Mini 4-H

Cass County

Electric

Name **Year 20**

Club

Mini 4-H Electric Project: Created 12/2018, Updated March 2023/ January 2024/ November 2025. Materials adopted from Wabash County

MINI ELECTRIC

It's fun to learn about energy, especially renewable energy. In your electric project, you will learn about solar power as one source of renewable energy.

REQUIREMENTS

1. Read all the important information in this book.

2. Complete the fun activities in this book. Then have an adult check your work. Note: this book does not get turned in with the project at the fair.

   a. For First Grade: activity "Conductors and Insulators" and "Summer Maze."
   b. For Second Grade: activity "What is Solar Energy?", "Summer Search" and Energy Types

3. In this project, you should obtain/purchase a grade-specific kit from the Extension Office. With the help of an adult, assemble the kit. Kits are available at the Extension Office, located on the 3rd floor of the courthouse.

   a. For First Grade: Energy Stick
   b. For Second Grade: Solar car

4. **Exhibit Options:**
   a. First Grade – Energy Stick and record sheet
   b. Second Grade – Solar Car and record sheet
   c. If choosing not to obtain a kit, Exhibit one of your activity pages from your manual and your record sheet.

5. Leave space in the lower right-hand corner for the exhibit card that the Purdue Extension staff will provide.

6. You are encouraged to enter your exhibit at the Cass County 4-H Fair on the Saturday designated in the 4-H Handbook from 7:30-9 a.m.

We hope you enjoy working with your Mini 4-H Electric project this year. Keep up your enthusiasm, and when you're in the 3rd grade, you can join in more fun by joining a 4-H club and continuing with the electric project or enrolling in other projects.

If you have any questions or problems with your Mini 4-H project, call or stop in the Extension Office (8-4 M-F). We are located on the 3rd floor of the courthouse. Our phone number is 574-753-7750.

See you at the 4-H fair!

The 4–H Pledge

A pledge is a promise you make to yourself and the people around you.

I pledge my head  to clearer thinking
My heart  to greater loyalty, to use
My hands  to larger service
My health  to better living

The 4–H motto is "To make the best better."

How to be a "Super Energy Saver"

FOLLOW THESE SIX SIMPLE STEPS!

1. Turn off all the lights when you leave the room.
2. Shut down the computer when you are not using it. (If you need help, ask mom or dad.)

3. Unplug electronics like cell phones, video games and televisions when not in use.
4. Set your thermostat to 78° in the summer and 68° in the winter.

5. Don't hold the refrigerator door open for long periods of time.
6. Change the light bulbs. Help your mom or dad change regular light bulbs to CFLs like Charlie.

FIVE RULES FOR ELECTRICAL SAFETY

1. Always ask an adult for help when you need to do something that uses electricity.
2. Don't yank or pull cords from an electrical outlet.
3. Never overload outlets with too many plugs.
4. Keep electrical stuff away from water. Water and electricity don't mix.
5. Never touch a power line, especially if there is one that may have fallen down.

www.touchstoneenergykids.com

CFL Charlie's Summer Maze

Hi kids! CFL Charlie here. One of my favorite things about summer is playing outside! I make sure that the lights are off inside the house before I go out. Can you help me check if the lightswitch is turned off? We have to go through the maze first. Let's go!

Start! Good Luck!

Finish!

Awesome! Great job!

Touchstone Energy® Cooperatives

The power of human connections®

www.kidsenergyzone.com

CFL Charlie's Summer Search

Hey kids! CFL Charlie here. Looking to stay cool over the summer? Here are some tips on how to do that while saving energy.

1) Turn your thermostat up a few degrees – it can save you a lot of money! If you're still hot, turn on a ceiling fan or have a popsicle.

2) Make sure to turn off things like your TV and shut down your computer – those make a lot of heat if you leave them on.

3) Finally, make sure to replace your regular light bulbs with CFL or LED light bulbs – these save energy and aren't as hot.

l	i	g	h	t	b	u	l	b	s	f	e	o
p	o	p	s	i	c	l	e	e	u	f	n	t
l	n	w	o	d	t	u	h	s	l	o	e	a
e	i	l	r	a	h	c	p	o	o	n	r	e
d	n	l	m	t	c	f	t	e	o	r	g	h
n	a	f	g	n	i	l	i	e	c	u	y	l
i	t	h	e	r	m	o	s	t	a	t	a	a

Charlie
Cool
Energy
Thermostat

Ceiling Fan
Popsicle
Turn Off
Shut Down

Heat
Light Bulbs
CFL
LED

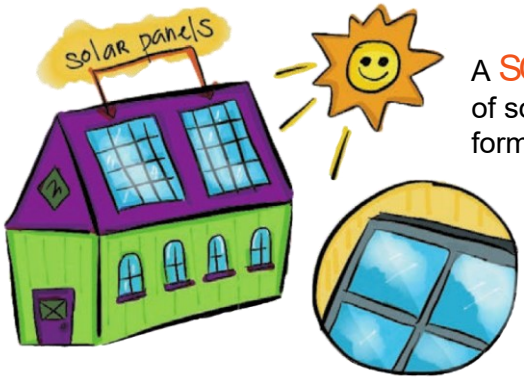
Touchstone Energy® Cooperatives
The power of human connections®

www.kidsenergyzone.com

WHAT IS SOLAR ENERGY?

Solar energy comes from the sun. The sun is an important resource, as it helps sustain life. Without the sun, our planet would have no life. Through the use of technology, we are able to harness the energy from the sun to convert it to electricity.

SOLAR CELLS are tools that change light energy from the sun and other light sources into electricity. Many calculators use solar cells to power them.



A SOLAR PANEL is a group of solar cells connected to form a large, flat surface.

THINK AND DRAW

What do you think a car powered by the sun would look like? Draw a picture.

CONDUCTORS AND INSULATORS

A **conductor** is a material that allows electricity to flow through it.

An **insulator** is a material through which electricity cannot flow.

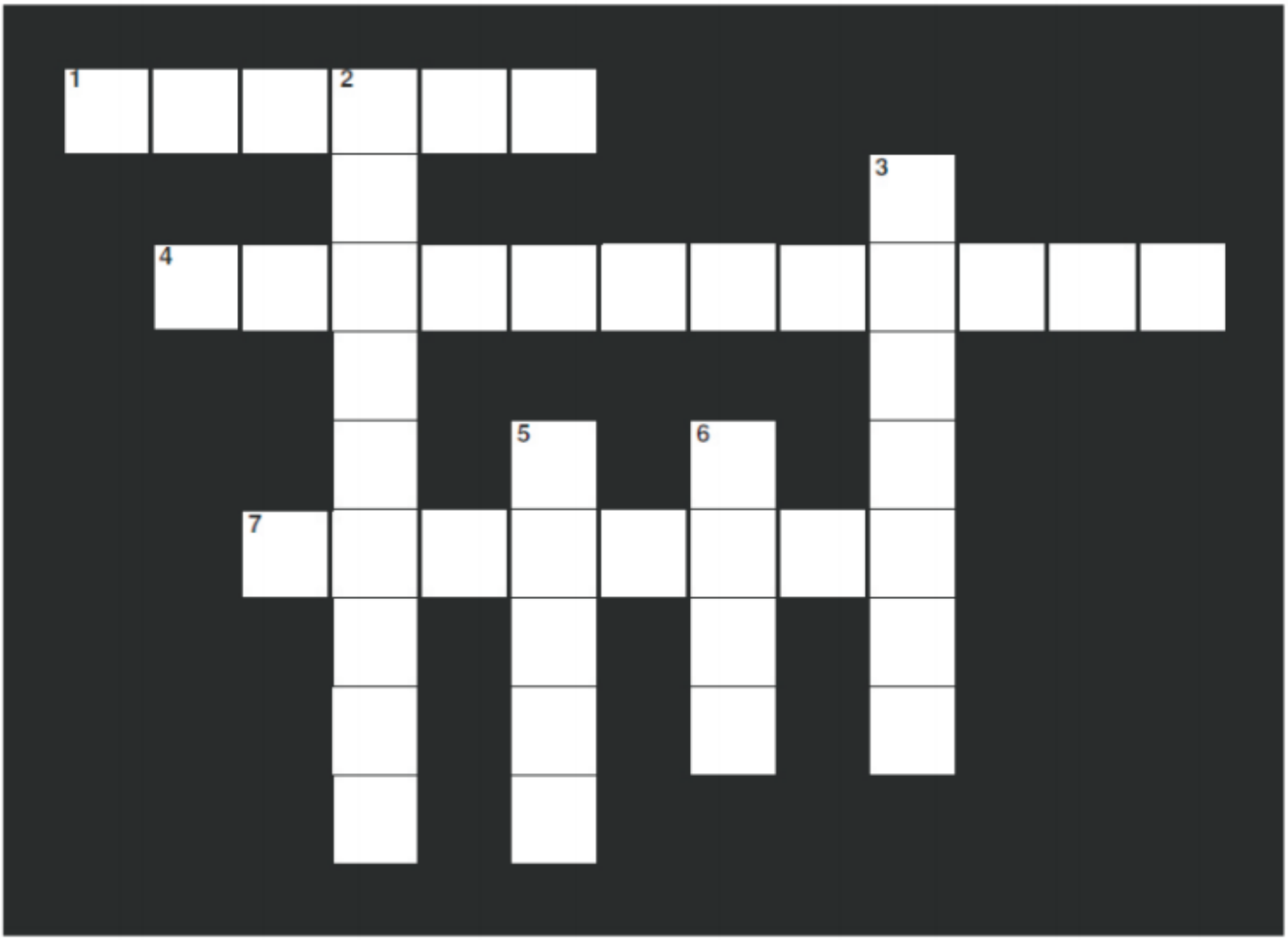
Project Directions:
To find out if an object is a conductor or an insulator, use your energy stick to see if it lights up!
Once you have determined if the item is a conductor or insulator, display the items you tested along with your findings.
Don't forget to bring your energy stick to be displayed at the Fair!

Object	Conductor or Insulator?
Rubber Band	
Penny	
Paper Clip	
Toothpick	
(Your Choice)	
(Your Choice)	

Energy Types

Directions: Use the words below to answer the questions and fill in the crossword puzzle.

BATTERY
ENERGY
GASOLINE
NONRENEWABLE
RENEWABLE
SOLAR
WIND



ACROSS:

1. What we need to work and play
4. An energy source that can run out
7. The energy source we use in a car

DOWN:

2. An energy source that will never run out
3. An energy source used in flashlights and cell phones
5. Energy that comes from the sun
6. Energy source that uses windmills

MINI 4-H ELECTRIC RECORD SHEET

EXHIBIT YOUR POSTER OR PROJECT. FILL OUT THIS MINI 4-H ELECTRIC RECORD SHEET AND BRING WITH YOUR EXHIBIT TO THE 4-H FAIR.

NAME _____ GRADE IN SCHOOL _____

YEAR IN MINI 4-H ELECTRIC PROJECT (circle) 1st or 2nd

CLUB ATTENDED _____

WHAT DID YOU LEARN MOST FROM YOUR MINI 4-H ELECTRIC PROJECT?

_____

_____

_____

WHO HELPED YOU WITH THIS PROJECT? _____

_____

DID YOU HAVE ANY PROBLEMS WITH YOUR MINI 4-H ELECTRIC ACTIVITY(S)?

_____

_____

_____

WHAT WAS THE MOST FUN PART OF DOING THIS PROJECT?

_____

_____

_____

_____

Leader Signature _____ Date _____

MINI 4-H ELECTRIC RECORD SHEET

EXHIBIT YOUR POSTER OR PROJECT. FILL OUT THIS MINI 4-H ELECTRIC RECORD SHEET AND BRING WITH YOUR EXHIBIT TO THE 4-H FAIR.

NAME _____ GRADE IN SCHOOL _____

YEAR IN MINI 4-H ELECTRIC PROJECT (circle) 1st or 2nd

CLUB ATTENDED _____

WHAT DID YOU LEARN MOST FROM YOUR MINI 4-H ELECTRIC PROJECT?

_____

_____

_____

WHO HELPED YOU WITH THIS PROJECT? _____

_____

DID YOU HAVE ANY PROBLEMS WITH YOUR MINI 4-H ELECTRIC ACTIVITY(S)?

_____

_____

_____

_____

WHAT WAS THE MOST FUN PART OF DOING THIS PROJECT?

_____

_____

_____

_____

Leader Signature _____ Date _____