

Description: An exhibit of two parts: (1) a robot made by the member, and (2) a Robotics Engineering Journal. Projects should be a robot created by youth. For the purposes of this project exhibit, a robot is defined as a machine that is electrical and mechanical and is guided by a computer program. They can be created from kits or from miscellaneous parts. All robots will be returned after fair. More weight is given for youth designed projects. Robots will be judged on structural stability, creativity, functionality. Youth are responsible for submitting clear directions on how judges can access the files and make the robot function. Robot and a full description of what it is meant to accomplish must be submitted.

A Robotics Engineering Journal is required. Include the date of each meeting, names of the persons present and a record of what was done. Include photos, illustrations and examples of software code developed or changed. The journal information will be used by the member to fill out the Robotics Project Description sheet for fair. It is important that the member downloads the Robotics Project Description sheet from 4-H Project Description sheets posted at <http://oregon.4h.oregonstate.edu/node/1858> to know what is required in the Journal. Be sure the Journal includes the problem/task you choose to solve or what you hoped to accomplish. What were the goals of the project? What is the robot programmed to do? List the steps you used to solve the problem or accomplish your task. What materials (software, books, online resources, kits) did you use? Explain your results and provide a thoughtful evaluation of the project. If you were to do it again, how/what would you do differently or how would you improve your project? Who was involved in this project? How did you come up with the idea for this project? What was the most difficult aspect of this project?

863 104 1__ Junk Drawer Robotics Level 1

An exhibit on any robotics topic youth learned about in Junk Drawer Robotics, Level 1, Give Robots a Hand, addressing the theme robotic arms, hands and grippers or trebuchet-type catapult design. An exhibit of two parts: (1) an exhibit made by the member and (2) a photocopy of the corresponding design and build pages from the Junk Drawer Robotics Youth Robotics Notebook.

863 104 2__ Junk Drawer Robotics Level 2

An exhibit on any robotics topic youth learned about in Junk Drawer Robotics, Level 2, Robots on the Move, addressing the theme moving, power transfer and locomotion. Design, build project options are the Clipmobile, Can-Can Robot, Es-Car-Go or Sea Hunt. An exhibit of two parts: (1) an exhibit made by the member and (2) a photocopy of the corresponding design and build pages from the Junk Drawer Robotics Youth Robotics Notebook.

863 104 3__ Junk Drawer Robotics Level 3

An Exhibit on any robotics topic youth learned about in Junk Drawer Robotics Level 3, Mechatronics, addressing the theme the connection between mechanical and electronic elements. Design, build project options are Forward and Reverse, Wall Follower Design, Breadboard, Say What? or "Build your Robot." An exhibit of two parts: (1) an exhibit made by the member and (2) a photocopy of the corresponding design and build pages from the Junk Drawer Robotics Youth Robotics Notebook.

Engineering

ELECTRICITY PROJECT

Exhibits will be any of the articles included in the project manuals that show skills learned in the project. Items must be labeled with member's name, county, and class number. To qualify for judging, an *Electric Energy Explanation Card* must be attached. Forms are available at the county Extension offices and at the State 4-H website:

<http://oregon.4h.oregonstate.edu/fair-exhibit-and-con-test-materials>. **Intermediates and seniors must include a schematic diagram.** The exhibit may be a poster or a three-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 and 36" high.**

Classes will be divided into the following groups:

862 100 001 Electricity, Junior

862 100 002 Electricity, Intermediate

862 100 003 Electricity, Senior

Mechanical Science

You may enter ATV, automotive, bicycles, handyman, small engines, snowmobile, etc., projects in the Educational Display classes found in the Communications section of the fair book.

WOOD WORKING PROJECT

In each class, the exhibit shall be one article or pair of articles made of wood by the 4-H member. Completed "Woodworking Explanation Card" 871-02 is required to qualify the exhibit for judging. Judging criteria are outlined on 4-H Woodworking Exhibit Score Card (40-635), available at the county Extension office or on the State 4-H website at: <http://oregon.4h.oregonstate.edu/fair-exhibit-and-con-test-materials>

871 100 001 Woodworking, Junior

871 100 002 Woodworking, Intermediate

871 100 003 Woodworking, Senior

TRACTOR PROJECT

In each class the exhibit shall be an educational exhibit which will show or illustrate what the member has learned. Include an explanation telling: (a) how the exhibit was made or what was done in the project; (b) operating instructions (if appropriate); and (c) what the member learned by the doing the project.

Explanations are required to qualify the exhibit for judging.

881 100 001 Junior

881 100 002 Intermediate

881 100 003 Senior

Communications

The 4-H member must be enrolled in the project in order to exhibit in that project, except computers, videography, educational displays and conservation which are open to all 4-H members

Videography

Videography classes are open to all 4-H members and/or teams in all project areas. Members may enter **one exhibit per class.**

Suitable topics include project and non-project related subject matter. All portions of the video and sound

must support the 4-H code of behavior. Audio or video parts not actually recorded by the member(s) must be from the public domain or not infringe on copyright. Public display of the video will be at the discretion of 4-H management. All audio or video parts not recorded by member must be given credit at the end of the movie. (Time for the credit roll does not count in the movie minutes)

Videos must be between 30 seconds and 10 minutes in length, not including the entry information at the beginning.

All exhibits must be accompanied by a Videography Exhibit Explanation Card (213-03). Judging criteria are outlined on the Videography Score Sheet (213-01). Both are available from the county Extension Office or state 4-H website at: <http://oregon.4h.oregonstate.edu/fair-bookcommunications>

To be eligible for judging, videos must be presented in a format viewable on any computer or uploaded to the website. Options and instructions are available from the county Extension office or the state 4-H website at: <http://oregon.4h.oregonstate.edu/communications-projects>

Fill in blank in class number () with corresponding number for Junior, Intermediate, Senior, or Club/Team

1 Junior

2 Intermediate

3 Senior

4 Club/Team

213 100 00 - Promotional (advertisements, public service announcements, other promotional pieces)

213 200 00 - Documentary (oral history, travel log and other documentary pieces)

213 300 00 - Educational (would include;how to; or informational pieces)

213 400 00 - Performance (emphasize capturing a performance; not the quality of the performance itself)

213 500 00 - Animation

FAMILY AND CONSUMER SCIENCE PROJECTS

All projects checked in Monday, Aug. 8 beginning at 2 p.m.

Designing Spaces

Members are encouraged to enter Educational Displays under the Communications division, enter Science experiments under the Science division (i.e. compare energy use with different types of lighting, water efficient products, use of landscape to heat or cool homes), and enter career exploration, hands for larger services, community outreach projects using designing spaces skills under the *Citizenship and Leadership division*. Members may enter up to **three** classes, one exhibit per class.

In the Designing Spaces project, items produced by the 4-H member are developed within the context of the over all design/plan of a specific location. The classes align with the four elements of designing a space, designing a room, furnishing a room, finishing a room, and creating a healthy room environment. Judging criteria are outlined on the appropriate evaluation form: *Furnishing & Finishing Designing Spaces (340-01)* and *Designing and Making Healthy*