



# Electric Celebration

A major retailer of cards and holiday supplies asks you to help them with a new line of electronic gadgets. They know that a cool holiday gadget can make them millions of dollars.

They want you to create and construct an electrical device that people can use to celebrate a holiday. It can be Christmas, Chanukah, Kwanza, Halloween, Ramadan, July 4th or any holiday you choose. What about something for birthdays or 4-H Week?

It could be a table centerpiece, a door decoration, a toy, something to go on a Christmas tree...anything at all. You can include music, lights, bells, buzzers, fiber optics, or anything electrical.

**Electric Celebration** lets you:

- Share your skills and knowledge
- Be comfortable in front of an audience
- Create something new

What You Will Learn:

- About electricity and electronics
- How to use electricity to perform work
- Problem solving

### Who Can Participate

Any Alabama young person may participate in any 4-H competitive event. However, you must be a member of an Alabama 4-H Club. It's easy and quick to join – just call or e-mail your county Alabama Cooperative Extension System Office for information (for contact information, go to [www.aces.edu/counties](http://www.aces.edu/counties)).

If you and your friends would like, you might start a 4-H Interest Club that focuses on your topic. For more information, see **Starting a 4-H Club** ([www.AL4H.org](http://www.AL4H.org)).

**Electric Celebration** is a Junior and Senior 4-H Event. Your local Extension Office has information on local and regional events, as well as other 4-H activities.

### Levels of State-Recognized Competition

- **Juniors:** 9 – 13 Years Old. Participant must be 9, 10, 11, 12, or 13 years old on January 1 of the current calendar year.

- **Senior – Level I:** 14 – 15 Years Old. Participant must be 14 or 15 years old on January 1 of the current calendar year.
- **Senior – Level II:** 16 – 19 Years Old. Participant must be 16, 17, 18, or 19 years old on January 1 of the current calendar year.

You can win multiple times as a Senior Level I or II participant, but not with the same project. Each year you must have gained new information and skills that you use to teach others.

### The Rules!

The rules are pretty simple:

- There should be only one switch or switching device to turn it on and off.
- It should be easy to use and safe to operate.
- Electricity can be either AC or DC
- No larger than 18" x 18" x 18"
- Your name and county need to be on a small piece of tape attached to your project.
- You cannot use a kit.

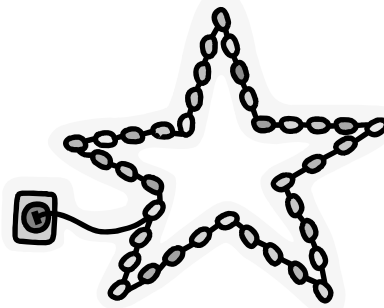
You will need to be able to explain your design and answer questions from the judges about what you have learned.

### Parents' and Volunteers' Guide

Like all 4-H projects, this activity is just for young people. It is expected that the young person create an original presentation. The role of adult helper is to support and encourage youth in their efforts, to ask and answer questions about the project, and to help youth learn specific techniques (such as computer techniques) that they might use in their project.



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### Where Do I Start?

There are many ways to decide what you want to build. If you have a clear idea in mind, you might just start putting it together or experimenting. If you like to use a computer, you might start with a design program like the free 3D graphics software, **DesignWorkshop Lite** ([www.artifice.com/dw\\_lite.html](http://www.artifice.com/dw_lite.html)).

Or let your imagination flow. Look at catalogues of interesting electronic devices or toys or do a web search for *electric holiday toys*, *electric gadgets* or similar terms. Remember, you are looking for inspiration, not something to copy!

Begin roughly sketching out your idea. Start thinking about what materials you might need.

Check with your hardware, hobby, building supply or electronics store for materials or inspiration.

Ask assistance from a knowledgeable person. This might be someone who knows about computers, electricity or technology. An electrician, science teacher or a hobby-shop staffer may be enthusiastic about sharing their knowledge and helping you bring your idea to life.

#### **Safety**

It is extremely important that you practice good safety in using tools and in handling electricity. For more information: see [www.nsc.org/library/facts/electrical\\_safety.htm](http://www.nsc.org/library/facts/electrical_safety.htm)

### Career Connections

Skills that are developed through this project have direct connections to a number of exciting and rewarding careers. These include: Electrical Engineering, Construction, Design, Teaching, Industrial Design, Interior Design, Computer and Peripheral Design, and Electrician. There are also opportunities to learn how to build and sell your own new products.

### **Above and Beyond**

All 4-H projects can be taken “above and beyond” just being a short-term activity. Awards and recognition throughout Alabama 4-H are not based on how well you do in competitive events; they are based on your all-round community service, leadership, and project work.

Here are some ideas for taking your interest in Electrical Energy and Product Design to a level where you can both grow as a person and have an impact on the lives of others:

- See if your new project is something people want to buy. Offer it on EBay or through a local shop.
- Organize a community show of **Electric Celebration** and other art and technology projects.
- Create a web site with short videos of the group’s **Electric Celebration**.
- Talk with an engineer or electrician about your project.
- Teach younger kids to put together simple electrical projects.
- Make a video about your project or use it in a digital story.
- Take photographs of your project.
- Create a 3-D model of your **project** using CAD (Computer Aided Design) software.
- Invite an engineer or technician to provide a workshop.

## The Day of the Big Event

Each county or region will schedule its own **Electric Celebration** or include this project with Freestyle events. It may be part of a County Round-Up or Regional Congress. Some places may have workshops that help young people learn to build their skills.

On the day of the event, allow yourself *plenty* of time to set up. Check to make sure that your invention is in good working order and is safely put together.

And be ready to *informally* answer some questions from the judges. These questions might be things like:

- “How did you create your project?”
- “What did you learn about electronics or electricity?”
- “What would you do differently?”
- “Could you use your design to create a product that people might want to buy?”

## Competition is Celebrating Your Learning

Judges at your county event will determine which entries advance to the next level of competition. At Regional 4-H Congress for Juniors, and State 4-H Congress for Seniors, all Electric Celebration entries are already outstanding as measured by a standard of excellence.

At Regional and State Congresses, you will compete against other 4-H’ers. Judges will award rankings such as 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup>. Participation ribbons may also be awarded to all entries.

Judges will base their evaluation on criteria such as time and effort, knowledge gained, problems solved, decision made, future learning goals, knowledge of quality standards, workmanship, completeness of entry, organization and clarity and creativity. See the score sheet for complete details.

Be ready to informally discuss with the judges your learning experience. This discussion will take about 3 minutes. Judges will probably start by saying something like: “Tell me about your project and what you did”. Be prepared with about a 1 minute response. Be excited and confident!

## Suggestions for Event Facilitators

1) The guidelines for **Electric Celebration** have many points in common with Freestyle Showcase. Event Facilitators may wish to include **Electric Celebration** entries with **Freestyle Showcase** entries.

2) Hearing youth talk about their learning is really fun, and seeing the results of their learning is exciting. Event facilitators should try to have **Electric Celebration** entries open for public viewing.

3) The selection of judges is important to the success of the event. The ideal judge chats easily with young people and is interested in learning new things. Basically, in **Electric Celebration** the judge is the learner and the 4-H participant is the teacher. Judges should begin by prompting the 4-H’er... “Tell me about your entry”. Sample follow-up questions might be:

- “Where did you get your idea or information?”
- “What equipment did you use?”
- “How did you select your materials?”
- “What were some of the difficulties or problems you had?”
- “What would you change or do better if you could?”

4) The **Electric Celebration** Score Sheet is designed to make judging easy, uniform, and educational for the 4-Her. A description of each standard (white, red, blue) for each criteria of evaluation is provided. Descriptions are written in youth friendly terms and should be given to the 4-Her at the end of the competition after the awards have been presented.

November, 2006

## Score Sheet: Electric Celebration

Name of Participant: \_\_\_\_\_ County: \_\_\_\_\_

Level: \_\_\_\_\_ Junior (ages 9-13) \_\_\_\_\_ Senior I (ages 14-15) \_\_\_\_\_ Senior II (ages 16-19)

Description of Entry: \_\_\_\_\_

		<b>Blue</b>	<b>Red</b>	<b>White</b>
<b>Minds On Learning (3 min discussion)</b>	Time & Effort	Majority of your learning did not occur this 4-H year. Maybe it's time to try a different project area.	Your learning is just beginning. Keep exploring your interests.	You've spent considerable time and effort in learning new skills.
	Knowledge	Being more knowledgeable would make answering questions easier.	You are at ease with your content, but could answer only easy question. Try to elaborate more.	You demonstrated full knowledge of subject with explanations and elaboration.
	Problems Solved & Decisions Made	You would have learned more with less adult help. See if you can make more decisions on your own.	You asked advice from adults, but made your own decisions and solved problems.	Learning by trial & error has taught you important skills and made you independent.
	Future Learning	Without plans you will not reach your full potential.	Your plans are good, but general. Try to be more specific.	Your detailed plans for continued learning will make you successful.
	Knowledge of Excellence	Try to find information on what quality workmanship looks like. Then you'll be able to judge the quality of your work.	You know 2-4 things to look at to know if you've done a good job. But, there is more to consider and/or better sources of information.	You have full knowledge of quality standards pertaining to your entry; and have used accurate sources of information.

<b>Hands-On Learning (contest entry)</b>	<b>Exhibition of Learning OR</b> (display, album, video, etc)	<b>Item</b> (made, finished, repaired, etc)				
			4-H'ers Self Assessment	You told me that several things need improvement.	You told me there are a few things that need improvement.	You told me your workmanship was excellent.
			Quality	Ask an expert to teach you better techniques and help you select more appropriate materials.	A little more practice and you'll have it perfect.	Excellent workmanship.
			Suitable for intended use	This item can not be used as you intended. Learn more and then try again.	Be careful about the safety, function, or durability or your item.	Enjoy using your item. It is constructed well for it's intended use.
			Completeness of content.	You've only shown a few learning experiences.	You've been busy doing activities. Your entry should also tell about what you learned.	By looking at your entry I have a complete idea of what you've done and learned.
			Organization & clarity	To reduce confusion... change the order, amount, or appearance of your information	Your information is in logical sequence, but difficult to understand.	Logical and interesting sequence. Easy to understand.
			Creativity	People may not be attracted to your display. Be creative.	A little more pizzazz and you'll have it. Make your entry stand out.	Your entry has lots of appeal and is an original idea.

RATING (white, red, blue): \_\_\_\_\_ **or** PLACING (1<sup>ST</sup>, 2<sup>ND</sup>, 3<sup>RD</sup>, etc): \_\_\_\_\_

OTHER: \_\_\_\_\_