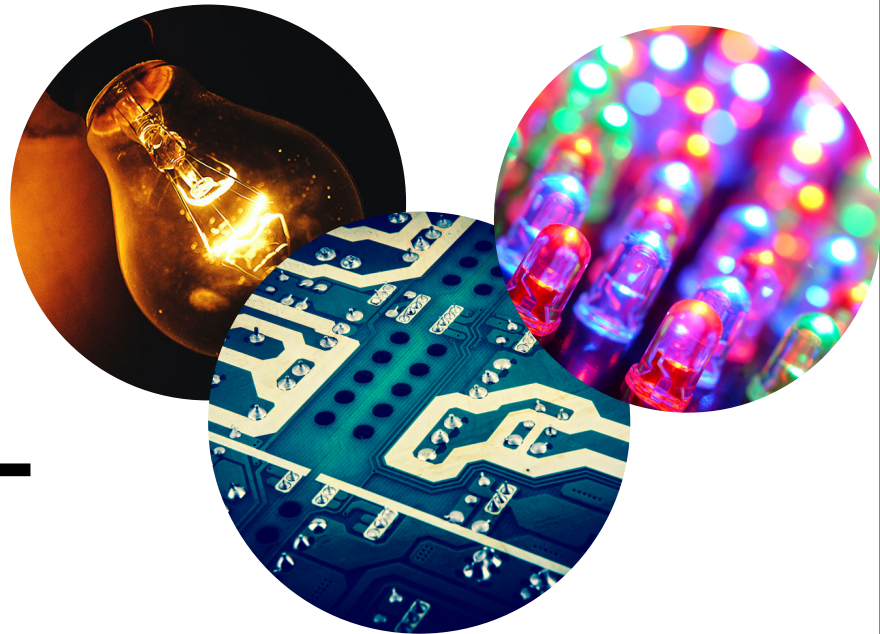




COLORADO STATE UNIVERSITY
EXTENSION

Electricity



Project Unit 1 is designed for members 8-18 years old with little to no electrical energy experience.

Unit 1 - Magic of Electricity

Inspiring youth to:

- Accomplish the following learning experiences:
 - Plugging in
 - Bright lights
 - Control the flow
 - Circuit sense
 - Electric attractions
 - Make it spin

Project Units 2 & 3 are designed for members 8-18 years old who understand basic electrical principles.

Unit 2 - Investigating Electricity

Inspiring youth to:

- Accomplish the following learning experiences:
 - AC and DC electrical currents
 - Investigating Ohm's law
 - To flow or not to flow
 - Series and parallel circuits
 - Switching circuits
 - Building an alarm

Unit 3 - Wired for Power

Inspiring youth to:

Accomplish the following learning experiences:

- The code of safe practices
- How much electricity are you using?
- Fuses and circuit breakers
- Types of wires and bulbs
- Appliance nameplates
- Plug/outlet types, grounding
- Locating circuits in your home

Project Unit 4 is designed for members 14 and older with an understanding of advanced electrical principals.

Unit 4 - Entering Electronics

Inspiring youth to:

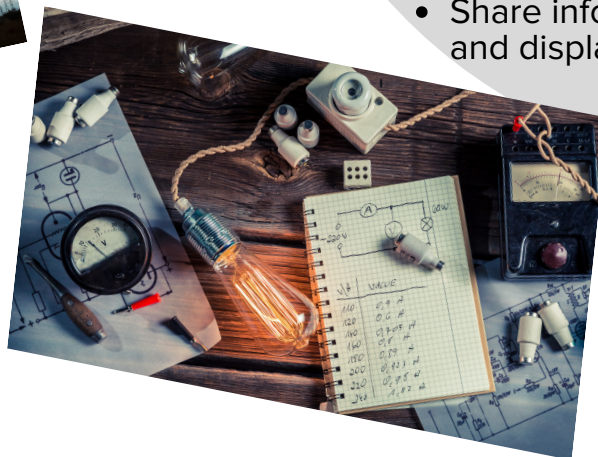
Accomplish the following learning outcomes:

- LED or SCR
- Operating with diodes
- Performance with LED
- Burglar proof
- Turn up the volume

Electricity

Judging Criteria:

- Project is evaluated on the completeness of the manual and e-record, and the quality of the exhibit
- E-record includes demonstrations, talks, story, and pictures, with at least one action shot of the member doing something with his or her project
- Neatness and legibility



Tips:

- Do at least three required activities and four optional activities (Brain Boosters) each year. Check them off on page 5 of the manual.
- Be sure to list day, month, and year for the completed activities.
- Be sure to have your leader or parent initial each activity.
- Take part in at least two leadership experiences each year.
- Be sure to include your completed manual with your e-record in a secure binder.
- If you plan to take the unit for more than one year, make sure that each exhibit is different each year.
- Entering Electronics is for Senior 4-H members only.
- Enter your project in your county fair.
- Share information learned in talks and displays.



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EXTENSION**

Resources:

- Exhibit & Judging Requirements
- Record Books
- Manual Information

Located at: Colorado4h.org

Electrical Careers



Electrician

To repair existing or install new electrical systems



Safety

Provide oversight and educational awareness to those involved in electrical occupations and the public



Regulation & Inspection

Work with a variety of entities to ensure safe products and infrastructure that involve electricity



Research

Test out new methods and techniques, increase efficiency, and improve safety



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Degrees/Certifications:

Construction Electrician Degree
Lineman Certification
National Fire Protection Association
Certifications (Electrical)
CAD Technician/Design
Electrical Engineer
Teaching including Agricultural
Education
Business Management
Construction Technology



Education

Opportunity to teach others about electricity, designs, and application



Emergency/Disaster

Work in different avenues to provide electrical service repairs and rebuilds



Retail

Sale of products to support the electrical industry including raw materials, retail products, and support to consumers



Manufacturing

Create and assemble products for use with electrical functions