

DUCK RIVER EMC'S

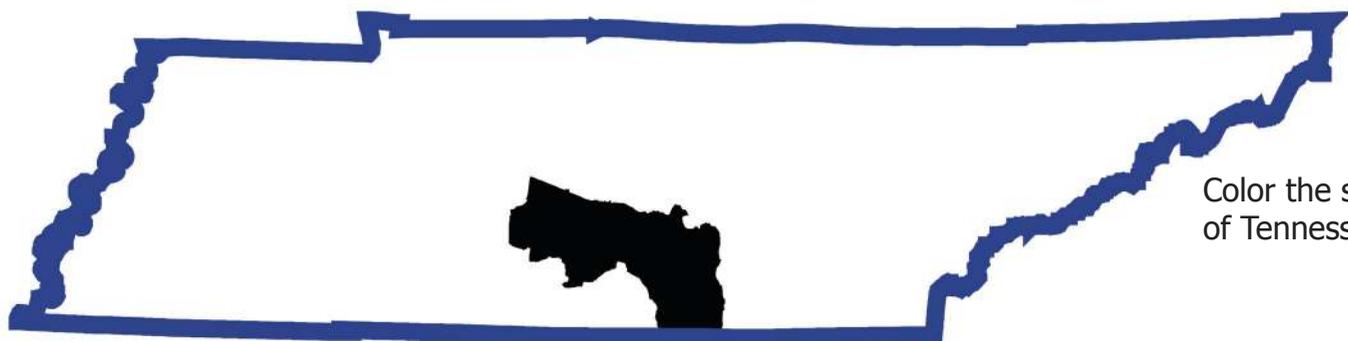


GUIDE TO SAFETY & ENERGY

ABOUT DREMC

Duck River Electric Membership Corporation (DREMC) is a not-for-profit, member owned organization providing electric and other services to more than 72,000 homes and businesses in southern Middle Tennessee. DREMC serves an area of approximately 2,500 square miles in Bedford, Coffee, Franklin, Giles, Grundy, Hickman, Lawrence, Lewis, Lincoln, Marion, Marshall, Maury, Moore, Rutherford, and Williamson counties in southern Middle

Tennessee. Formed in 1936, DREMC has a rich history of commitment and progress. The cooperative is based in Shelbyville. DREMC purchases its electricity from the Tennessee Valley Authority (TVA). DREMC is a Touchstone Energy Cooperative. Touchstone Energy co-ops provide high standards of service according to their four core values: integrity, accountability, innovation and commitment to community.



Duck River EMC Service Territory

DREMC'S MISSION STATEMENT

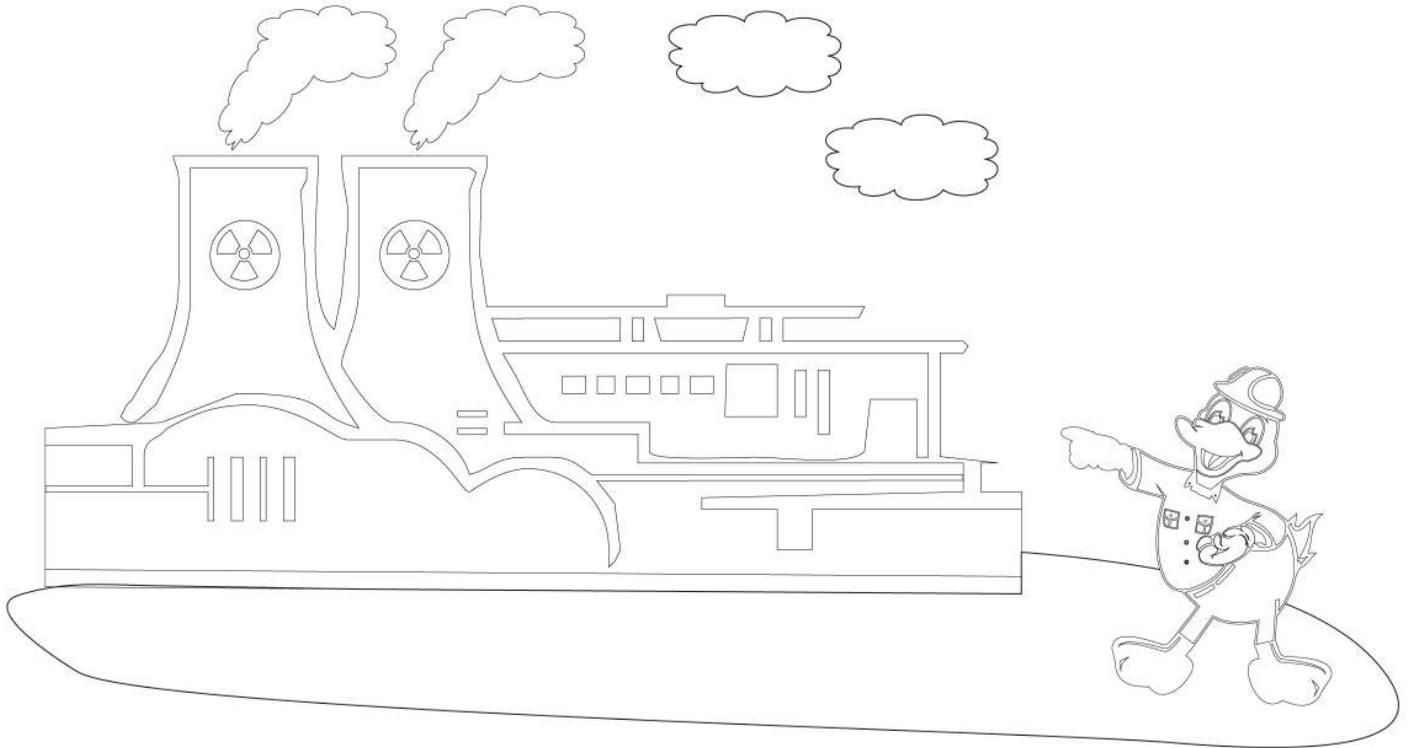
"The cooperative exists to deliver reliable electricity at the lowest possible cost, to promote economic development and to enhance the quality of life for its members."

Meet DREMC's energy education guide, E.L. Duck. Electric Lineman Duck - or E.L. Duck - knows all about electricity and how to be safe around it.



Where does electricity come from?

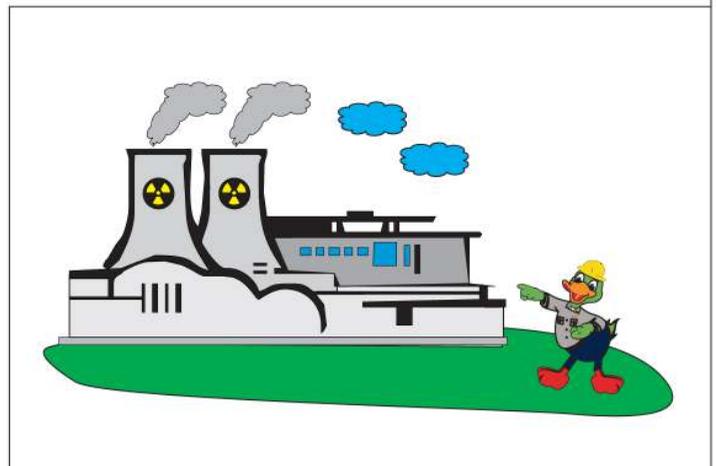
Nuclear Plant



Nuclear power is produced when the atoms that make up enriched uranium are split. Uranium is mined from the ground, just like coal or copper or silver ore. The uranium is then formed into pellets that are put in tubes inside a nuclear reactor.

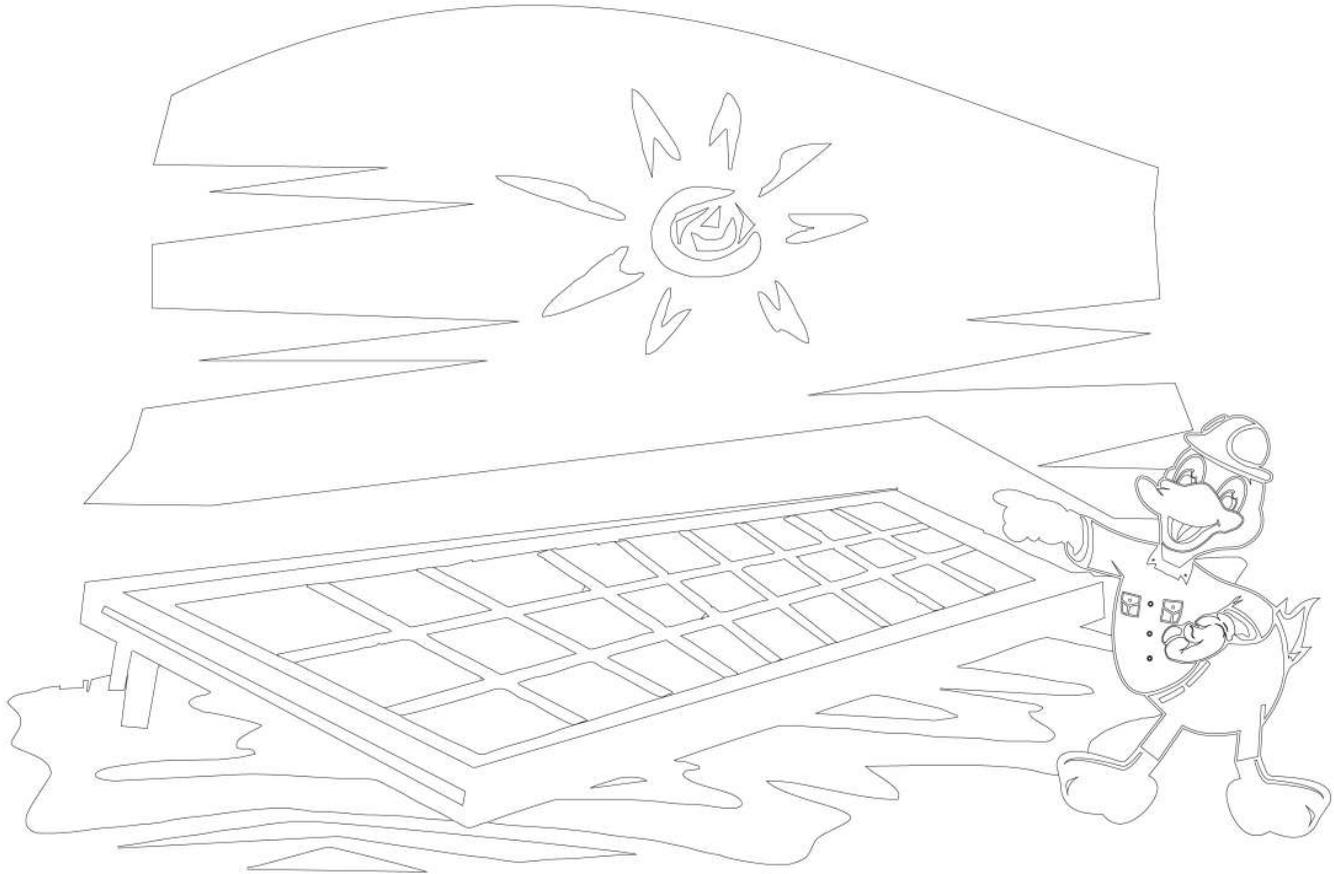
The pellets are bombarded with neutrons, which cause the uranium atoms to split. This is called nuclear fission. Nuclear fission creates enormous amounts of heat, which is used to turn water into steam. The steam is used to turn turbine blades, the blades spin the plant's generator, and the generator makes electricity.

Name: _____



Where does electricity come from?

Solar Farm



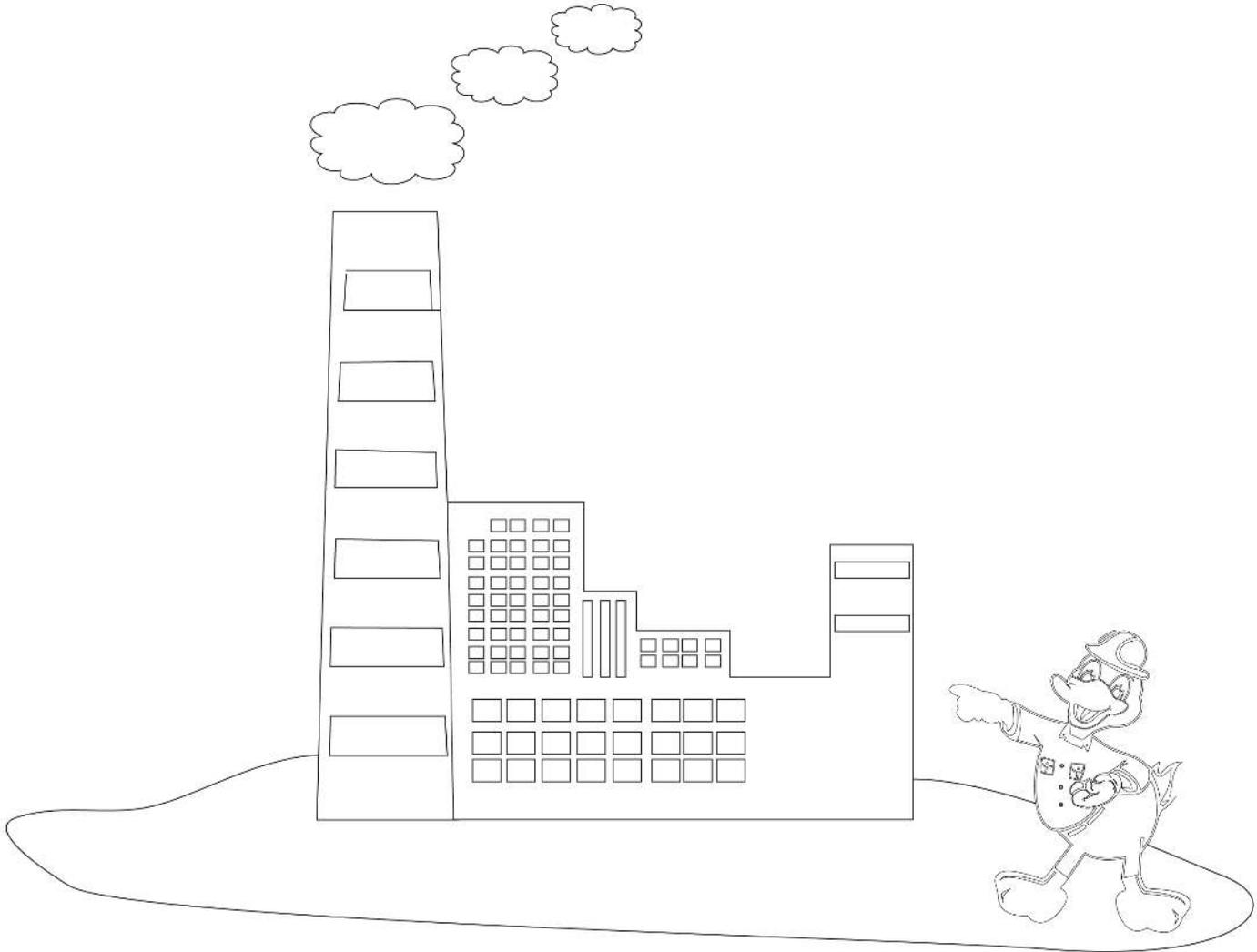
A solar farm uses the sun's rays and turns it into electricity. DREMC has a solar farm on its headquarters property in Shelbyville. Ask your parents to drive down Learning Way so you can see it and find out how to become an owner of one of DREMC's solar panels today at www.dremc.com.

Name: _____



Where does electricity come from?

Coal Plant



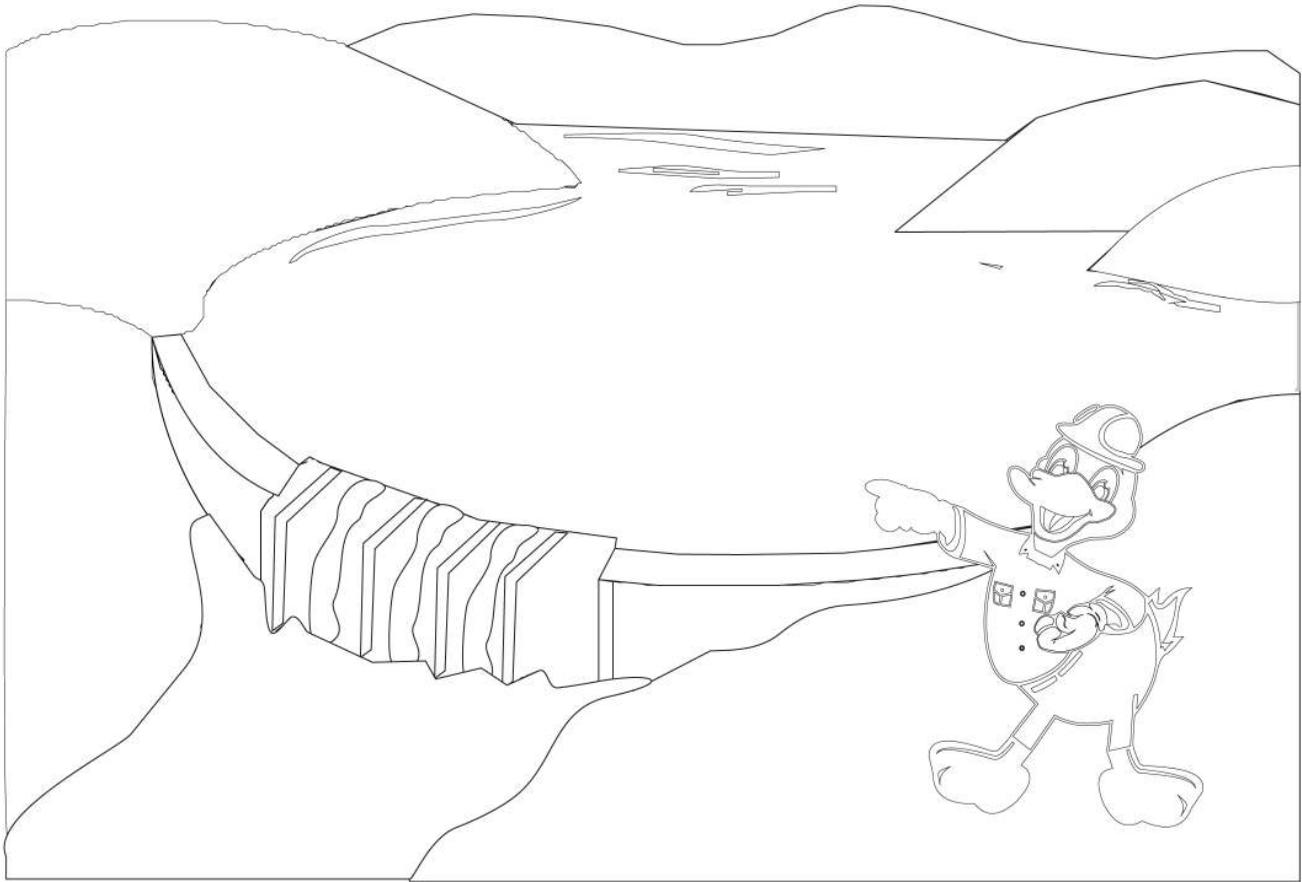
Electricity is made at a fossil fuel plant by burning coal, which heats water in a boiler to produce steam. The steam, under a lot of pressure, flows into a turbine, and the turbine spins a generator to make electricity. Natural gas is also a fossil fuel and can be used to generate electricity.

Name: _____



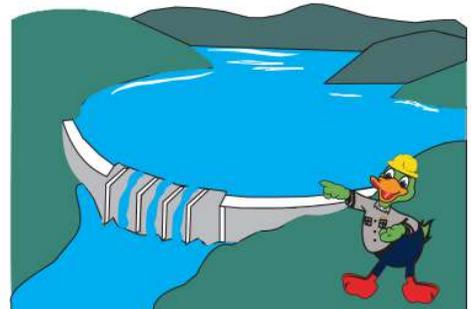
Where does electricity come from?

HydroElectric



Hydroelectric power, or hydroelectricity, is generated by the force of falling water. It's one of the cleanest sources of energy, and it's also one of the most reliable and costs the least.

Name: _____



SAFETY

Electricity powers our lives, providing light, heating and air conditioning, plus luxuries like video games. But electricity is dangerous. This is why power lines are on tall poles or buried underground. Touching a live high-voltage power line or even a wire inside your house could cause serious injury or death! At DREMC we care about the safety of our employees and our members.

Here's how to stay safe around electricity:

- Tree growing into power lines can conduct electricity. Don't climb or get near these trees.
- Storms can knock high-voltage lines to the ground. Don't assume the power is off. Stay far away.
- Wrecks sometimes involve power poles, and lines can fall on cars. Don't get out. Stay put until help arrives and DREMC makes sure the power is off. If the car is on fire, jump as far away as you can without touching the metal of the car door and ground.
- Kites are fun to fly but dangerous around power lines. Kite strings can conduct electricity. Fly kites only in open areas away from power lines.
- Electricity and water don't mix. Keep electrical devices away from wet areas or running water. Remember, your body is mostly water. Make sure electric cords or appliances cannot fall in bathtubs, sinks or swimming pools.
- If you see electric cords that are frayed and the wire is exposed, tell your parents to repair or replace the cord.
- Don't poke things in electric outlets except power cords. Don't overload electrical outlets.
- Don't play around high-voltage equipment. Obey signs that say "DANGER" or "KEEP OUT."



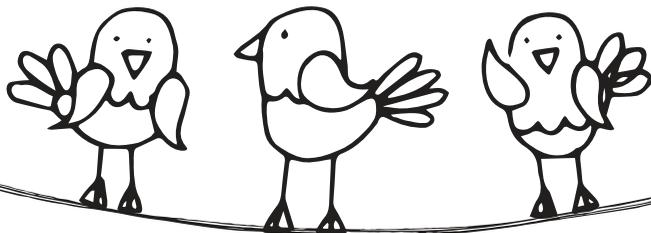
DREMC linemen want to keep you and your families safe.

WHY CAN BIRDS SIT ON POWER LINES WITHOUT BEING ELECTROCUTED?

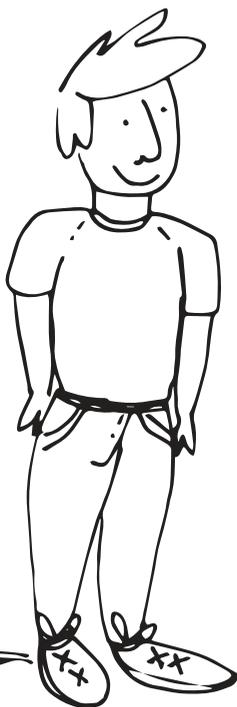
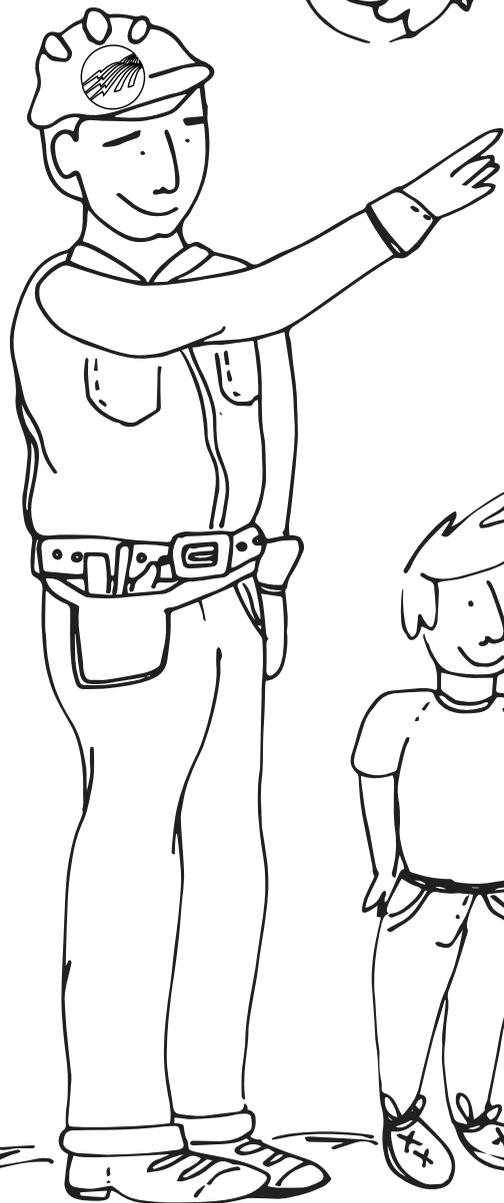


Energy
Explorers

Coloring
Sheet



Birds are not touching anything on the ground, meaning they are not grounded. Since electricity can't find a path to the ground through the birds, it stays inside the wire - keeping the birds safe!



SAFETY TIP:

Remember -
People should
never touch
electrical wires!

Circuit Sentences & Matching Activity

ESFi.org

Name:

A **circuit sentence** has no spaces between the words. Your challenge is to place slashes where you think the spaces should go. Each sentence contains a safety message. One has already been completed for you.

The second part of this activity challenges you to match the pictures with the sentences that describe what you see. Most of these are pictures of things you should not do! Draw a line from the end of the sentence to the matching picture. One has already been completed for you.

Sample: Don't/plug/too/many/things/into/one/outlet.



1. Waterandelectricitydon'tmix.



2. Makesureelectricalcordsarenotfrayedorbroken.



3. Neverdrythingsbyputtingthemonalamp.



4. Don'tputelectricalcordsundercarpet.



5. Placeelectricalcordswhereyouwon'ttriponthem.



6. Putsmokealarmsoneachlevelofthehouse.



7. Testsmokealarmsatleastonceamonth.



8. Replacesmokealarmbatteriesatleastonceayear.



9. Keepthings that can burn away from space heaters.



Visit kids.esfi.org for more free educational resources.



IT'S QUIZ TIME!

Now, that you've learned a lot, it's time to take a quiz. All of the answers have been mentioned in the booklet.

1. Fill in the blanks to make DREMC's mission statement complete.

"The _____ exists to deliver reliable _____ at the lowest possible cost, to promote economic development and to enhance the quality of _____ for its _____."

2. DREMC serves how many counties? _____

3. Where does DREMC purchase its electricity? _____

4. Name four ways to generate electricity. _____

THE 7 COOPERATIVE PRINCIPLES

**VOLUNTARY & OPEN
MEMBERSHIP**

**DEMOCRATIC
MEMBER CONTROL**

**MEMBER ECONOMIC
PARTICIPATION**

**COOPERATION AMONG
COOPERATIVES**

**AUTONOMY &
INDEPENDENCE**

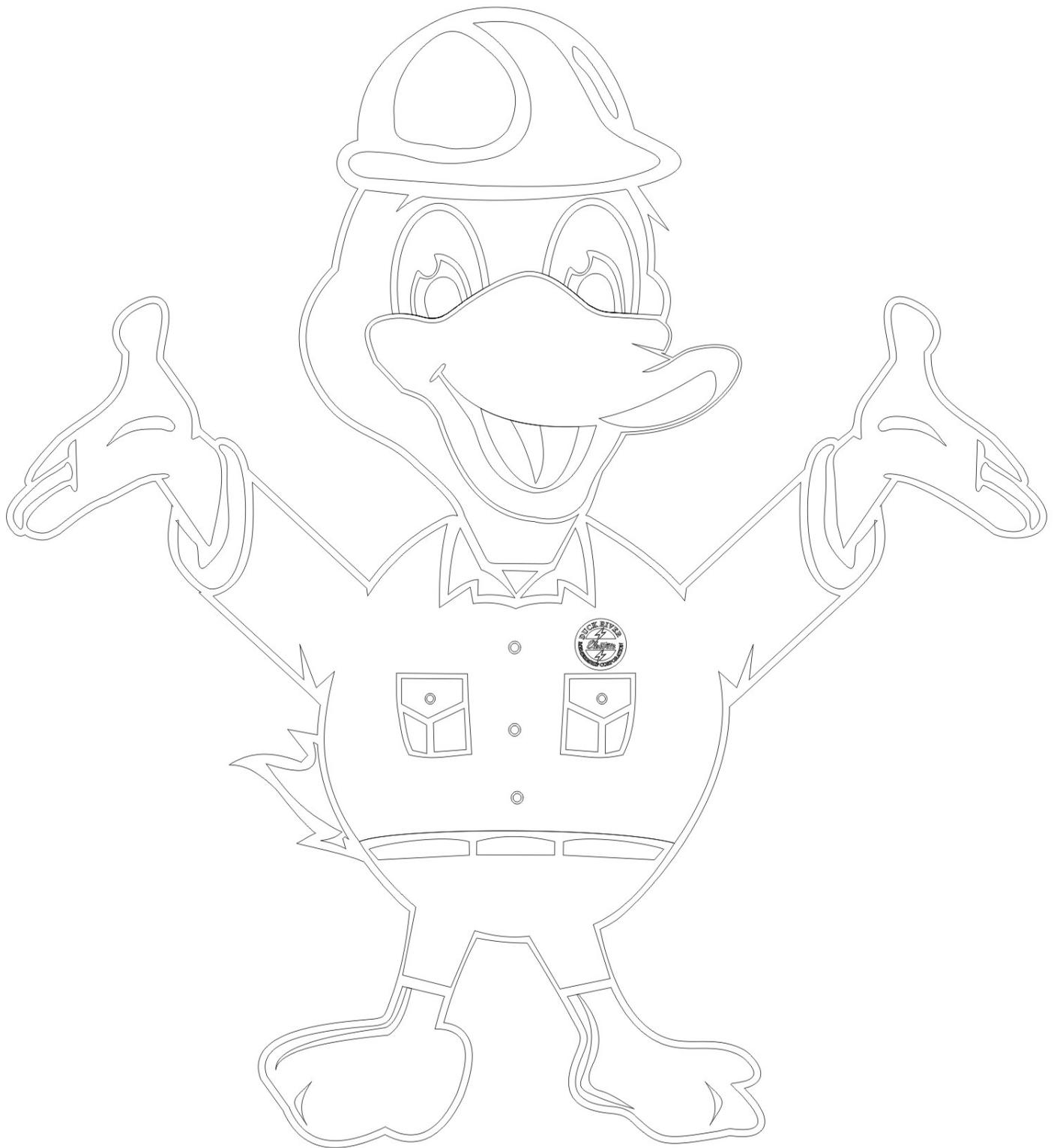
**EDUCATION, TRAINING,
& INFORMATION**

CONCERN FOR COMMUNITY

I love electric co-ops!



E.L. DUCK





**Touchstone Energy
Cooperatives**

**CHECK OUT
WWW.TVAKIDS.COM
WWW.KIDSENERGYZONE.COM
FOR GREAT ONLINE RESOURCES FOR KIDS!**