**MINNESOTA 4-H PROJECT EVALUATION**  
**ROBOTICS**

4-Her Name: ____________________________________________  Grade: ___________

County or Club: ___________________  Years in 4-H: ________  Years in Project: ______

- Purple
- Blue
- Red
- White
- Other

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<th>Comments:</th>
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<td>Strengths/accomplishments</td>
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### Learning Involved:
- Can explain how robots can be used in work, school or home life.
- Can talk about similarities and differences involving robots and/or software.
- Shows skill development in programming use.
- Knows pieces of the robot.
- Has developed programming skills.

### Workmanship & Techniques of Project:
- Product-information presented is accurate and correct, terms are correctly defined, component or other levels are correct, etc.
- Idea – exhibit communicates, in a clear, concise way, the concept or skill learned.
- Resources used in learning are identifiable, (e.g., 4-H Robotics Curriculum, books, Internet, Lego’s mentor, self-directed learning, etc.).

### General Appearance and Design:
- The exhibit is constructed in an appropriate way (i.e., strong enough to support components that may be attached to the exhibit.)
- Complex terms are defined.
- Lettering used is of appropriate size (if a poster or display, main title or concepts are large enough to read from a reasonable distance.)
- Notebooks have title, relevant graphics, etc. on cover.
### Rules
- All parts of the exhibit are labeled with the exhibitor’s name, county, and state.

### Guidelines
- Exhibit may include models, robot, diagrams, printouts or documentation created, notebooks, posters etc.
- In the case of programs, the exhibit may be demonstrated using a computer: however some sort of notebook, printout, or display that can be left behind for the public to view should be a part of the exhibit.
- The size of three dimensional displays and posters should be consistent with the size recommended by Minnesota 4-H.
- Projects are not limited to three-dimensional displays or posters—there may be actual computers and robots. Creativity is encouraged!
- Resources should be credited and documented in the exhibit (e.g., books, internet, 4-H or Extension publications, person with special knowledge, magazine articles, etc.)

### Project Ideas
- Labeled chart, graph, poster or three-dimensional display showing the components of a robot and how it works. May also include a simple or complex written summary.
- Display and/or written summary about one of the following: history of robots, changes in society resulting from the invention and use of robots, etc.
- A robotic program written by the member – could include a statement of purpose for the use etc.
- Demonstrate skills gained in the use of a specific program.
- A display showing how exhibitor uses the robot and programming to make it go.
- Report on robotic careers – include positions available, skills needed, course work needed to obtain skills and programs offered at universities and other institutions which relate to the career.
- Display and/or written summary including an outline or lesson plan for teaching others about Lego Robotics as a teaching tool for another topic.

Resources Available:
Searching the Internet (beware of credibility and accuracy of websites found)

**Web site for Minnesota 4-H resources:**
www.mn4-H.umn.edu/projects
http://z.umn.edu/mn4hrobotics

**Web site for National 4-H resources:**
http://www.4-hdirectory.org/ (Click Browse)
- Exploring 4-H Robotics 1: Robotics EXPLORER
- Exploring 4-H Robotics 2: Robotics PROBE
- Exploring 4-H Robotics Helper’s Guide: Robotics COACH
- Exploring 4-H Robotics: Robotics and You CD

http://www.4-hmall.org/Curriculum.aspx