

4-H Energy/Electricity Project



Step It Up!

Pass it on! Now that you know how, share it with others. Here are ideas to get you started.

Are you Into It?

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Explore 4-H Energy and Electricity!

- Learn about how electricity and energy affect people and their environments.
- Learn how to utilize and promote safe practices to prevent injury and property damage.
- Find out how to practice more efficient use of electrical power.
- Discover how electricity is generated, transmitted, and distributed for use.

Communication

- Share what you've learned with others through a speech or demonstration.
- Write a report or a descriptive paper on how you completed your project.

Citizenship

- Develop a plan for your family on how to make your home more energy efficient.
- Work with your school to determine how to incorporate energy saving practices.

Leadership

- Start a 4-H Electricity Club in your community to engage others with similar interests
- Teach younger 4-H members the skills you have learned.

4-H is a community of young people who are learning **leadership** **citizenship** and **life skills**.

Here's what you can do all year!

Starting Out
Basic/Level 1

- Discover the fundamentals of electricity and energy.
- Learn the difference between AC and DC current.
- Discover how electricity flows through a circuit.
- Make a simple circuit, flashlight and switch.
- Experiment with basic circuits using batteries, light bulbs, and switches.
- Learn about magnetism and how to create a simple electromagnet.

Learning More
Intermediate/Level 2

- Explore the differences between series and parallel circuits.
- Learn about different types of switches and their applications.
- Learn and practice proper techniques for creating simple soldered circuits and their components.
- Learn about Ohm's Law and its application.
- Practice using an Ohm/Volt meter.
- Learn about reading and creating circuit diagrams.

Expanding Horizons
Advanced/Level 3

- Learn more about different forms of electrical generation.
- Explore alternative energy sources and their applications.
- Create more complex electrical circuits using solid state components and circuit boards.
- Learn about career opportunities in Energy and Electrical fields.
- Study your family's electrical usage and determine how you can maximize efficiency.

Learn more at www.kentucky4h.org or contact your county extension office.





Take Energy and Electricity Further!

Here are some other opportunities to explore energy and electricity:

- Start a 4-H Electricity Club.
- Start a 4-H Energy Club.
- Find a community issue that can be addressed by the use of an electrical device.
- Study the impact of various types of electrical generation on the environment.
- Experiment with the efficiency of various types of power sources.
- Study how your own body utilizes electricity as it functions.

Exhibit Ideas

- Create a 4-H Electricity exhibit for your County Fair.
- Work with your local electric company to develop or enhance electrical safety displays for schools or communities.
- Develop a display showing the ways to make your home more energy efficient.

Resources

4-H Resources	Other Resources	Record Keeping
<ul style="list-style-type: none"> • National 4-H Electric Excitement Curriculum https://shop4-h.org/products/electric-excitement-helpers-guide • National 4-H Wired for Wind Curriculum https://shop4-h.org/products/power-of-the-wind-activity-bundle • National 4-H Explore A Power Park Paper Circuits https://shop4-h.org/products/explore-a-power-park-book-1-paper-circuits • National 4-H Electric and circuit kits https://shop4-h.org/collections/science-technology-engineering-math-curriculum?sort_by=title-ascending 	<ul style="list-style-type: none"> • Elenco Snap Circuits https://shop.elenco.com/consumers/brands/snap-circuits.html • Circuit Scribe https://circuitscribe.com/ • LittleBits https://sphero.com/pages/littlebits 	<ul style="list-style-type: none"> • Develop an Electric project notebook of what you have studied and created. • Keep copies of all your circuit diagrams from your projects. • Record expenses (and income) associated with your Electric project.

