

23 **Other Senior**
 34 **Club Exhibit**
 860 100 0 __ **GPS/GIS Exploring Spaces, Going Places**
 860 100 1 __ **GPS/GIS, Projects**
 860 101 5 __ **GPS/GIS, Map**
 861 100 1 __ **Computer Software Application, Word Processing**
 861 101 1 __ **Computer Software Application, Excel/Spreadsheet**
 861 102 1 __ **Computer Software Application, Presentation Software**
 861 103 1 __ **Computer Software Application, Graphic Design/Digital Imaging**
 861 104 1 __ **Computer Software Application, Database Management**
 861 105 1 __ **Computer Software Application, Multimedia Projects**
 861 100 2 __ **Computer Programming**
 861 100 3 __ **Computer Hardware Design**
 863 102 1 __ **Education poster- Robotics Level 1**
 863 102 2 __ **Education poster- Robotics Level 2**
 863 102 3 __ **Education poster- Robotics Level 3**
 863 103 1 __ **Robotics/ Lego Robotics**

AEROSPACE PROJECT

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. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Aerospace-Rocketry Evaluation available at: <http://oregon.4h.oregonstate.edu/contest-materials-science-engineering-technology>

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.

In some cases, the exhibit may be a poster or 3 dimensional display. 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, 36" high.** Posters must not exceed 22"x28". Judging criteria are outlined on the *4-H Education Display Check Sheet* (40-463) available from the county Extension Office or the state 4-H website at <http://oregon.4h.oregonstate.edu/contest-materials-science-engineering-technology>

Stage 3, Reaching New Heights

851 101 010 Rocketry

Description: An exhibit of a rocket made by the member from the Aerospace Adventures Stage 3 project kits and a Rocketry Engineering Journal is required. 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 cone, engine hook, fins, recovery system (parachute), 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. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Aerospace- Rocketry Evaluation available at: <http://oregon.4h.oregonstate.edu/contest-materials-science-engineering-technology>

851 101 020 Educational poster- Aerospace

An educational poster on any aerospace or aeronautics topic youth learned about in Aerospace Adventures, stage 3, except rockets. Display should demonstrate knowledge gained in one of these topics: rocket stabilization methods, airplanes, helicopters, gliders, pilot training, kites, or aerospace careers. Posters must not exceed 22"x28". Judging criteria are outlined on the *4-H Education Display Check Sheet* (40-463) available from the county Extension Office or the state 4-H website at <http://oregon.4h.oregonstate.edu/contest-materials-science-engineering-technology>

Stage 4, Pilot in Command

851 102 010 Rocketry

Description: An exhibit of a rocket made by the member from the Aerospace Adventures Stage 4 project kits and a Rocketry Engineering Journal is required. In Stage 4 the Rocketry Engineering Journal must include a rocket launch and flight report. Rockets displayed in this class may be made from the Estes Viking™ rocket kit, or other skill level 1 rocket kit where the member designs, constructs and tests the fin configuration. 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 (parachute), 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. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Aerospace- Rocketry Evaluation available at: <http://oregon.4h.oregonstate.edu/contest-materials-science-engineering-technology>

851 102 020 Education poster- Aerospace

An educational poster on any aerospace or aeronautics topic youth learned about in Aerospace Adventures, stage 4, except rockets. Display should demonstrate knowledge gained in one of these topics:

construction and use of altitude tracker, pilot training requirements, aerospace science and technology, astronaut training, box kites, helicopters, or aerospace careers. Posters must not exceed 22"x28". Judging criteria are outlined on the *4-H Education Display Check Sheet* (40-463) available from the county Extension Office or the state 4-H website at <http://oregon.4h.oregonstate.edu/contest-materials-science-engineering-technology>

GEOSPATIAL SCIENCE PROJECT

860 100 0 __ GPS/GIS Exploring Spaces, Going Places

Open **ONLY** to Juniors, Intermediates or Seniors who are in their first year in this project area. Description: Using the Level 1 "Take Me on a Tour" activity, create a map showing four to six tour sites, geo-tools used to create the map, positional data for the sites, and information about the selected site. See additional exhibit requirements, above, for Technology classes. Evaluation: Use GPS/GIS Mapping Projects Evaluation available at: <http://oregon.4h.oregonstate.edu/contest-materials-science-engineering-technology>

860 100 1 __, Geospatial Science Project

Description: GPS or GIS Projects. Exhibit may be an exhibit, binder or presentation on a disk, CD or thumb/travel drive. Computer presentations should follow requirements for similar exhibits found in the Computer Project exhibit classes. Examples of displays include creating a Community Atlas, geography project, or project reports presented to a community meeting. A project entry should contain two or more maps. Maps may be either be informational or directional. Maps that are not created by the member(s) may be included but the source of the map must be clearly shown. The exhibit should describe how the member's project addresses an issue or solves a problem.

See additional exhibit requirements, above, for Technology classes. Evaluation: Use GPS/GIS Mapping Projects Evaluation available at: <http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials>

860 101 1 __ GPS/GIS, Map

Description: Exhibit will be one map. A map is a single product of data gathering, manipulation and presentation skills. Maps may be either be informational or directional. Maps can be computer generated or hand drawn. Multiple maps should be entered as a Geospatial Science Project exhibit. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Map Evaluation available at: <http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials>.

COMPUTER PROJECT

These classes are open to all 4-H members without being enrolled in computer project. See additional exhibit requirements, above, for Technology classes.

A print version of the program must be submitted unless otherwise noted in the class description below. Youth are responsible for submitting clear directions on how judges can access the files. You may include a disk, CD or thumb/travel drive as part of your exhibit. If you do, all files must be compatible with use on a