Missouri 4-H Robot Exhibition

The Missouri 4-H Robot Exhibition is a great way for students to show off their imagination, innovation and creativity. Each team has complete freedom to create interactive and intelligent robotics projects such as robots for scientific experiments and robots for practical applications. There is no specific theme for the 2020 competition season. Teams are free to choose their own project theme.

In this event, youth are encouraged to be creative and present a unique robot exhibit or challenge for display. The robots must include an autonomous aspect and projects which interact with humans are encouraged. Use of a remote control for part of the demonstration is allowed, as long as the youth includes some programming of the controller beyond the basic tank or arcade driver controls and as long as they are able to explain their programming to the judges. Each robot exhibit will be judged for creativity and technical content. Youth who are brand new to robotics, as well as experienced youth, are welcome to show off their robot and field designs.

Youth are strongly encouraged to include the use of sensors in their robot exhibitions.

This event is open to all age divisions.

- Project Requirements/Limitations
    - Any material that is safe for humans can be used.
    - Robot-to-robot as well as human-to-robot interactions are encouraged.
    - Even though hard-wired remotes are not allowed, (wireless) program controlled remotes are allowed. For example, a human controlled EV3 or VEX IQ controller can control robots if the program of the remote controller is written by students.
    - Youth are strongly encouraged to include the use of sensors in their robot exhibitions.
    - On the day of the competition, each Exhibition team will be provided with a 6 ft. or 8 ft. long table on which to display/demonstrate the robots. Teams may choose to demonstrate robots on the floor. However, the exhibition space for each team is limited to a maximum of 64 square feet including the table.
    - Teams must bring all the necessary materials for their exhibition. For example, if the demonstration needs background music, the team must bring the music file. The sound system in the hosting site may not be available for individual use. Therefore, it is highly recommended that teams contact the site host in advance and/or bring a music player and portable speakers.

- Project Recommendations

    - It is requested that teams bring poster boards or other signage to describe their projects
    - Hard copies of team project documents to give to the judges are a plus, but not required

- Project Presentation

- Teams will have their project on display throughout the day. Judges will visit the team in the pit area at which time teams will present their project to the judges. There will also be a scheduled time for 4-H youth and families to tour the Exhibition area and listen to team presentations.
- Teams will have a maximum of 6 minutes to explain and demonstrate their robotics.
  - Teams are responsible for keeping track of their 6-minute time limit. **(Exceeding time limit may result in deduction of points)**
  - During the official 6-minute presentation, teams may not ask official Judges to be a part of their demonstrations.

- Judging
  - In addition to the formal presentation, Judges will ask additional questions, evaluate robots, and inspect program code at any time within the Official Judging time blocks
  - Age-appropriate math and science applications will be judged.
    - Advanced level skills are fine to use, however, they may not necessarily result in the highest scores in the STEM learning category on the rubric.