

YOUTH ROBOTICS CHALLENGE

Natalie Cervantes – Superintendent

ENTRY DEADLINE – DECEMBER 15, 2023

ENTRY FEE - \$50 per team

SCHEDULE:

Registration	Tuesday, March 19, 8:00 – 9:00 a.m.
Orientation.....	Tuesday, March 19, 9:00 – 9:30 a.m.
Build Time (includes 10-minute Coach Time).....	Tuesday, March 19, 9:30 – 11:00 a.m.
Robot Challenge Pre-Lims	Tuesday, March 19, 11:00 a.m.
Robot Challenge Finals	Tuesday, March 19, Following Pre-Lims
Awards Ceremony.....	Tuesday, March 19, Following Finals

CONTEST DESCRIPTION: This is a challenge-based robotics contest. Some known challenges will be released prior to the contest, and the remaining challenges will be revealed on contest day. Teams build and program their robot for known challenges prior to the contest. Teams will be given time to build and program the robot to account for the newly revealed challenges.

The **AgRobotics Rules & Known challenges** will be posted at this link (under contest section): <https://texas4-h.tamu.edu/projects/robotics/>.

SPECIAL RULES:

- 1. Eligibility:** Participation is open to Texas 4-H and FFA members, and Texas students currently enrolled in an accredited Texas school or homeschool (with proof of enrollment). Three (3) to six (6) students may constitute a team in this contest. Students are not allowed to compete on more than one team. Students will not be allowed to compete on both a 4-H and/or FFA team and a school team. All students must be from the same school, or club/chapter.

Junior Division: Participants must be at least eight (8) years old and in the third grade, but no more than eight grade.

Senior Division: Participants must be in at least the ninth grade, but not older than nineteen (19) years old and in the twelfth grade.

- 2. Entry:** Application must be made through the online entry procedures located on the internet at www.RodeoAustin.com on or before December 15. An entry of \$50.00 per team will be charged for this event. Payment with entry authorization signatures must be submitted to: **Rodeo Austin Attn: Competitive Events, 9100 Decker Lake Rd., Austin, TX 78724**. Payment with entry authorization signature must be postmarked December 15, for all Robotics entries made payable to Rodeo Austin. Show Management reserves the right to reject entirely or accept conditionally any entry.
- 3. Passes:** Passes will be mailed to the coach prior to Show. Each team will receive one (1) parking pass and Show Grounds passes if entered online by the deadline.
- 4. Contest Format/Rules of Play:** The challenge rules for this year’s AgRobotics game have been posted and can be found on the state robotics page here in the contest section: <https://texas4-h.tamu.edu/projects/robotics/>
 - [AgRobotics Game Mat](#)
 - [Game Piece Supply List](#)
- 5. Minimum Construction Skills and Proficiency:** Competitors must be capable of designing and building a functioning Lego Mindstorm/Spike Prime robot that includes the use of:
 - Motors
 - Light/color sensor
 - Touch sensor
 - Ultrasonic sensor
 - Levers, arms, claws, etc.

6. **Minimum Programming Skills and Proficiency:** Competitors must be capable of programming a Lego Mindstorm/Spike Prime robot to accomplish the following:
- a. Move
 - b. Turn
 - c. Lift
 - d. Maneuver attachments effectively
 - e. Use sensors appropriately and effectively
7. **Scoring:** Point values for each separate challenge may vary and should be referenced in the AgRobotics Game Rules. Penalties will also depend upon challenge design, but examples may include: knocking over pieces, restricted human interaction with robot or game pieces, excessive retrievals, etc. Points will be awarded or deducted for each round of match play. Additionally, a teamwork score will be assessed by a panel of judges and added to the match scores to form the preliminary team score. The preliminary team score determines qualifiers for finals. After each match, the team captain will initial the score sheet, indicating agreement to the points awarded. Once signed, the match score is final and cannot be challenged. The contest tabulator will review the score sheet and will correct any mathematical inaccuracies.
8. **Results:** The contest results, as announced, will be final.
9. **Awards:**

Junior Division

Champion Team – \$1,000 Premium, Banner, Rosettes
Reserve Champion Team – \$500 Premium, Banner, Rosettes
3rd – 5th Place Teams – Rosettes

Senior Division

Champion Team – \$1,000 Premium, Banner, Rosettes
Reserve Champion Team – \$500 Premium, Banner, Rosettes
3rd – 5th Place Teams – Rosettes