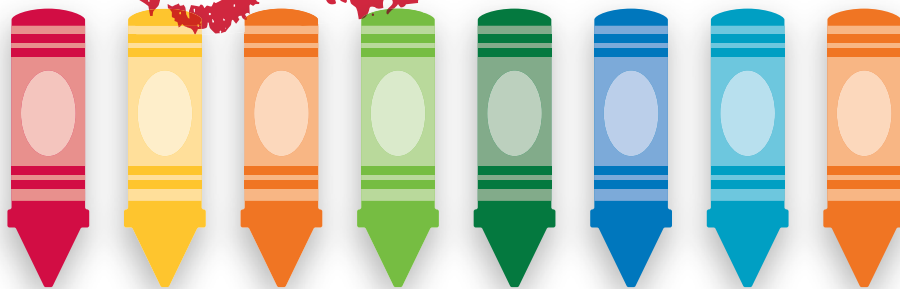


SMART ENERGY AMBASSADOR



ACTIVITY

BOOK



ComEd[®]

An Exelon Company

powering lives



**ComEd is looking for
Smart Energy Ambassadors
like you!**

ComEd wants you and your family to understand how energy works. Learn about solar energy, see how you can be more energy efficient, and always be safe around electricity.



**Explore the activities
in this book and become a
SMART ENERGY AMBASSADOR!**

HEY GROWNUPS!

Please take a few minutes to review the activities with your family.

We can all be Smart Energy Ambassadors!

FIND AND CIRCLE THE HIDDEN WORDS BELOW!

Have you heard these words before?

CAN YOU FIND THEM ALL?

x e c c a x e l u r s a f e t y
y l o h c r l n f o g w p t a u
p e n a s z e m i c r o g r i d
p c n r u x c d q q n n r z v k
o t e g b d t i v z w b g h v i
w r c i s e r s q d l g w y y x
e i t n t c i t h j w g i t p p
r c e g a o c r k g n h i r l o
l v d s t n i i t r u l a m i w
i e e t i t t b v w i l s o n e
n h o a o r y u w b o z a b e r
e i g t n o c t a s e y v n m p
s c m i k l c i g g f h i i a l
p l z o k g l o k c g d n i n a
t e a n m e r n e z l x g k l n
j s w s r l n u n h m y s r p t

Solar

Reliability

Savings

Microgrid

Control

Charging Stations

Electric Vehicles

Distribution

Electricity

Connected

Power Lines

Substation

Lineman

Power Plant

Safety

ENERGY

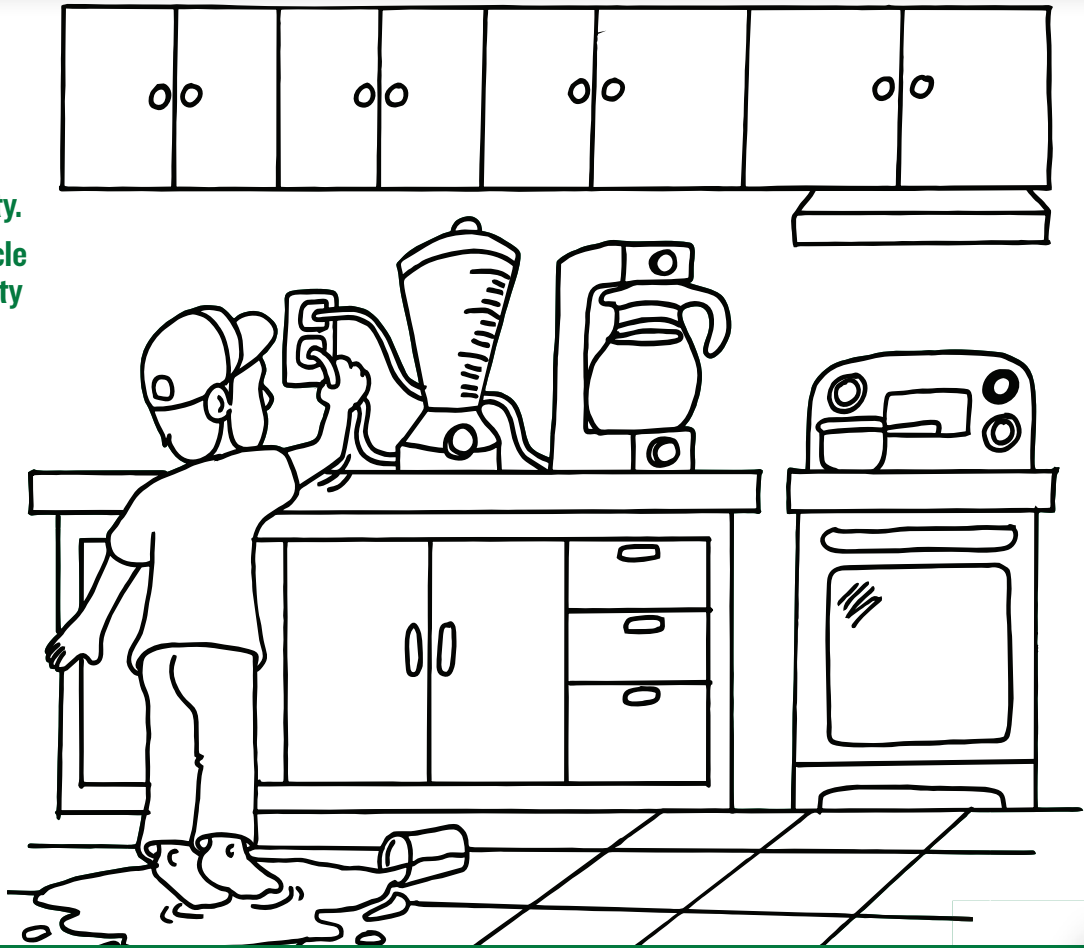
W
O
R

FIND

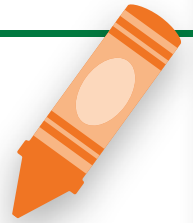
COLOR FOR SAFETY



Color the items
in the picture
that use electricity.
Then find and circle
the **TWO** electricity
dangers.
See bottom
for answers.



Draw and color
an item from
your kitchen
that uses
electricity.



ASK A GROWNUP FOR HELP!

ELECTRICITY INVESTIGATIONS

Get permission before starting any of these activities! A grownup must be present when using any sharp tools. Take care when cutting and handling scissors.

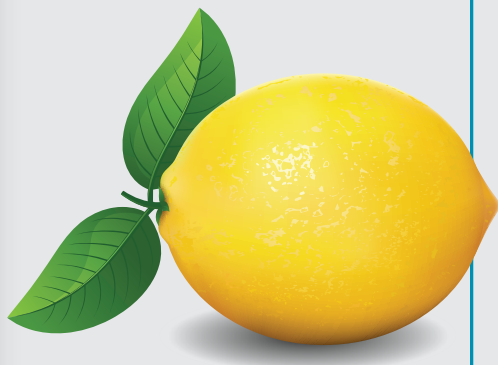


Make a lemon circuit.

Did you know that you can make a battery using a piece of fruit? It's true! This will be a very low-voltage battery and it's safe to touch the weak current created. You should feel a tingling sensation when touching the two aluminum foil strips sticking out of the lemon. However, since electricity is very dangerous, you should not experiment with commercial batteries or wall outlets.

WHAT YOU NEED

- One penny
- Water
- A few drops of dish-washing soap
- Paper towel
- Aluminum foil
- Scissors
- Ruler
- One lemon (preferably with a thin skin)
- Knife
- One plastic-coated paper clip



GETTING STARTED

- Wash and dry the penny to remove any dirt.
- Cut two aluminum foil rectangles, each 1 inch by 8 inches.
- Fold each strip in thirds lengthwise to get two aluminum strips size 1/3 inch by 8 inches.

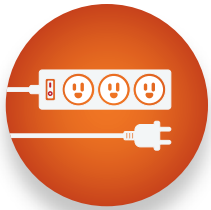
WHAT TO DO

1. Make a small cut about 3/4 inch long and 1/2 inch deep in the side, near the middle of the lemon.
2. Make a second, similar cut about 1/2 inch away and parallel to the first cut.
3. Push a penny in the first cut until half of it is showing above the lemon skin. Part of the penny should be in contact with the lemon juice. **Note: If the lemon has a thick skin, ask a grownup to carefully cut away some lemon peel.**
4. Slide one of the aluminum strips in the second cut until you are sure part of the aluminum is touching the lemon juice.
5. Attach the second aluminum strip to the part of the penny sticking out of the lemon using a plastic-coated clip. Make sure the aluminum touches the penny so electricity can pass between the copper and aluminum.
6. As soon as the two aluminum strips touch, electricity is produced and flows through the strips.
7. Keep the two strips about 1/2 inch apart and touch your fingertip to them.

5 TIPS

SAVING ENERGY AT HOME

Match each picture to the correct safety tip.



EXAMPLE

TURN OFF the lights and any devices or appliances that you are no longer using.

TAKE SHORT SHOWERS instead of baths.

Heating the water to fill a bath tub uses more energy than taking a quick shower.

USE ENERGY-EFFICIENT LED LIGHT BULBS.

They use at least 75% less energy and can last 15 times longer than incandescent bulbs.

Electronics, including computers, televisions, and gaming systems still use power when plugged into a wall outlet when not completely powered off.

Instead, you should plug these items into a power strip and **TURN THE POWER STRIP OFF** when you are not using them.

Make sure you **COMPLETELY CLOSE** the refrigerator and freezer door.

Leaving them open even a crack lets cool air escape and wastes electricity.

TURN OFF!

Create decorative energy-saving reminders to place around your home.

Use paper, clay, magnets, felt, or feathers. Be creative! Hang a fun sign that says "Turn off the lights!" over your bedroom light switch. Make colorful stickers to wrap around a cell phone charging cord as a reminder to unplug the cell phone when it is done charging.

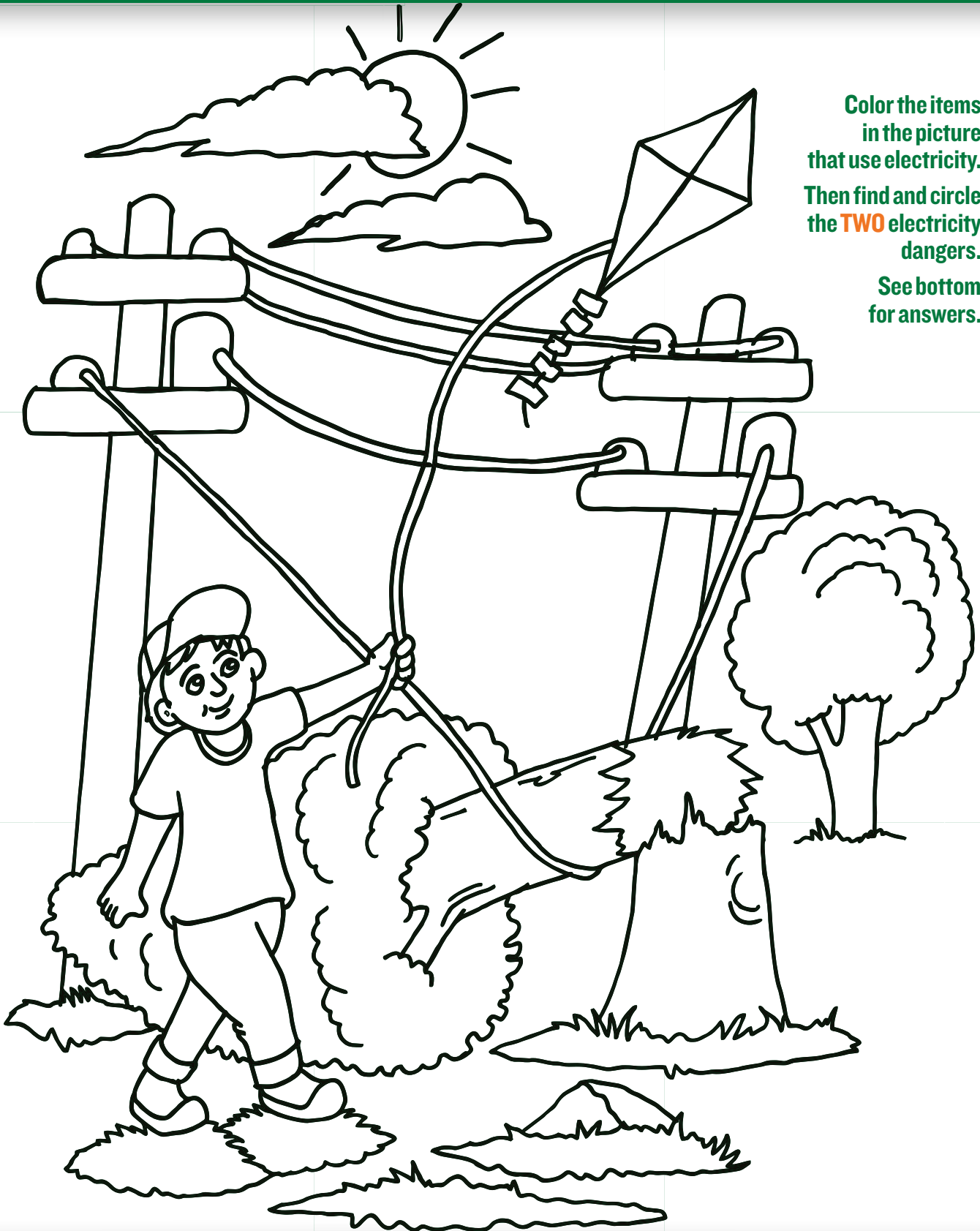
DIY



FUN



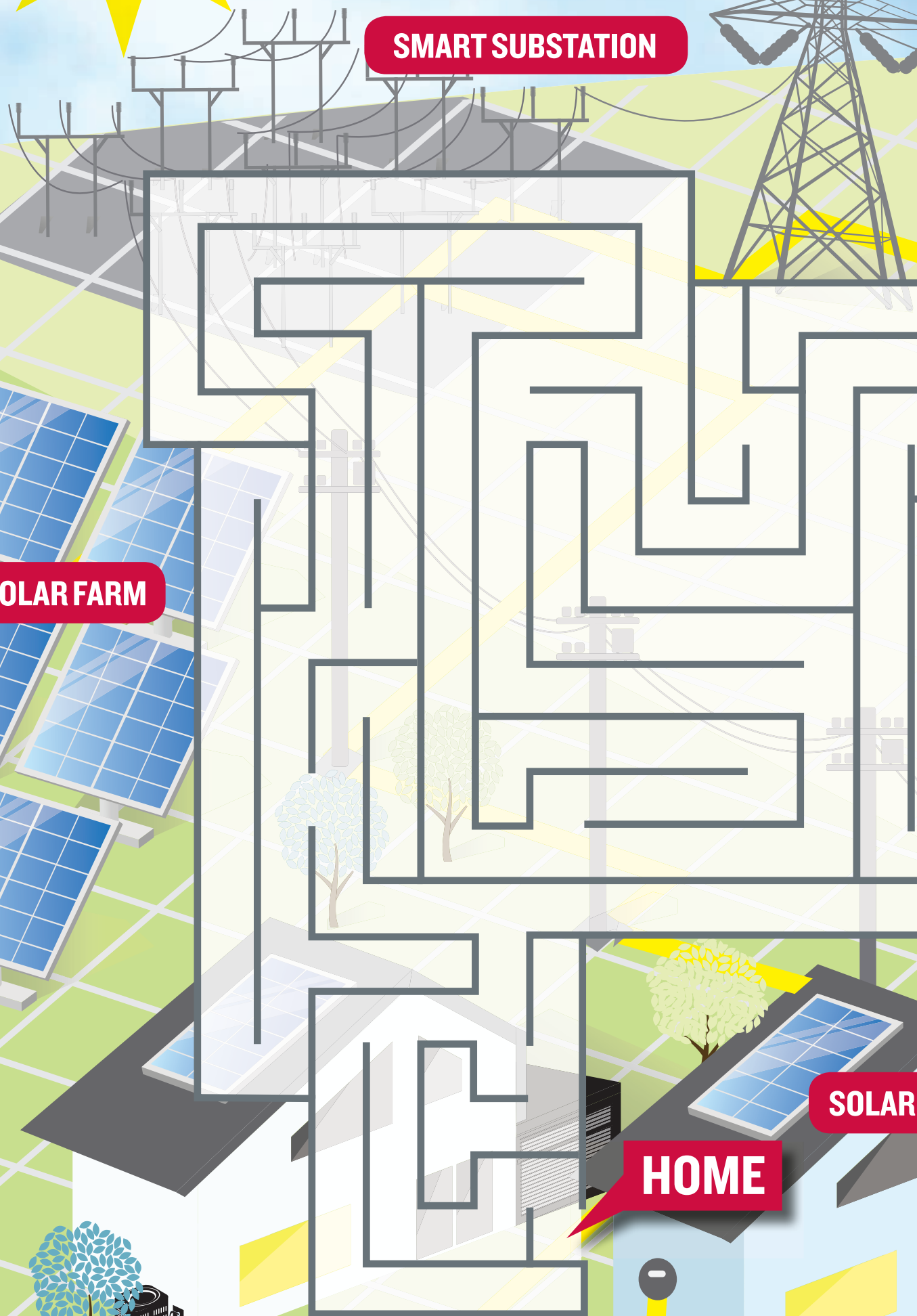
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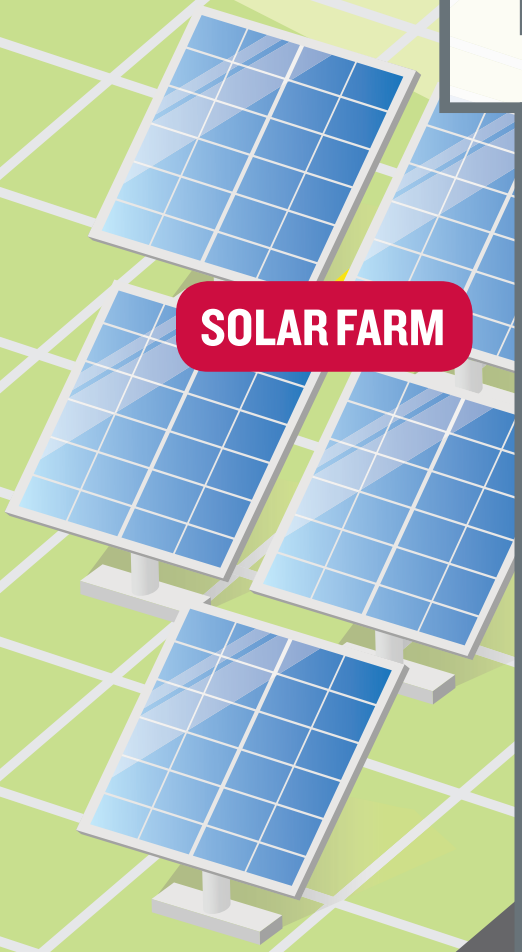
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SMART SUBSTATION



SOLAR FARM



SOLAR P

HOME





POWER PLANT

START

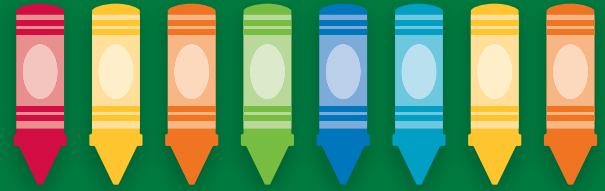
POWERING YOUR HOME

There are many ways energy can be delivered to your home.

Follow the maze to see some options.

PANELS

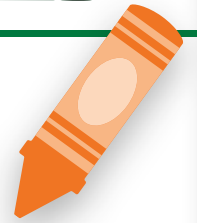
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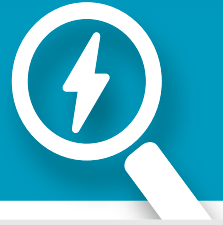
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Build A Solar Oven

Melt marshmallows with the sun! By capturing the sun's rays with foil, it can be transformed into energy. When the energy builds inside the box, it will raise the temperature, and your marshmallows will melt!

WHAT YOU NEED

- Empty pizza box
- Aluminum foil
- Plastic wrap
- Tape
- Scissors
- Ruler
- Paper plate
- Food to cook – graham crackers, chocolate bars and marshmallows

**BEST
RESULTS
ON A NICE
WARM DAY!**

WHAT TO DO

1. Cut a flap in the top of the pizza box leaving a 2" border on the sides and front. Wrap the bottom side of the flap and the interior of the pizza box with aluminum foil "shiny side out" and tape in place.
2. Cover the opening created by the flap with plastic wrap and tape into place.
3. Place marshmallows on a paper plate inside the solar oven. Prop the flap open with a ruler in position to reflect the sun into the oven.
4. Let the sun bake the food. Depending on the time of day, heat and other variables it may take up to an hour.
5. Be careful removing marshmallows (they will be hot!). Enjoy!





Play I Spy with family and friends.

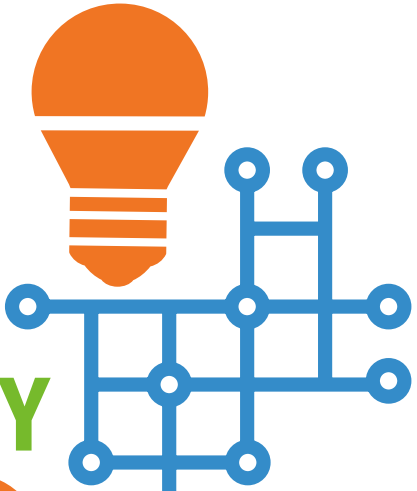
Take turns describing items in your home that need electricity to work and have others guess what the item is.

"I spy with my little eye... something with a face and hands. I use it every morning to make sure I'm not late for school."

See if your family and friends guess a clock.



YOUR ELECTRICITY IQ



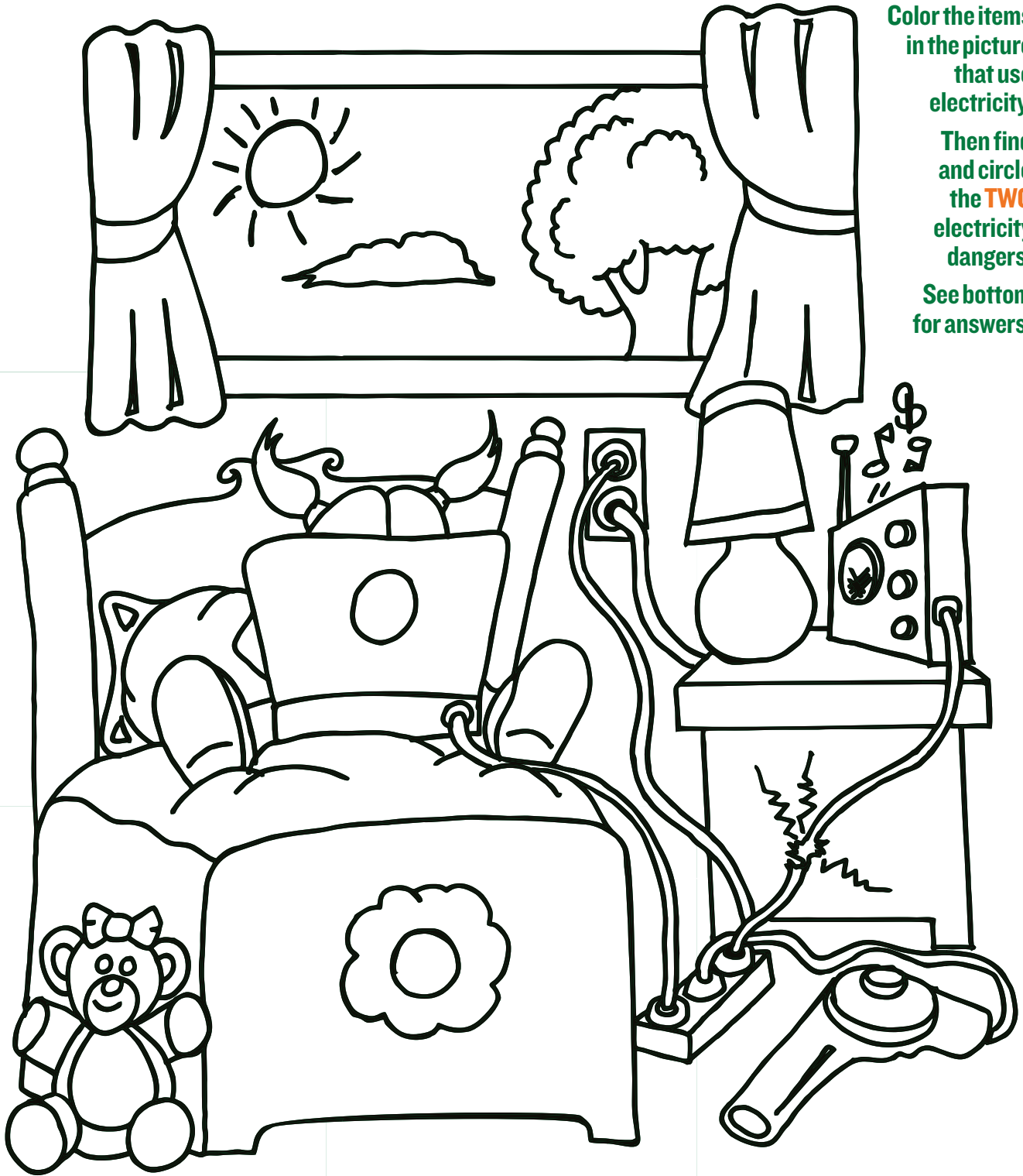
How smart are you about electricity?

ANSWER THE QUESTIONS BY CIRCLING YES OR NO

- 1 Electricity can be generated using fossil fuels, solar, wind, or water. YES NO
- 2 Power cell batteries can store extra energy to be used later. YES NO
- 3 Solar energy can be generated through solar farms and rooftop solar. YES NO
- 4 Electric vehicles produce more carbon pollution than gasoline-powered cars. YES NO
- 5 It takes less energy to heat and cool a home than to charge a cell phone. YES NO
- 6 Overhead electricians use special gloves to help protect them from powerful electricity running through power lines. YES NO



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5 TIPS

BEING SAFE AROUND HOME

Check off the tips when you have shared them with your family.

CHECK THEM OFF!

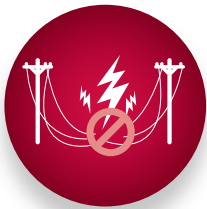
1



To unplug a toaster, a lamp, or anything else, **PULL ON THE PLUG**, never the cord.



2



If you see a fallen power line, **STAY AWAY**.
The ground around the line may be electrically charged.



3



KEEP FINGERS OUT of appliances.
Don't pull your toast out of a toaster with a knife or fork.



4



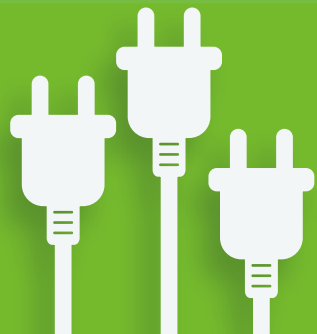
DON'T CLIMB utility poles or trees near **POWER LINES**.



5



NEVER TOUCH anything electrical if you're wet or standing in water.



Brainstorm one or two ways to reduce electricity use in a room.

Count all of the items in one room in your home that require electricity. Maybe you'll only use the television to watch your favorite show and then turn it off the rest of the day.

DIY



FUN

TIPS FOR GROWNUPS, TOO!

- Take advantage of all the energy-management tools available to you. They're simple to use!
- You can sign up for Weekly Usage Reports and High-Usage Alerts for more control over your energy use.
- Enroll in programs that can help you save when you voluntarily shift energy use to when demand for electricity is low.

GET STARTED NOW

ComEd.com/MyAccount

- Reduce your energy use with a FREE home energy assessment. You will receive personalized savings recommendations and free energy-saving products.
- Recycle your energy-wasting fridge or freezer.
- Receive instant discounts on energy-efficient lighting.
- Earn rebates on ENERGY STAR® certified appliances, smart thermostats and qualifying high-efficiency equipment and services.

START SAVING MONEY AND ENERGY TODAY

ComEd.com/HomeSavings

**GROWNUPS CAN BE SMART ENERGY
AMBASSADORS TOO!**



INTERESTED IN SOLAR POWER?

See if solar is right for you. Using your address and factors like your roof's pitch and shading, our Solar Calculator will evaluate your roof's solar potential.

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Thanks for being a
SMART ENERGY AMBASSADOR!

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