862 101 3 __ __ Education Poster - Electricity, Level 3: An educational poster on any electricity topic youth learned about in Electric Excitement Level 3 Wired for Power addressing any of these themes: electrical tools, electrical meter, identify wire and cable symbols, light bulbs, appliance nameplate information, electricity usage, receptacles, circuits, grounded and non-grounded outlets, an explanation of wall switch replacement.

862 101 4 __ __ Education Poster - Electricity, Level 4: An educational poster on any electricity topic youth learned about in Electric Excitement Level 4 Entering Electronics addressing any of these themes: identification of electronic parts, soldering and preparing a circuit assembly, demonstrate how a diode controls current flow, develop a circuit that shows the action of a transistor to regulate current flow, understand polarity and voltage limits of LEDs, use of a light sensitive semiconductor, assemble a circuit that gives a meter reading in response to light, show how a Silicon Controlled Rectifier (SCR) triggers an alarm, use an integrated circuit in an amplifier circuit.

OTHER ELECTRCITY EXHIBIT

1. Each exhibit piece must be labeled with the member's name, county and class number. Fill in the blank in class number (__) with corresponding number for Junior, Intermediate or Senior member.
2. **Exhibit:** An exhibit relating to electricity addressing a different theme or using a different combination of components from those addressed in 4-H Electricity Levels 1-4. The exhibit may NOT be a poster or a robot (see the exhibit classes for Junk Drawer Robotics). It may be made from a kit, from a pattern or plan not included in 4-H Electricity Levels 1-4, or an item designed by the member.
3. To qualify for judging an *Electric Energy Explanation Sheet (862-02 Revised 9/2016)* must be attached to the exhibit. Forms are available at the County Extension Offices and at the State 4-H website.
4. **In addition, intermediates and seniors must include a schematic or circuit diagram of the electricity project.** Refer to the 4-H Electric Series Level 2 book Investigating Electricity and the interactive e-learning modules for Activities 5 and 6 and Activities 7-9. The Level 4 book Entering Electronics will also be a useful reference for this requirement

1 Junior
2 Intermediate
3 Senior
4 Club

862 200 00__ Other Electricity Exhibit

4-H TECHNOLOGY

AEROSPACE

1. Each exhibit piece must be labeled with the member's name, county and class number. If more than one article is contained in the exhibit each article must be labeled with the member's name, county and class number. This may be done with masking tape, attaching an index card, or writing directly on the back with a marker. All the articles that comprise the exhibit must be attached to each other. The one exception to this is the Rocketry Engineering Journal, which must be included with the Rocket display, but is not required to be attached to it.
2. Each exhibit must include the current year's edition of the appropriate Project Description for the exhibit form filled out neatly and securely attached to the exhibit. *4-H Project Description* sheets are posted on the Oregon 4-H website. Be sure to use the newest version of the Project Descriptions for each technology exhibit. Exhibitors should answer the description page carefully and in full sentences. This is the exhibitor's opportunity to tell the judge about their project. Judging Evaluations can be found on the Oregon 4-H website. These provide valuable information to youth on creating their project displays.

STAGE 2, LIFT-OFF (STAGE 1 IS FOR GRADES 1-3)

851 100 010 Rocketry: Description - An exhibit of two parts: (1) a rocket made by the member from the Aerospace Adventures State 2 project kit, and (2) a Rocketry Engineering Journal. Rockets displayed in this class may only be made from the Estes Gnome ™, Wizard ™, or Mosquito ™ rocket kits. Rockets included in a static display MUST be shown without engines or igniters. All the parts of the rocket and their function should be identified. Rocket components which must be included and labeled are body tube, nose cone, engine hook, fins, recovery system (streamer or tumble method), launch lug, engine mount, and shock cord. On the display, list any items required to launch the rocket and their function such as the launch system, igniters and recovery wadding. List the appropriate engine size(s) for your rocket and your level of experience. The exhibit will be judged on neatness of labels and workmanship. A Rocketry Engineering Journal is required. Include the date of each meeting, names of the persons present and a record of what was done. Include photos or illustrations. The information will be used to fill out the Aerospace-Rocketry Project Description sheet for fair. It is important that the member downloads the Aerospace-Rocketry Project Description sheet from *4-H Project Description* sheets posted on the Oregon 4-H website to know what is required in the Build Report and the Launch and Flight Reports in the Journal. See additional exhibit requirements for classes under Aerospace above. Evaluation: Use Aerospace- Rocketry Evaluation available on the Oregon 4-H website.

851 100 020 Educational Poster- Aerospace: An educational poster on any aerospace or aeronautics topic youth learned about in Aerospace Adventures, stage 2, except rockets. Display should demonstrate knowledge gained in one of these topics: space, kites, hot air balloons, weather or aerospace careers. Individual exhibits are **limited in size to 30" wide, 24" deep (front to back), and 36" high. Club exhibits are limited in size to 60" wide, 24" deep and 36" high.** Posters must not exceed 22"x 28". Judging criteria are outlined on the *4-H Education Display Check Sheet* (40-463) available from the County Extension Offices and the state 4-H website.

STAGE 3, REACHING NEW HEIGHTS

851 101 010 Rocketry: Description - An exhibit of two parts: (1) a rocket made by the member from the Aerospace Adventures Stage 3 project kits, and (2) a Rocketry Engineering Journal. In Stage 3 the Rocketry Engineering Journal must include a rocket launch and flight report. Rockets displayed in this class may only be made from the Estes Monarch ™, Alpha™, or Alpha III™ rocket kits. Rockets included in a static display MUST be shown without engines or igniters. All the parts of the rocket and their function should be identified. Rocket components which must be included and labeled are body tube, nose