

CLASS 2 - Lighting Comparison - Display studying the efficiency of various lighting (incandescent, fluorescent, halogen, Light Emitting Diodes, etc.). Exhibit could be a poster display or an actual item. SF

CLASS 3 - Electrical Display/Item - Show an application of one of the concepts learned in the Wired for Power project. Examples include: re-wiring or building a lamp, re-wiring or making a heavy duty extension cord or developing an electrical diagram of a house. Exhibit could be a poster display or an actual item. SF

CLASS 4 - Poster - Should exemplify one of the lessons learned in the Wired for Power Project. Posters can be any size up to 28" by 22". SF

Electronics - Unit 4

CLASS 5 - Electrical/Electronic Part Identification - Display different parts used for electrical/electronic work. Exhibit should show the part (either picture or actual item) and give a brief description, including symbol of each part and its function. Display should include a minimum of 10 different parts. SF

CLASS 6 - Electronic Display - Show an application of one of the concepts learned in the Electronics project. Examples include: components of an electronic device. (Refer to page 35 of the Electronic manual) SF

CLASS 7 - Electronic Project - Exhibit an electronic item designed by the 4-H'er or form a manufactured kit that shows the electronic expertise of the 4-H'er. Examples include: a radio, a computer, or a volt meter. SF

CLASS 8 - Poster - Should exemplify one of the lessons learned in the Entering Electronics Project. Posters can be any size up to 28" x 22". SF

DEPARTMENT H, DIVISION 900 - PHYSICS/POWER OF WIND Premiums: Purple, \$4.00; Blue, \$3.00; Red, \$2.50; White, \$2.00

One entry per each class. The name and county of each exhibitor should appear separately on the back of each poster or articles and on the front cover of the notebooks so owner of exhibit may be identified if the entry tag is separated from the exhibit.

Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned). All reports should be computer generated and enclosed in a clear, plastic cover. The reports should be attached securely to the display.

CLASS 1 - Create and Compare Energy Resources Poster - Poster should explore 2 alternative/renewable energy resources. Compare and contrast the 2 resources including two of the following information: amount of energy created, costs of production, usability of the energy, pros/cons of environmental impacts, etc. Posters can be any size up to 28" by 22". SF

CLASS 2 - Experiment Notebook - Notebook will explore the scientific method involving alternative/renewable energy sources. Information required. 1) Hypothesis 2) Research 3) Experiment 4) Measure 5) Report or Redefine Hypothesis. SF

CLASS 3 - Solar as Energy Display - Item should be the original design of the 4-Her. Include the item, or a picture if item is in excess of 6' tall or 2' X 2'. Include a notebook of why the item was designed and how it harnesses the power of the sun. Examples include solar ovens, solar panels, etc. SF

CLASS 4 - Water as Energy Display - Item should be the original design of the 4-Her. Include the item, or a picture if item is in excess of 6' tall or 2' X 2'. Include a notebook of why the item was designed and how it harnesses the power of water. SF

CLASS 5 - Wind as Energy Display - Item should be the original design of the 4-Her. Include the item, or a picture if item is in excess of 6' tall or 2' X 2'. Include a notebook of why the item was designed and how it harnesses the power of wind. SF

CLASS 6 - Other Nebraska Alternative Energy - Notebook should explore Nebraska an alternative energy source besides wind, water, and solar power. Include information on type of power chosen, infrastructure for distribution, what resources are needed to create this alternative resource, cost of production, and potential uses of bio-products. SF

DEPARTMENT H, DIVISION 911 - WOODWORKING
Premiums: Purple, \$4.00; Blue, \$3.00; Red, \$2.50; White, \$2.00

One entry per each class. The name and county of each exhibitor should appear separately on the back of each board, poster or articles and on the front cover of the notebooks so owner of exhibit may be identified if the entry tag is separated from the exhibit.

Several classes require a display board which should be a height of 24 inches and not to exceed 1/4 inch in thickness. A height of 24 7/8 inches is acceptable to allow for the saw kerf (width) if two 24 inch boards are cut from one end of a 4' x 8' sheet of plywood. **NOTHING SHOULD BE MOUNTED WITHIN 3/4 INCH OF THE TOP OR BOTTOM OF THE BOARD.** Fabricated board such as plywood, composition board, or particle type lumber may be used for demonstration displays. Demonstration boards should be sanded and finished to improve their appearance. The finish on the demonstration board will be judged as a woodworking exhibit. Board should include an overall title for the display, plus other necessary labeling.

Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned). All reports should be computer generated and enclosed in a clear, plastic cover. The reports should be attached securely to the display.

Requirements: All articles exhibited must include a plan (with drawings or sketch or blueprints) stating dimensions and other critical instructions a builder would need to know how to build the project. Plans may include narrative instructions in addition to the dimension drawings and include any alterations to the original plan. Part of the score depends on how well the project matches the plans. If plans are modified, the changes from the original need to be noted on the plans. All plans used for making the article must be securely attached and protected by a clear plastic cover. Include a copy of the plans even if using plans from the manual.

All projects must have appropriate finish.

All outside projects **MUST** have entry tag and supporting information placed in a protective bag to prevent damage from weather events such as rain and be ATTACHED to projects with string, zip ties, etc.