



Computer Project

Judging - Thursday, July 2, at 3pm at the Fairgrounds; Shrine Building.

A county may submit a total of three (3) state fair entries, one (1) entry per grade level division.

**Please also refer to the Policies and Procedures beginning on page 2 and the General Project Rules on page 20.*



Are you interested in computer science? Consider attending 4-H Academy at Purdue in June!

There are three exhibit grade level divisions; Grades 3-5, Beginner; Grades 6-8, Intermediate; and Grades 9-12, Advanced. Exhibits are to be skill appropriate for the member's grade level.

Youth enrolled in the computer project will select one of the below subject categories to study, regardless of grade. Youth may choose to create an exhibit demonstrating skills learned during the year. Check with your county Purdue Extension Office to determine if a computer will be available during judging and if there will be an opportunity to explain your exhibit to the judge. Poster exhibits are not acceptable. Exhibits qualifying for state fair are to be submitted on a thumb drive securely attached to a notebook/portfolio describing accomplishments, skills learned, design ideas, budget, a summary of what was done, etc. as the exhibitor will not be able to discuss their work with a judge. Youth may continue in the same subject category in subsequent years expand on the previous year's topic, or choose a new topic. Subject categories are:

- Hardware and Networking Design/Installation/Repair
- Software or Smartphone App Programming and Development
- Website Development
- GPS or Software Utilization
- Computer Entrepreneurship
- Computer Forensics (identity theft, online bullying, ethical use of technology, responsible social media use, etc.)
- Independent Study - A topic of your choice that does not fit in any other category

Software must be compatible on both PC and Mac platform. If additional software other than Microsoft Office Suite is required to view the member's work, that software must be provided by the member and comply with all manufacturer copyright laws. Apps can be Android or IOS compatible.



Electric

Judging - Thursday, July 2, at 3pm at the Fairgrounds; Shrine Building.

1 Champion from each level to State Fair.

**Please also refer to the Policies and Procedures beginning on page 2 and the General Project Rules on page 20.*

Division I

Exhibit a circuit board (using kit provided, label parallel or series circuit). "What I Have Done and Learned" is required for county only.

Project Completion

1. Make a circuit board.
2. Conduct a Hazard Hunt.

Division II

*Exhibit either: magnetic powered flashlight or a poster (22" x 28") as outlined in the project manual or project CD.

Project Completion

1. Make a magnetic powered flashlight or exhibit a poster (22" x 28") on a topic described in the manual.

Division III

*Exhibit either: Extension cord; a trouble light or a poster as outlined in the project manual. If the exhibit is not a poster, attach a note explaining how it is to be used.

Project Completion

1. Make one of the following:
 - a. Build an extension cord using all new parts
 - b. Build an incandescent trouble light using all new parts
 - c. Build a fluorescent trouble light using all new parts
 - d. Repair an extension cord or trouble light by replacing the cord, plug, connector body or socket handle with a new part(s).
 - e. Create a poster about:
 - Wire size
 - Wire type
 - Current carrying capacity
 - The parts of an extension cord or trouble light
 - An important safety-related topic
 - any topic covered in the Division III manual

All poster exhibits are to be displayed horizontally, sized 22"x 28", mounted on a firm backing (foam-core board or other) and covered in clear plastic or transparent material. Place standard identification label with your name, grade and county in the lower right-hand corner of the poster.

Note: For parameters on any of the above project options, see the Division III electric manual

Division IV

*Exhibit one of the following:

- Made or remade lamp
- Display board on any topic covered in manual
- Poster on any topic covered in this manual

If the exhibit is not a poster, attach a note explaining how it is to be used.

Project Completion

1. Complete the activities presented in the manual.
2. Make or remake a lamp, or make a poster or display board on any topic covered in the manual

Advanced Divisions 5-10 Electricity & Electronics (*This book is being updated and you may find other resources at your local library, electricians, instructors, internet, etc. to provide guidance for your project.*)

The Advanced Division is split into two different categories. One area is "Advanced Electric 5-10" and the second is "Advanced Electronics 5-10." You may choose one category for your Advanced 5-10 exhibit.

Exhibit ONE of the following:

- An article based on wiring around the home, farm, or facility, etc.

- An article made in the area of heating and cooling
- An article made in the area of lighting
- An article made in the area of electronics (advanced division electronic projects may contain and use molded plugs if they are part of the electronic kit)
- An article made in the area of power
- A written report on: consumer buying, better electrical methods, or electrical careers.
- A written notebook report with photos of individual steps (close-up) and overall work, illustrations, explanation of each step performed, explanation of overall work done, reasons for performing work, reasons for selecting materials used, list of materials used and prices (budget), schematics, etc. of electric project. This option allows you to use your imagination and complete any electrical project that you cannot physically bring to the fair to exhibit. You could wire a room in a house, the barn, outdoor lighting, indoor lighting, control systems, alarm systems, etc.
- Display board (no larger than 36"x36"x36") showing home wiring (3-way switch, 4-way switch, GFCI Grounding, Circuit Protection, etc.) or any topic covered in the Advanced Division manual.
- Create a video showing the work accomplished and skills learned. This video should include the same type of information as required in written notebook listed above. This video is to be no more than ten minutes in length and formatted as MP3 or MP4 and submitted on a thumb drive. This video can also be uploaded to a YouTube account with the video being made public and the link submitted for evaluation.

Attach to the exhibit any kit instructions or book/manuals if you feel they will help explain the operation of the exhibit. This may be important for advanced electronic projects.

If the exhibit is not a poster, attach a note explaining how it is to be used.



Small Engines

Judging - Thursday, July 2, at 3pm at the Fairgrounds; Home & Family Arts Building.

1 Champion from each level to State Fair

****Please also refer to the Policies and Procedures beginning on page 2 and the General Project Rules on page 20.***

Actual Engine Display Requirements for all 3 levels

- The actual small engine may be displayed.
- Must be mounted on a stable base no larger than 30" x 30".
- For safety reasons, all fluids (fuel and oil) must be removed.
- Note: It is strongly suggested that a notebook with details and pictures of what was done to the engine accompany the display.

Display Board Requirements

- No more than 36" wide x 24" deep and free standing
- 3-dimensional display
- All items to be securely fastened
- 4-H member's exhibit card to be secured in lower right hand corner

All posters, notebooks, and display boards must include a reference list indicating where information was obtained, giving credit to the original author, to complete the 4-H member's exhibit. This reference list should/might include web site links, people and professionals interviewed, books, magazines, etc. it is recommended this reference list be attached to the back of a poster or display board, be the last page of a notebook, or included as part of the display Visible to the public. A judge is not to discredit an exhibit for the manner in which references are listed.