

## **COMPUTER**

**Note: Identify a problem to solve or a project to work 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. Robotic projects are appropriate only if the software or the hardware is developed by the 4-H member. These classes are open to all 4-H members without being enrolled in computer project.**

To qualify for judging each exhibit must have a *4-H Project Description* securely attached.

Forms are available at county Extension offices and on the State 4-H website at:  
<http://oregon.4h.oregonstate.edu/resources/materials.html>

Project Description Sheets and Judging Evaluations can be found at:

*Computer Software Application Project Description*  
*Computer Software Application Evaluation*  
*Computer Programming Project Description*  
*Computer Programming Evaluation*  
*Computer Hardware Project Description*  
*Computer Hardware Evaluation*  
*4-H Lego Project Description*  
*4-H Lego Evaluation*  
*Robotics Project Description*  
*Robotics Evaluation*  
*GIS Map Project Description*  
*GIS Map Evaluation Criteria (861-06),*  
*GIS Map Evaluation Score Card (861-05)*  
*Geography Project Description*  
*Geography Evaluation*  
*Aerospace/Aeronautics Project Description*  
*Aerospace/Aeronautics Evaluation*  
*Rocketry Project Description*  
*Rocketry Evaluation*

Available at the county Extension office or on above website.

**861 100 1\_\_ Software Application, Word Processing**  
**861 101 1\_\_ Software Application, Excel/Spreadsheet**  
**861 102 1\_\_ Software Application, Presentation Software**  
**861 103 1\_\_ Software Application, Graphic Design/Digital Imaging**  
**861 104 1\_\_ Software Application, Database Management**  
**861 105 1\_\_ Software Application, Multimedia Projects**  
**861 100 2\_\_ Programming**  
**861 100 3\_\_ Hardware Design**  
**861 100 4\_\_ Lego robotics, Robot Construction**  
**861 101 4\_\_ Lego robotics, Programming task**  
**861 102 4\_\_ Lego robotics Displays**  
**861 XXX X\_\_ Robotics –**  
**861 100 5\_\_ GPS/GIS, Projects**  
**861 101 5\_\_ GPS/GIS, Maps**  
**861 XXX X\_\_ Geography –**  
**861 XXX X\_\_ Aerospace/Aeronautics–**  
**861 XXX X\_\_ Rocketry –**

**You may include disks or CDs as part of your exhibit. If you do, all files must be:**  
**-Compatible with a PC**

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 cd format.

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 with all exhibits.

**Note: Fill in blank in class number (\_\_) with one of the following numbers.**

11 **Junior**, First year in this project area

21 **Other Junior**

12 **Intermediate**, First year in this project area

22 **Other Intermediate**

13 **Senior**, First year in this project area

23 **Other Senior**

34 **Club Exhibit**

861 100 1\_\_ **Software Application, Word Processing**

861 101 1\_\_ **Software Application, Excel/Spreadsheet**

861 102 1\_\_ **Software Application, Presentation Software**

861 103 1\_\_ **Software Application, Graphic Design/Digital Imaging**

861 104 1\_\_ **Software Application, Database Management**

861 105 1\_\_ **Software Application, Multimedia Projects**

861 100 2\_\_ **Programming**

861 100 3\_\_ **Hardware Design**

861 100 4\_\_ **Lego robotics, Robot Construction**

861 101 4\_\_ **Lego robotics, Programming task**

861 102 4\_\_ **Lego robotics Displays**

861 XXX X\_\_ **Robotics –**

861 100 5\_\_ **GPS/GIS, Projects**

861 101 5\_\_ **GPS/GIS, Maps**

861 XXX X\_\_ **Geography –**

861 XXX X\_\_ **Aerospace/Aeronautics–**

861 XXX X\_\_ **Rocketry –**

861 XXX X\_\_ **Science Fair –**

861 XXX X\_\_ **Challenges –**

**861 100 1\_\_ 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. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Software Application Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

**861 101 1\_\_ 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. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Software Application Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 102 1\_\_ Software Application, Presentation Software**

Description: Projects created by youth that show learning in the area of presentation software. Software can be any current presentation software including online versions like Google applications or voicethread.com. Project should be an original creation by the participant that shows 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.) Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Software Application Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 103 1\_\_ 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 an original creation by the participant that shows their graphic design or digital imaging skills. Youth are responsible for submitting clear directions on how judges can access the or program . Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Software Application Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 104 1\_\_ 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. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Software Application Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

### **861 105 1\_\_ Software Application, Multimedia Projects**

Description: Projects created by youth that show learning in the area of Multimedia Projects. Software can be any current software including online versions. Project should be an original creation by the participant that shows their multimedia skills. In general, multimedia includes a combination of text, audio, still images, animation, video, or animation. Multimedia combines multiple content forms. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at <http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Software Application Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

### **861 100 2\_\_ Programming**

Description: Projects created by youth that show learning in the area of programming. Project should be an original creation by the participant that shows their programming skills. Hard copy of program must be submitted, and it is up to the youth to ensure the program will function or display at Fair. 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. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at <http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Programming Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

### **861 100 3\_\_ Hardware Design**

Description: Projects created by youth that show learning in the area of hardware. Project should be an original creation by the participant that shows their computer hardware skills. It is up to the youth to ensure the hardware and project will function or display at Fair. 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. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at <http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Computer Hardware Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 100 4\_ \_ Lego Robotic Construction:**

Description: Judging of Lego Robot. Robot and full description of what it is meant to accomplish must be submitted. Robots will be judged on structural stability, creativity, functionality. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at <http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Lego Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 101 4\_ \_ Lego Robotic Programming Tasks:**

Description: Judging of stated programming task for a robot. Print version of the program must be submitted. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at <http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Lego Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 102 4\_ \_ Lego Display –**

Description: An original creation built out of Legos. Does not need to be robotic. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at <http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Lego Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 XXX X\_ \_ Robotics –**

Description: Project should involve youth created robots. They can be created from kits or from miscellaneous parts. All robots will be returned after fair. More wait is given for youth designed projects. Robot and full description of what it is meant to accomplish must be submitted. 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 robot function. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at <http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Robotic Evaluation available at <http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 100 5\_ \_ GPS/GIS, Projects**

Description: GPS or GIS Projects. Projects consist of a detailed goal, and multiple applications of either GPS or GIS skills. A conclusion is reached, a problem was

evaluated or studied, a solution was found (or the problem was better defined) Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Map Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 101 5\_ \_ GPS/GIS, Maps**

Description: A map is a single product of the data gathering, manipulation and presentation skills. Maps can be computer generated or hand drawn.

Multiple maps should be entered under GPS/GIS Projects. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Map Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 XXX X\_ \_ Geography –**

Description: Projects involving youth learning and displaying knowledge about geography. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Geography Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Online Ideas: <http://www.myWonderfulWorld.org>

#### **861 XXX X\_ \_ Aerospace/Aeronautics–**

Description: Projects involving youth learning and displaying knowledge about Aerospace or Aeronautics. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Aerospace/Aeronautics Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

#### **861 XXX X\_ \_ Rocketry –**

Description: Projects involving youth learning and displaying knowledge about Rocketry. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Rocket launch may be available at Oregon State Fair.

If launch is not available, projects will be based on rockets and write ups regarding a group launch.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Evaluation: Use Rocketry Evaluation available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

### **861 XXX X\_\_ Science Fair –**

Description: “The Best of Oregon” Science and Technology Competition

Who: Elementary grade students (4<sup>th</sup>, 5<sup>th</sup> or 6<sup>th</sup> grade level)

What: New Science & Technology Competition

When: During participating county fairs and at Oregon State Fair 08/22/08 – 09/01/08

Where: Various statewide county fairgrounds and at Oregon State Fairgrounds

Why: To foster Science & Technology education and innovation

### **Summary:**

A new statewide Science and Technology competition will begin in 2008 with elementary school students. The competition will grow to include other academia levels and entrepreneurial endeavors in subsequent years.

Project Ideas: May be available under SET Project Ideas at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

Full Details: Use Science Fair Information available at

<http://oregon.4h.oregonstate.edu/resources/materials.html>

### **861 XXX X\_\_ Challenges –**

Challenge 1: Sumo Bot

Cost \$10

Work in a group of four youth to build the bot that lasts the longest in the ring.

{DATE/TIME}

Challenge 2: The Fastest Bot

Cost \$10

Work in a group of four youth to build the bot that lasts the longest in the ring.

{DATE/TIME}

Challenge 3: Catapult/Trebuchet

Bring your own Catapult/Trebuchet to the fair on (THIS DATE) to participate in the Catapult Challenge. Catapult/Trebuchet must be made entirely of Lego pieces. Rubber bands or cotton thread are also acceptable. Catapults will be launching large marshmallows. Marshmallows that fly the furthest will receive a ribbon.

