ROBOTICS - Members 14 years of age and older may apply for a Mechanical and Engineering Science Achievement Record Award.

Project # and Name	*Skill Level, Age Time Commitment*	*Project Requirements for Completion, Project Judging and Fair*	*4-H Competitive and Educational Opportunities*
509 Robotics Essential **512M Robotics Master** Go to **ohio4h.org/robotics** for more details on purchasing kits to get started.	Intermediate skill level for youth age 11 and older Advanced skill level for youth ages 12 and older 1 to 3 months Project Work Time.	♦ Complete all activities and talk it over questions and all tasks as outlined in the project guidelines' section. Engineer a Robot to accomplish a task. **Miscellaneous Project Judging Requirements:** ♦ **Project Book:** Bring your completed project book. ♦ **Project Item(s):** Bring your engineered robot. ♦ **Project Interview:** Answer questions about your project experience including general 4-H knowledge, project book knowledge and activities, and project item. ♦ **Robot Skill:** Demonstrate your robot's ability to complete tasks on your own test surface. ♦ **State Fair Selection:** One member may be selected to participate from each project. No member may be selected in more than one **ATV safety, bicycles,** rockets, robotics, science fun, young engineers, **microscope mysteries**, not just knots, small engines, ready set mow, **paper circuits**, **smart circuits**, or self-det. STEM projects. **County Fair Exhibit Requirements:** ♦ **Fair Exhibit:** Bring your engineered robot to display in club booth.	**County Events** ***4-H Miscellaneous Judging*** Tue., July 14, 3 PM-7 PM, Fgrds, Annex **Clark Co. Fair - Youth Bldg.** ***4-H Project Exhibit*** Club Booth in Youth Bldg. **Thurs., July 23, 3 PM-9 PM** **Fri., July 24, 9 AM - Noon** ***4-H Winner's Revue*** Tue., July 28, 7 PM, Entertainment Tent **Ohio State Fair** ***4-H STEM Project Judging Day*** Sat., Aug.1, Lausche Youth Exploration Space

ROPE - Members 14 years of age and older may apply for a Mechanical and Engineering Science Achievement Record Award.

Project # and Name	*Skill Level, Age Time Commitment*	*Project Requirements for Completion, Project Judging and Fair*	*4-H Competitive and Educational Opportunities*
540 Not Just Knots (Rope) **Repeating Project:** One time only project.	Age 8 to 18 Younger members may take under the supervision of an adult. Minimum of 1 month Project Work Time.	♦ Complete all 17 activities and the talking it over questions and all tasks as outlined in the project guidelines' section. **Miscellaneous Project Judging Requirements:** ♦ **Project Book:** Bring your completed book to judging. ♦ **Project Exhibit:** Create and bring a rope display that illustrates types of ropes, knots, and/or other project skills. Display must be less than 48" wide, 24" deep and 36" tall. ♦ **Project Interview:** Answer questions about your project experience including general 4-H knowledge, project book knowledge and activities, and project exhibit. Be prepared to demonstrate how to tie different knots. ♦ **State Fair Selection:** One member may be selected to participate from each project. No member may be selected in more than one **ATV safety, bicycles,** rockets, robotics, science fun, young engineers, **microscope mysteries**, not just knots, small engines, ready set mow, **paper circuits**, **smart circuits**, or self-det. STEM projects. **County Fair Exhibit Requirements:** ♦ **Fair Exhibit:** Bring your project exhibit to display in club booth.	**County Events** ***4-H Miscellaneous Judging*** Tue., July 14, 3 PM-7 PM, Fgrds., Annex **Clark Co. Fair - Youth Bldg.** ***4-H Project Exhibit*** Club Booth in Youth Bldg. **Thurs., July 23, 3 PM-9 PM** **Fri., July 24, 9 AM - Noon** ***4-H Winner's Revue*** Tue., July 28, 7 PM, Entertainment Tent **Ohio State Fair** ***4-H STEM Project Judging Day*** Sat., Aug. 1, Lausche Youth Exploration Space