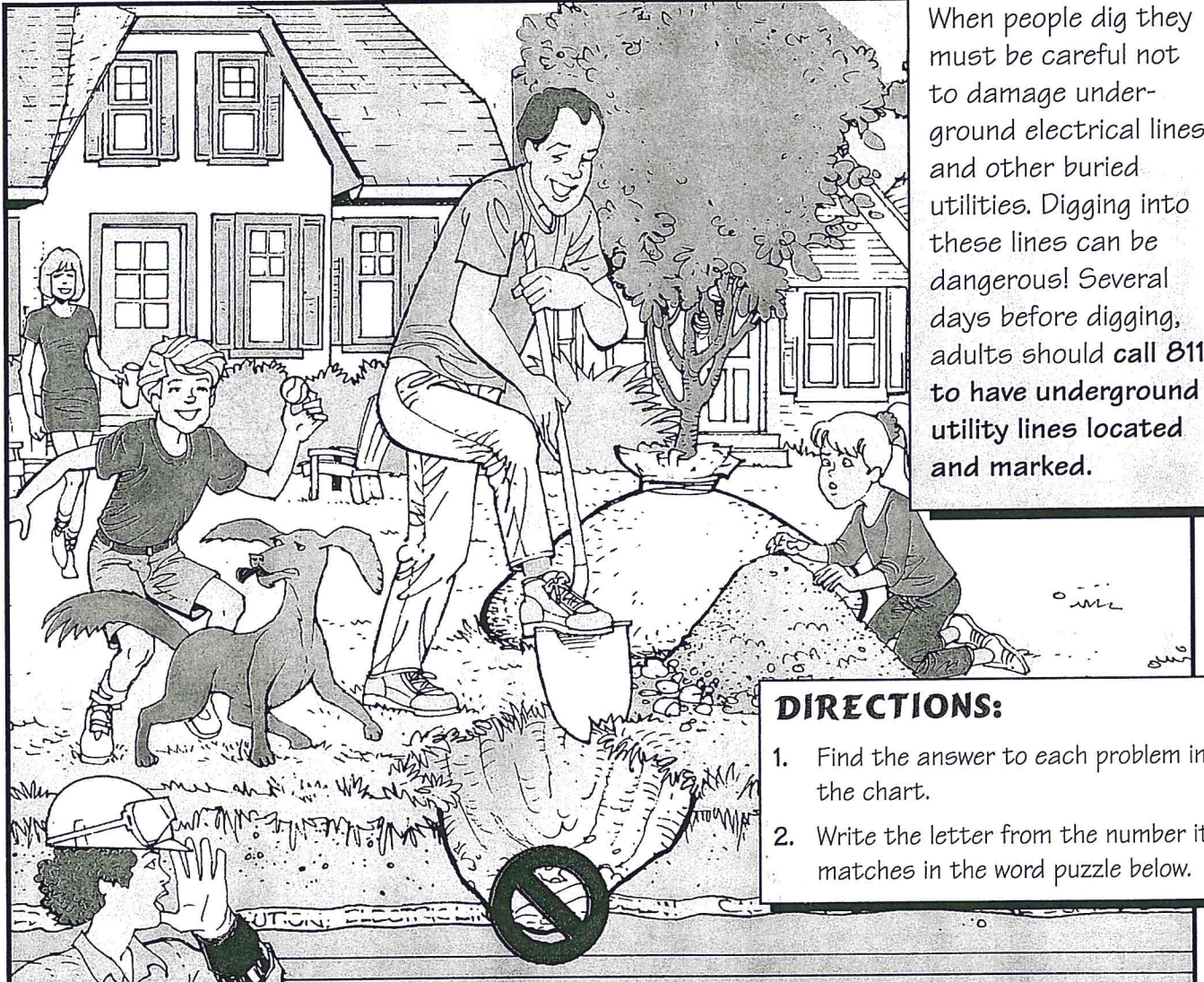
DIRECTIONS: Study this scene, and then answer the questions below. Share your answers with a partner.

1. Who should you call if you see an accident like this?

2. Why is it dangerous for you to go near the car or the wire?

Bonus: If there's a fire, the people in the car should jump out without touching the car and the ground at the same time. This is so they don't become electricity's path from the car to the ground. Pair up with a friend and practice how you would do this.

Underground Utility Lines



When people dig they must be careful not to damage underground electrical lines and other buried utilities. Digging into these lines can be dangerous! Several days before digging, adults should call 811 to have underground utility lines located and marked.

DIRECTIONS:

1. Find the answer to each problem in the chart.
2. Write the letter from the number it matches in the word puzzle below.

PROBLEM	ANSWER	LETTER
$9 \times 8 =$		L
$364 + 166 =$		I
How many states are there in the U.S.?		T
$35 + 7 =$		U
Number of letters in our alphabet?		Y

Before digging, call 811
to have underground
5 50 530 72 530 50 26
lines marked so you can dig safely.



Know what's below.
Call before you dig.

Don't Mix Electricity And Water



Water conducts electricity. When insulators get wet, they can be dangerous.

DIRECTIONS:

1. Find 3 electrical hazards on this page and circle them.
2. Look around your classroom or home and find places where water and electricity are near each other. List them here:

3. Talk with an adult or a classmate about how to keep electricity and water apart.

Burnt Toast



DIRECTIONS: Answer the questions below to solve the puzzle.

- Which letter is in HOUSE but not in SHOE?
- Which letter is in LINE but not in YIELD?
- Which letter is in POWER but not in SHOWER?
- Which letter is in LIGHT but not in HEIGHT?
- Which letter is in OUTLET but not in HOTEL?
- Which letter is in BIG but not in BIKE?

What's a better way to get the toast out?
_____ the toaster first.

Electrical Emergency!



In case of an electrical fire...

1. Do not use water.
2. Tell an adult to safely unplug the appliance.
3. If the fire is small, tell an adult to use a fire extinguisher.
If the fire is not small, leave the house.
4. Call 911 or your emergency number to get help.

If someone is being shocked by electricity...

1. Do not touch them or anything they are touching.
You could be shocked or even killed.
2. Tell an adult to turn off the main power to the house.
3. Call 911 or your emergency number to get help.



DIRECTIONS:
 Do this inspection inside and outside your home. If you find any hazards, check **NEEDS FIXING** and then ask an adult to have them fixed.

Have your parents help you complete this inspection.	TRUE	NEEDS FIXING
1. Electric outlets are not overloaded.		
2. Electric cords are in good condition.		
3. Electric cords do not run under rugs or furniture legs.		
4. Electric appliances are used away from water.		
5. A fire extinguisher is kept in the house.		
6. Power tools are used only in clean, dry areas.		
7. All danger and warning signs are read and carefully followed.		

ACTIVITY SOLUTIONS:

- p.3 power plant, Power lines, substations, transformers, transformers, homes, outlets.
- p.4 Path goes from kite, kite tail, or power line, through girl, through tree, and into ground. **Bonus:** The birds can sit on the line because they are not touching the ground, so electricity stays in the line and doesn't go through them. (The power line is on a pole that is in contact with the ground, but the line is held away from the pole by insulators that prevent electricity from going into the pole.)
- p.5 Put a "C" on the person, ladder, and power line. Put an "I" on the work gloves and the insulator on the pole.
- p.7 Transformers, electricity's, wires, underground, transformer, overhead, transformer, lot, electricity, play, transformers, damaged, electric, utility.
- p.8-9 Hidden dangers are: climbing tree near power lines, sailboat mast near power lines, antenna installation near power lines, electric lawn mower near water, girl reaching for balloon in power lines, man painting near power lines.
- p.10 If the kite gets caught in the power lines and the boy is touching the string or tail he could be shocked. The girls in the tree house could contact the power lines.
- p.11 If you see an accident like this you should call your electric utility, 911, or your emergency number. It is dangerous for you to go near the car or the wire because they both have electricity running through them.
- p.12 Math solutions: 72, 530, 50, 5, 26. Word solution: UTILITY.
- p.13 Three hazards: blow dryer cord is in sink full of water; using blow dryer while standing in water; radio near bathtub full of water.
- p.14 Unplug