

NAME: _____

DATE: _____



Student Workbook

Hey there Students!

This book will help you become an expert on:

Page 2 • Sources of Energy

Page 3 • Electric Safety

Page 4 • Conductors & Insulators

Remember to download the EmPOWERed Kids app for free on your device at home!

**For more great energy resources and activities visit:
ConsumersEnergy.com/kids**

Sources of Energy

Next to each energy source indicate whether it is a renewable (**R**) source of energy or a non-renewable source (**N**).

Reminder: Renewable sources can be used over and over again. Non-renewable sources are permanently gone once all used up.

 N Coal

 N Nuclear

 N Natural Gas

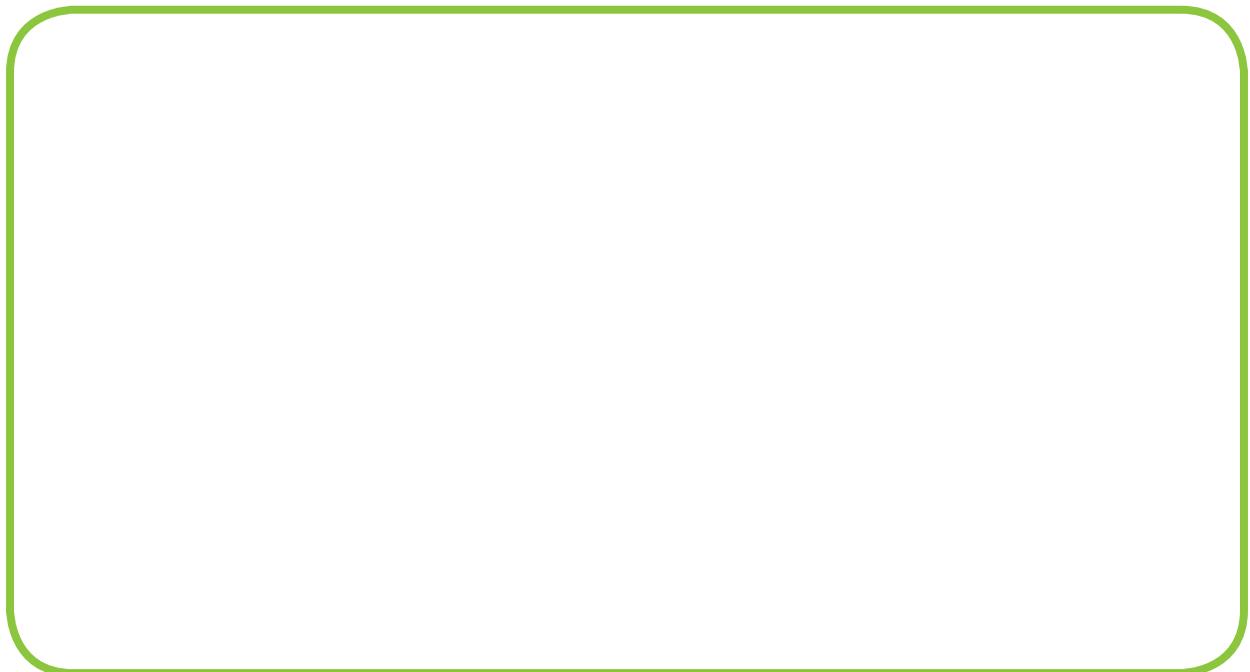
 R Solar

 R Biogas

 R Wind

 R Water

Pick one energy source from above, describe how that source is used to make electricity, and then draw how it makes energy in the box below.



Electric Safety

3 things can happen to your body if you touch electricity. You can be:

1. Shock 2. Burn 3. Electrocution

Unscramble the following danger zones that you should never play by:

- BSNAISUTOT Substation USFE OXB Fuse Box
 NFATRESORMR Transformer WEOPR NIELS Power Lines

What do these three danger signs tell you? Stay away. Electrocution hazard.



Downed power lines can be deadly, so it is important to stay away and stay alive! How many feet should you stay away from a downed power line? 25

What is one safety message you learned from EmPOWERed Kids?

Remember:

Electricity, people, and water **DON'T mix!**

Look up for **POWER LINES** when climbing a tree or flying a kite.

Stay away from downed power lines. If you see one, call Consumers Energy right away — 800-477-5050.

Conductors and Insulators

Fill in the blank with the correct vocabulary word:

1. **Conductors** _____ allow electricity to flow. Write down an example:
Copper or any metal is a conductor.
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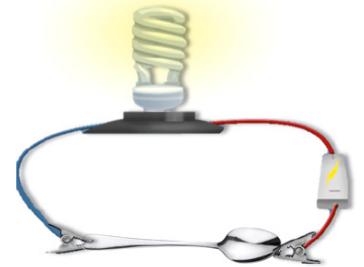
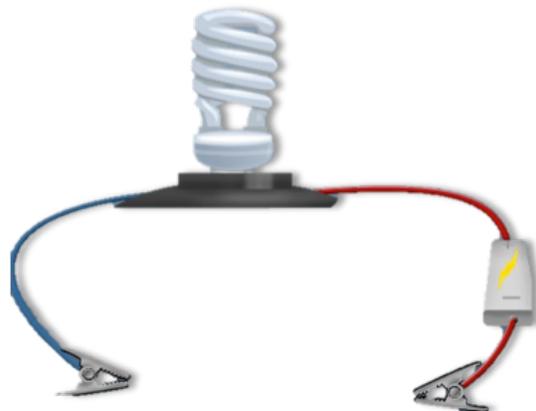
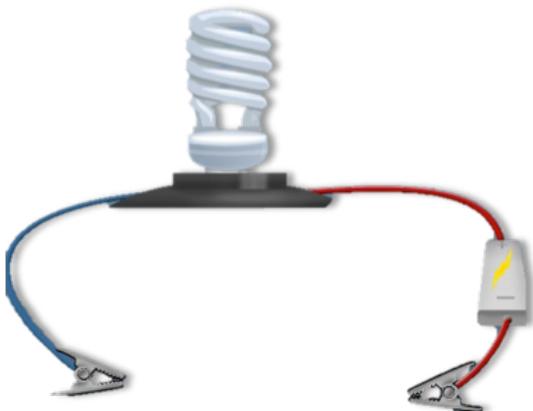
2. **Insulator** _____ stop the flow of electricity. Write down an example:
Rubber or wood can act as an insulator.
-

Circle either True or False after each statement below:

TRUE or FALSE People are conductors of electricity.

TRUE or **FALSE** Water is an insulator of electricity.

Draw an example of one conductor and one insulator in the circuits shown. Color the light bulb of the circuit that would produce electricity.



Conductor example