

Kids' Activity Book





ELECTRICAL SAFETY QUIZ

Test your electrical safety knowledge by taking the quiz below!

Use the answer key if you need help.

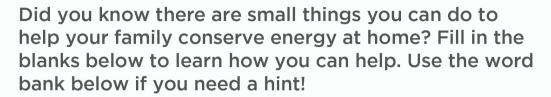
- 1. Smoke alarms in your home should be tested _____.
 - A. once a week
 - **B.** twice a year
 - C. once a month
- 2. Overloading electrical outlets and power strips can create an electrical fire hazard.
 - A. True
 - B. False
- 3. What's the most dangerous place to use electricity?
 - A. Outdoors
 - B. Near other electrical equipment
 - C. Near water
- 4. It's safe to run an electrical cord under a rug or carpet as long as the cord is not damaged.
 - A. True
 - B. False
- 5. Which is safest to play near?
 - A. Power lines
 - **B.** Pad-mounted transformers
 - C. Neither A or B both are dangerous







ENERGY CONSERVATION TIPS FOR KIDS!





1	Turn the off month just by taking t	-	ng your teeth. You can sav	e several gallons a
2	Any time you leave a they use LED lights, v	5		Ask your parents if
3	With the help of your	parents,	glass, plastic, paper and a	aluminum items.
4	When the heat or air c	onditioning is runnir	ng, always keep	to the outside closed.
5	Take short	instead of baths to	conserve water use.	

Word Bank Showers Doors Water Recycle Lights

ENERGY SAVINGS WORD SEARCH

Did you know there are many ways you can help save energy in your home?





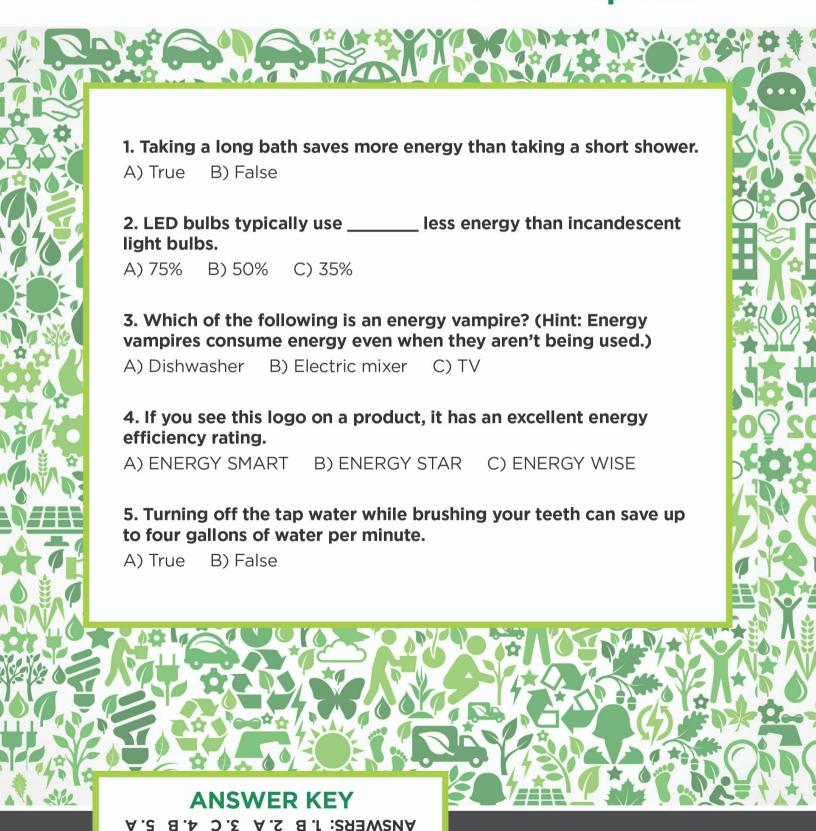


- Turn off **lights** any time you leave a room.
- Keep the **refrigerator** door closed to save energy.
- Wash clothing in cold water to reduce the load on your water heater.
- Unplug items that consume electricity even when they're not in use, like cell phone chargers and coffee makers. These are known as "phantom load" electronics.
- Take **showers** instead of baths showers require less **water** use.

ENERGY EFFICIENCY QUIZ

Energy Explorers

Are you an energy efficiency whiz?
Test your knowledge by taking the quiz below.
Hint: Check your answers at the bottom of the page.

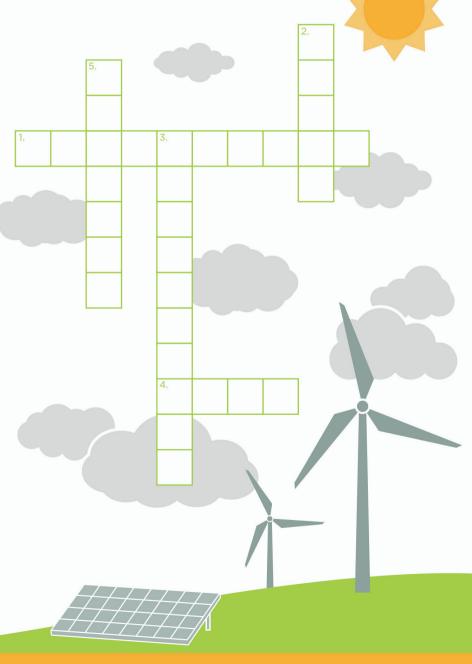


RENEWABLE ENERGY SOURCES CROSSWORD



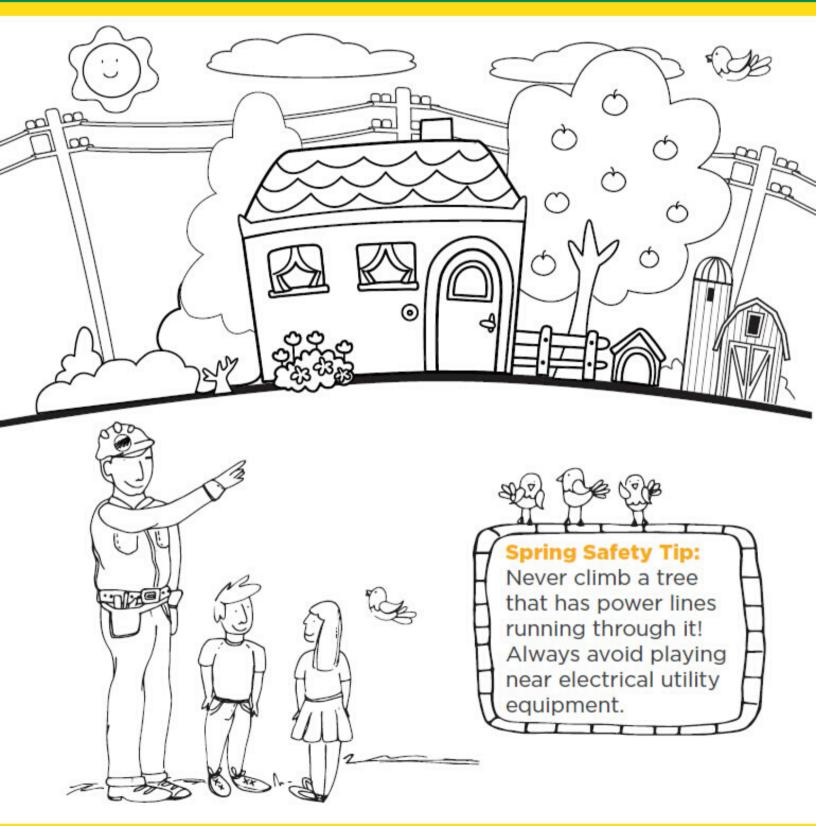
Did you know the electricity you use in your home is generated using a variety of fuel sources? Some energy sources are nonrenewable (like coal and natural gas) and some are renewable (like solar and wind energy). Learn about renewable energy sources and complete the puzzle below.

- 1. ACROSS: ____ energy uses heat from the earth. People can use the heat to warm buildings or to generate electricity.
- 2. DOWN: _____ energy is produced through panels that convert sunlight into electricity.
- 3. DOWN: ______ is energy produced from moving water. The power plant is typically located on or near a water source.
- 4. ACROSS: _____ energy uses tall turbines with blades to collect kinetic energy.
- organic material that comes from plants and animals; it contains stored energy from the sun and when burned, uses chemical energy that is released as heat.



Spring Safety Coloring Sheet







Energy Sources Activity

Did you know Americans use electricity that is generated from different fuel sources? Some fuel sources are renewable, meaning they harness natural energy from the Earth's resources, and some are non-renewable, meaning they use fossil fuels.

Do you know which energy sources are renewable and non-renewable? Use safety scissors to cut out the images below and place them in the correct row. Use the answer key to check your work.

Renewable Sou	irces		
Non-Renewable	e Sources		
uclear), coar, orr	Ni 'spo in inghi 'saanos aigpaa	o, Wind, Biomass, Solar Non-rene	Wellewable Sources, Hydro
	553	; <u>-</u> <u>-</u> -	51
H.,		ZOY.	
Coal		Solar	Oil
11	Wind		illilii
	1 8 8 8 1		

ELECTRICAL EQUIPMENT WORD SCRAMBLE



Electric co-ops use a variety of equipment to make sure you and your family receive reliable electricity. Can you unscramble the equipment terms below?

Use the provided clues for help, and double check your work in the answer key below.

1. ORNSTAMREFR

These can look like large metal cans on top of utility poles or big green boxes on the ground. They are used to reduce the voltage of electricity, making it safe for use in your home.

2. OERPW NSLIE

These can hang overhead or be placed underground. They carry electricity from where it's generated to homes and businesses in your community.

3. OUTASBSNTI

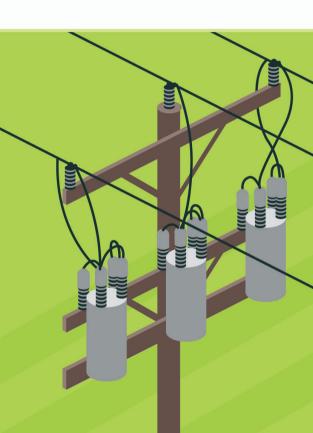
This is an electrical facility that contains equipment for controlling the flow of electricity.

4. RCTLECIE ERMTE

These devices are typically found outside the home and measure the amount of electricity you use.

5. CBUTKE KTURC

Lineworkers use these types of vehicles to reach power lines and poles when making repairs and updates to the electrical system.



GEARED FOR SAFETY

Electric co-op lineworkers wear special gear to help them stay safe on the job. Can you match the descriptions below to the correct safety equipment?

Use the answer key to check your work!



Hard Hat

Flame-Resistant
Clothing

- 1. These provide extra protection while lineworkers work with heavy materials that could fall near their feet.
- 2. This material keeps lineworkers safe from electrical hazards.
- 3. This protects lineworkers from head injuries and falling debris.
- 4. These insulated protectors keep lineworkers safe from electrical shock while working on power lines.
- 5. These keep debris away from lineworkers' eyes while on the job.
- 6. This is a handy piece of safety gear that holds tools and other equipment.



Answers: 1. Work Boots 2. Flame-Resistant Clothing 3. Hard Hat 4. Insulated Gloves 5. Safety Goggles 6. Equipment Belt

SUMMER FUN WORD SEARCH



Summer is the best time of the year! Can you find all the words associated with summer fun in the puzzle below? Use the word bank for help.

U 00(G Т K 0 V R K N G W C K F M Υ Н Α X Н F S F C S Т G - 1 X E J P SO Ε Е CG Q Υ D F J Н Α Q F CY N В 0Н R Ν 0 П M Z P J S F Н W 0 Т Α W R K P Α U 0 X D W Z Ε U G W M N P 0 L В V M S Н G Т K W D Т L R 0 U C Т W N C Н X R Н Н 0 0 7 M B N Α 0 F K R W F Е Н D U C Z N V Ε J S M H X K 0 D Z F G Т J I P Y J U M U Т K K Н R W R X U U N C 7 S G K V G O U Υ N R

WORD BANK

BEACH
COOKOUT
FIREFLIES
ICE CREAM

PICNIC SUNSCREEN SWIMMING POOL



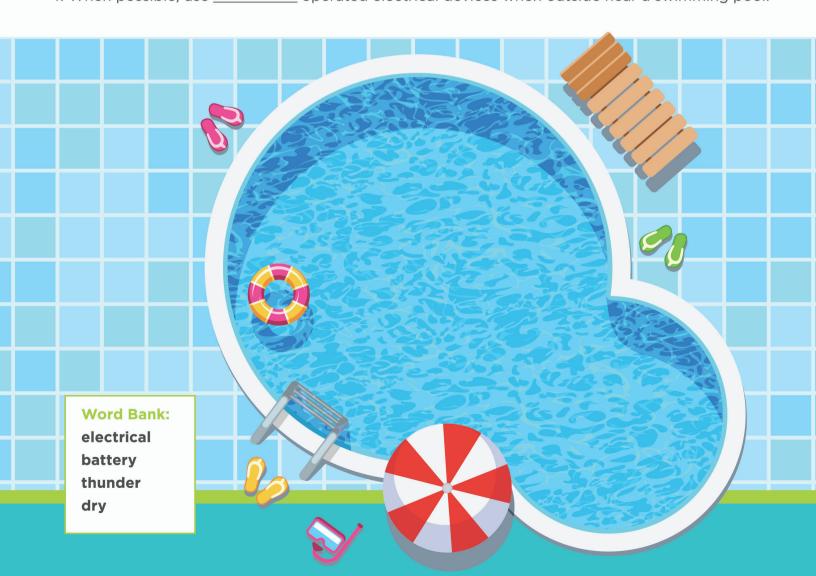
SWIMMING POOL ELECTRICAL SAFETY

Water and electricity never mix! Remember to practice electrical safety when you're cooling off in the pool. Fill in the blanks in the electrical safety tips below. Use the word bank for help. *Hint: Check your answers in the key below.*



SWIMMING POOL SAFETY TIPS:

- 1. If you hear _____, immediately exit the swimming pool. Storms may be near.
- 2. Never bring _____ devices near a swimming pool. If they come in contact with water, electric shock could occur. Devices should be kept at least 10 feet away from water sources.
- 3. Outdoor electrical outlets should be covered to keep them ______.
- 4. When possible, use operated electrical devices when outside near a swimming pool.







Can you find the words associated with Independence Day in the puzzle? Use the word bank below to check your work.

AMERICA
CELEBRATION
FIREWORKS
RED
WHITE
BLUE

INDEPENDENCE PICNIC STARS STRIPES FLAG FREEDOM



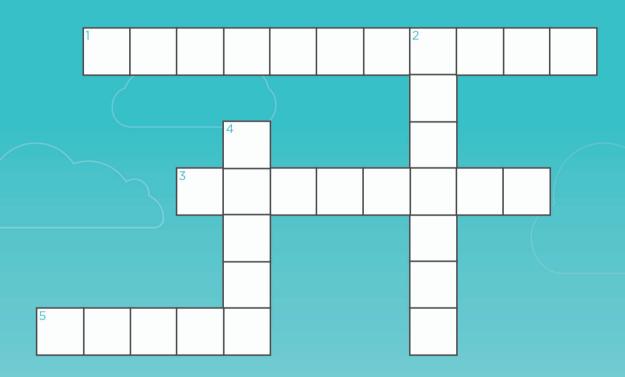


SAFETY TIP: Always have an adult supervise fireworks activities. Only persons over the age of 12 should be allowed to handle sparklers of any type.

HOW SOLAR PANELS WORK

Did you know energy from the sun can be used to create electricity? Complete the crossword puzzle below to find out how! Use the answer key if you need help.





- 1. **ACROSS**: Solar panels contain photovoltaic cells that convert sunlight into
- 2. **DOWN**: Sunlight hits the solar panels and generates a direct ______, or DC.
- 3. **ACROSS**: The direct current flows to an inverter, which _____ it to an alternating current, AC. (This is the kind of electricity we use in our homes.)
- 4. **DOWN**: The alternating current flows from the inverter to the home's breaker box, where it's used to _____ appliances and other electrical items in your home.
- 5. ACROSS: If the _____ panels generate more electricity than the home needs, the unused electricity is sent back to the power lines, or electric grid.

ANSWER KEY

ENERGY TERMS QUIZ

Can you match the definitions below with the correct energy terms? Use the word bank for clues!



1. These energy sources, like coal, oil and natural gas, were formed from the remains of ancient plants and animals buried underground and are used to generate electricity.





- 2. This is the network of poles and power lines that sends electricity from where it's generated to homes and businesses all over the county.
- **3.** These energy sources include natural energy from the sun, wind and water and are used to generate electricity.





- **4.** This is the flow of electrically charged particles like electrons within a conductor or circuit.
- 5. This is the act of using less energy.



Word Bank

CURRENT

ELECTRIC GRID

FOSSIL FUELS

RENEWABLE RESOURCES
ENERGY CONSERVATION

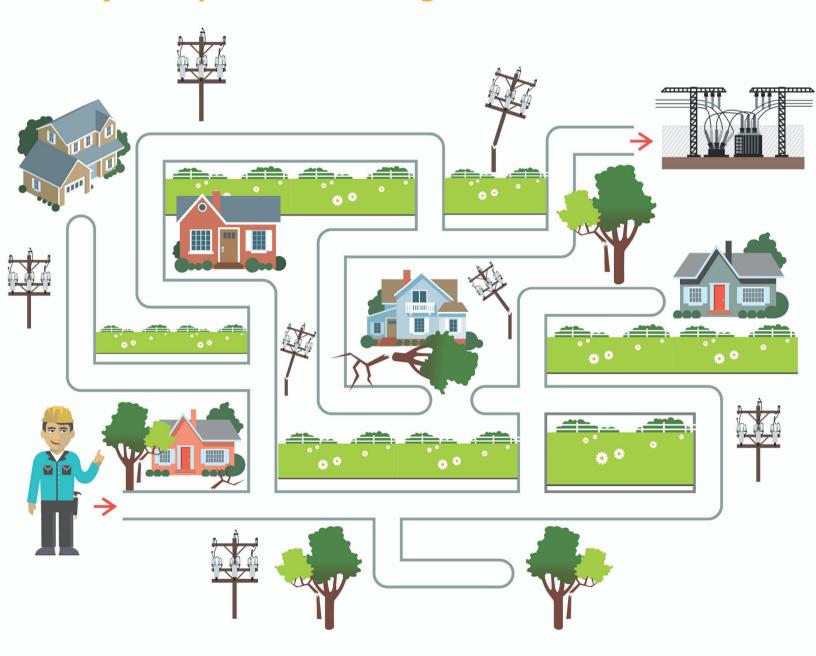
Answer Key; 1. fossil fuels $\, \Sigma. \,$ electric grid $\, 3. \,$ renewable resources $\, 4. \,$ current $\, 5. \,$ energy conservation

HELP THE LINEWORKER REACH THE SUBSTATION



Lineworkers work in dangerous conditions to restore electricity after major storms and other types of power outages. Many times, lineworkers make substation repairs to get the power back on.

Can you help the lineworker get to the substation?



STORM SAFETY CROSSWORD PUZZLE

Spring has finally arrived with colorful flowers and warmer weather. But the season can also produce severe storms. The Energy Explorers want to remind everyone to stay safe when severe weather hits. Complete the crossword puzzle below and share these tips with your family and friends.

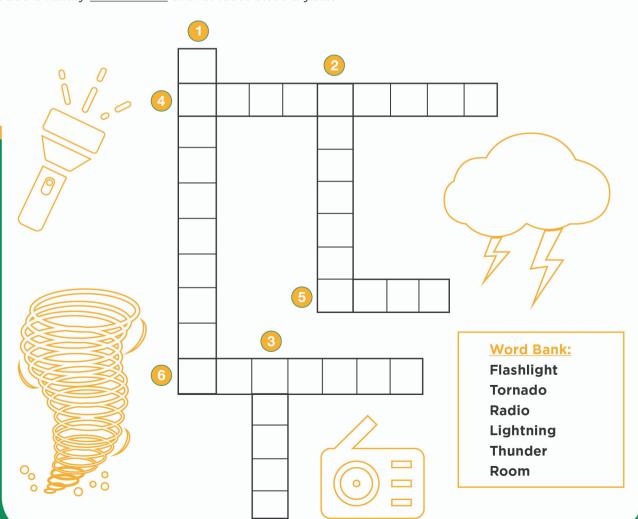


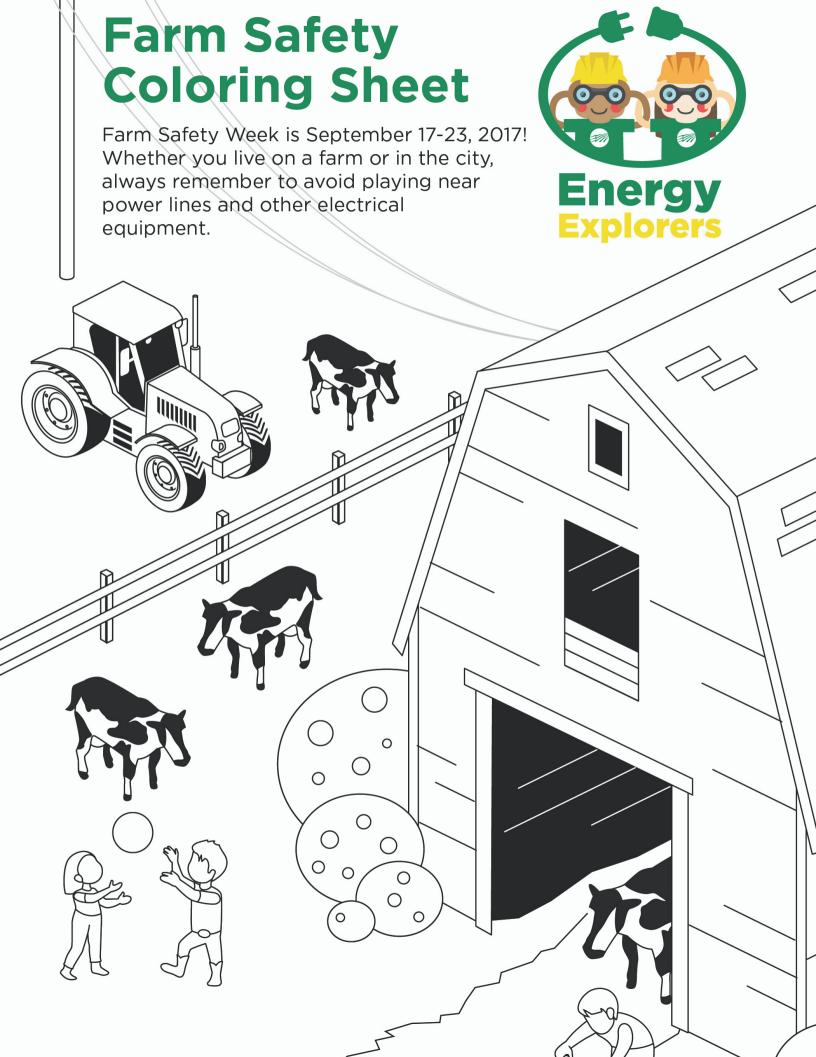
-	-	

- 1. Keep a _____ handy in case of a power outage.
- 2. If you hear _____ go inside. If you can hear it, you are close enough to be in danger from lightning.
- 3. Have a battery-powered weather _____ nearby so you can keep track of the severe weather.

ACROSS

- 4. Watch for signs of a thunderstorm, including dark skies, flashes of _____ or heavy winds.
- 5. If a tornado is heading your way, pick a safe ______ in your home where family can gather. The safest places would be a basement, storm cellar or interior room.
- 6. Practice a family _____ drill at least once a year.





ELECTRIFYING WORD SEARCH!

Can you find the words associated with electricity in the puzzle below?
Use the word bank if you need a hint!





Word Bank

ELECTRICITY

CIRCUIT

WATTS

CURRENT

WIRES

POWER

SWITCH

VOLTAGE

BULB

CHARGE





WASHING MACHINE

CLOTHES DRYER

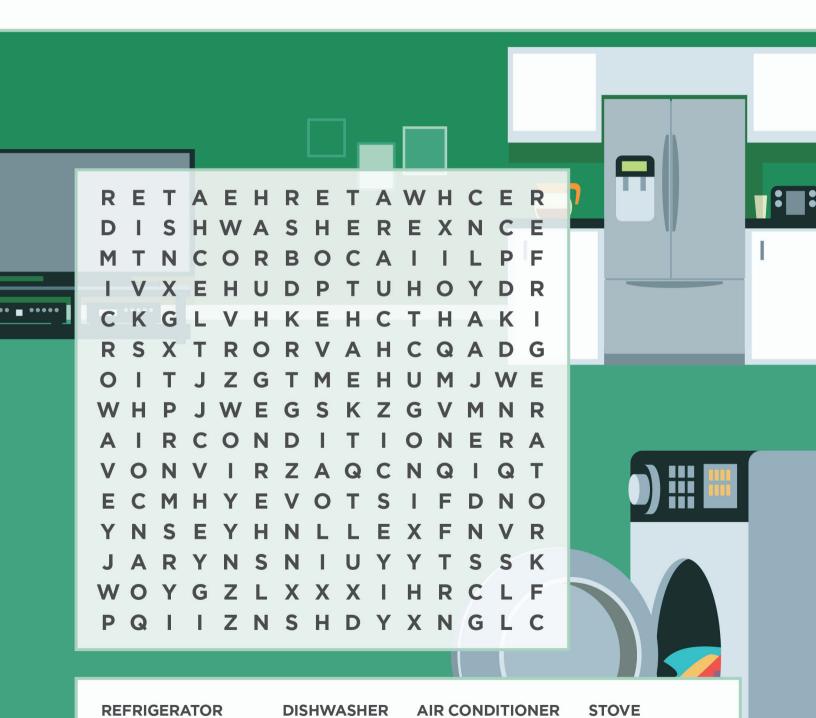
APPLIANCE WORD SEARCH

Did you know major appliances account for a large portion of your home's energy use?

Circle the names of all major appliances in the puzzle below.
Use the word bank for clues!

WATER HEATER

WORD BANK



HEATER

MICROWAVE

OVEN

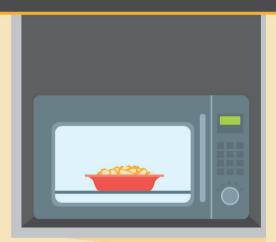
FALL SAFETY TIPS FOR KIDS!

Fall is finally here! The leaves are changing, the weather is cooler and the holidays are just around the corner. But Fall also brings a higher risk of home fires and electrical safety hazards.

Read the safety tips below and fill in the blank with the correct term from the word bank.



- 1. Candles and _____ should only be used by adults.
- 2. An adult should always stay in the kitchen when something is
- 3. Smoke alarms should be tested every _____ to ensure they are working. Batteries should be replaced at least once every ____ or right away if they start to "beep."
- **4.** Make sure all _____ are blown out before leaving a room.
- Keep any items that can burn away from the stove, toaster and other cooking





WORD BANK

APPLIANCES COOKING

YEAR MATCHES CANDLES MONTH





WIND ENERGY WORD SEARCH

Did you know wind can be used to generate electricity?

The wind blows, turning the blades on the wind turbine, which turns the generator inside the turbine – this produces electricity.

Circle the words associated with wind energy in the puzzle below.

E A H Q Z A T A J J R R D B G Z J C B X U Q K K T Y E I F W P T D H R S P I N G Y W M E I U H F B S D J T Y T G O W X N A G I X P X Q H I Y J P S A D Y N E I C I C C M L X O P W F E G T N Y D I Q P D I V U R A U Q R F E R E N E W A B L E R A C X E T R S E D A L B D Z M F E V C N A A W J B Z N C G W Q E E F S E C T Y S I B S U Q G L U W Q X C I O W F J C D R E P S T O Y H O Y R P U X S C F B F A K W V B W C N F B Q O K X H S E G N M S C R V D R N

Word Bank

TURBINE

WIND

FLECTRICITY

BLADES

POWER

WIND FARM

SPIN

RENEWABLE

GENERATOR

ENERGY

Fun Fact

Wind farms are built in flat, open areas where the wind blows at least 14 miles per hour.

CO-OP MONTH CROSSWORD

October is National Co-op Month! Complete the crossword puzzle below to learn about ways co-ops are unique. Need a hint? Use the work bank below.



CO-OPS To, the Community	4	2	3	
WORD BANK: LED MEMBERS LOCAL COMMUNITY PRINCIPLES		5		
 DOWN: Co-ops are organizations and businesses, so they understand the communities they serve. DOWN: Co-ops don't have customers; they have DOWN: All co-ops operate according to the same set of seven cooperative ACROSS: "Concern for " is the seventh cooperative principle. ACROSS: Co-ops are by the members they serve. 				

CO-OP MONTH WORD SEARCH

Did you know October is National Co-op Month? Co-ops are different types of businesses because they are not-for-profit and are owned by the members they serve — including you!

Use the word bank to find the words associated with co-ops in the puzzle below.



N G R M P В G K R Е D

Word Bank

PRINCIPLES
COOP MONTH
PARTICIPATION
MEMBERS
DEMOCRACY

COOPERATION
NOT-FOR-PROFIT
COOPERATIVE
EDUCATION
COMMUNITY





AUTUMN CROSSWORD PUZZLE

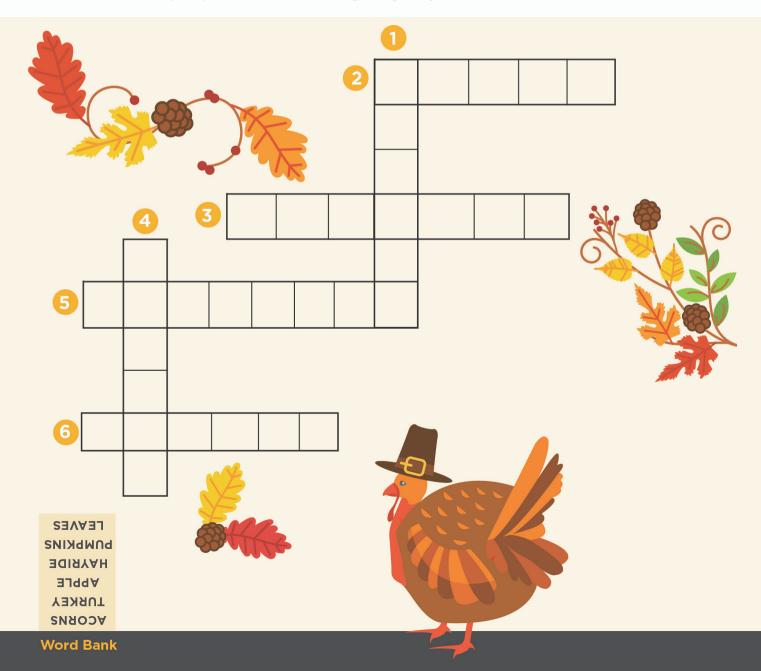
Autumn is finally here! Complete the crossword puzzle below by filling in the Autumn words that fit the clues. If you need help, use the word bank at the bottom of the page.

ACROSS

- 1. Fruit you bob for.
- 3. This is a fun outing that usually takes place in autumn and can be enjoyed from a wagon, truck or trailer as long as it's filled with hay.
- 5. These are orange and can be carved to decorate your home during Halloween.
- 6. These change colors during autumn months.

DOWN

- 2. These fall from oak trees and squirrels love to collect them.
- 4. This is what most people eat on Thanksgiving Day.



ENERGY VAMPIRE WORD SEARCH

Are energy vampires lurking in your home? Energy vampires are appliances and electronics that consume energy even when they aren't being used.

Circle all potential energy vampires in the word search below. Tip: Use the word bank as a guide.





Word Bank

GAME CONSOLE COFFEE MAKER PHONE CHARGER CABLE BOX MICROWAVE DVD PLAYER TELEVISION

To save energy, unplug these items when they are not in use.

Holiday Safety Crossword Puzzle

This holiday season, remember to keep safety in mind! Complete the crossword puzzle below.

Tip: Use the word bank if you need help.

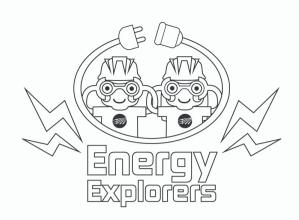




C	lues	
1	Down: cords used for holiday or exposed wires.	y decorations should be checked for damage
2	Across: Do not overload electrical or appliances.	with too many decorations
3	Across: Turn off all electrical	before leaving home or going to sleep.
4	Down: Make sure your Christmas	is watered daily.
5	Across: Never leave a burnir	ig if you're not in the room.
	Word Bank Outlets Decorations Tree Extension Candle	
S S		

Happy Holidays from Your Electric Co-op

Wishing you a merry and bright holiday season!





Electrical Safety Activity

The holiday season is a festive time of year! Remember to keep electrical and fire safety in mind as you decorate your home.





Electrical Safety Tips:

- Do not overload electrical outlets with too many decorations or appliances.
- Never leave a candle burning if you're not in the room.
- Make sure your tree is watered daily.
- Extension cords used for holiday decorations should be checked for fraying/damaged or exposed wires.





The Carroll Electric Membership Cooperative (EMC) is a not-for-profit, consumer-owned electric provider.

By sharing this enriching activity book, the cooperative seeks to educate its mini-Members on the basic facts, proper uses and potential hazards of electricity. Carroll EMC values its Membership and understands the importance of teaching its mini-Members the role they have in the cooperative.

Please visit carrollemc.com to learn more.













