



ROBOTICS CONTEST

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AG ROBOTICS MISSION CHALLENGE

The AgRobotics contest is a robotics competition where teams design, build, and program a Lego robot to complete challenges autonomously and score points in a timed match. The theme and challenges change each year, but all are focused on some aspect of agriculture. This is a challenge based contest. Some known challenges will be released prior to the contest, and the remaining on contest day. Teams build and program their robot for known challenges prior to the contest. On contest day, the remaining unknown challenges will be revealed and teams will be given time to build and program the robot to account for the newly revealed challenges.

Each team will decide on their challenge strategy and will launch their robot from a designated home base. The robot will be programmed to move outside of that base and attempt to complete challenges within the given timeframe.

MINI-SUMO ROBOT:

The sumo format will test teams' strategy, engineering design, and programming skills. Teams will bring a fully assembled and programmed robot to compete against others in the tournament until a winner is declared. Two robots will "wrestle" in a dohyō (sumo ring) designed for robots. As with human Sumo wrestling, the goal of sumo-style robotics is to gain leverage over an opponent and force it out of the ring. Please note, this is NOT a "battle bots" style competition. In other words, intentionally destructive robots are not allowed.

Please note: Teams must bring their own robot kit (preferably the Lego Mindstorms NXT, EV3 or SPIKE) and any additional Lego pieces necessary for their contests. It is also required that teams bring their own laptops/software. Please see game rules for specific equipment requirements

REQUIREMENTS:

The contests are open to any 4-H member currently enrolled in the Robotics project. Teams may enter one or all of the contests. Teams may consist of 1-4 members. **(In 2027, teams will need at least 2 members to compete.)** Team names and designations are due to contest officials ONE WEEK prior to the contest.

AGE GROUPS:

Junior (8-13)
Senior (14 & up)



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JUDGING

All of the contests are ranked based on the criteria in the rules and score sheets. Members are judged on their application of technological principles and concepts and their ability to solve difficult problems. During the judging for each contest, only the contest facilitator and judges/officials are permitted in the designated contest area. Leaders, other members, parents and additional competition attendees are prohibited from entering the designated area of the contest while judging is occurring. For all contests and special awards, the decisions of the judge(s) are final and binding.

AWARDS:

The following awards will be given in both the Junior and Senior age divisions:

- **Agrobotics**
 - 1st Place - Belt Buckles
 - 2nd Place - Jackets
 - 3rd Place - Vests

- **Sumo**
 - 1st Place - Belt Buckles
 - 2nd Place - Jackets
 - 3rd Place - Vests