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. 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 PC.

Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project.

The youth exhibitor should identify a problem to solve or create a work application involving technology. Possible ideas might include: applying existing software programs to a 4-H project area, composing music, developing a game, drawing landscape scenes, designing buildings, publishing club newsletters, creating a website, editing a video, working with photographs, etc.

Online projects using Google applications or other Web 2.0 software are acceptable.
Youth must make sure clear directions are given in the project explanation so the judges can find and access the project online. Website exhibits must be viewable online or on a disk, CD or thumb/travel drive.

Exhibits entered in the "Programming" class must be a program written, translated, or substantially (at least 30%) altered by the 4-H member. Programming projects please submit a hard copy or thumb/travel drive for programs with excessive pages such as GameMaker software.

861 100 1_ _ Computer Software Application, Word Processing
Description: Projects created by youth that show learning in the area of word processing. Project should be an original creation by the participant that shows their word processing skills. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Computer Software Application Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

861 101 1_ _ Computer Software Application, Excel/Spreadsheet
Description: Projects created by youth that show learning in the area of spreadsheet design and usage. Project should be an original creation by the participant that shows their spreadsheet skills. Intermediate and Senior members are expected to have some formula usage in their project. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Computer Software Application Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

861 102 1_ _ Computer Software Application, Presentation Software
Description: Projects should be created by youth to show learning in the area of presentation design skills. Software can be any current presentation software including online versions like Google applications or voicethread.com. Project should be created by the participant to show their presentation design skills. Youth can also submit video clips of how the presentation was used. (For example: A video clip of the youth using the presentation in a group activity.) See additional exhibit requirements, above, for Technology classes. Evaluation: Use Computer Software Application Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

861 103 1_ _ Computer Software Application, Graphic Design/Digital Imaging
Description: Projects created by youth that show learning in the area of graphic design or digital imaging. Software can be any current presentation software including online versions. Project should be created by the participant to show their graphic design or digital imaging skills. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Computer Software Application Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

861 104 1_ _ Computer Software Application, Database Management
Description: Projects created by youth that show learning in the area of database management. Project should be an original creation by the participant that shows their spreadsheet skills. Intermediate and Senior members are expected to have apply their projects to real world scenarios. Youth are responsible for submitting clear directions on how judges can access the files. See additional exhibit requirements, above, for Technology classes. Evaluation: Use Computer Software Application Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials