



2021-2022 TCEA Robotics Inventions Contest Rules



In the Inventions Contest, teams will create and develop a unique robotic invention that will solve a problem. Student teams will need to approach their problem, working together like real team of engineers, to solve a common challenge using the Engineering Design Process. The Engineering Design Process is a particular course of action and sequence of operations intended to achieve a result or produce an outcome. The Engineering Design Process consists of the following steps:

- **Research**
- **Plan**
- **Prototype**
- **Document and Test**
- **Commercialize**

All teams will be responsible for keeping a logbook where they record notes each time the team meets. The logbook should describe each step of the Engineering Design Process during the creation of their robotic invention. Judging criteria will be based on student teams presenting their step-by-step process, as well as documentation in their logbook. Students should use the Inventions Scoring Rubric as a guide for planning their project and presentation and for providing talking points for their presentation to the judges.

Inventions Specific Rules:

- Each team will have a 6 ft. table to conduct their presentation on and will be limited to a 10 ft. by 10 ft. area, which will include the table. Teams are not required to use the table.
- Presentation time is limited to 6 minutes. Teams will be notified as they approach the 5-minute mark as well as the 6-minute mark. Judges are encouraged to hold questions to the end of the presentation, but it is not required.
- Teams final scores are averaged together for their rank at the area level and totaled at the state level.
- In the event of a tie, the log book is the tie breaker.
- Parents, sponsors, and spectators may not be in the Inventions area during a competition.
- Adults may not aid with the construction of the invention or any associated components. This project must be completed solely by students.
- Students must set up their own presentation materials at both Area and State Contests.
- Sponsors/parents may help transport heavy equipment before and after each contest, but they must immediately leave the pit or contest area after delivering the items. No lingering or further assistance from the sponsors/parents will be allowed. If further help is necessary, please communicate your needs to contest personnel.
- The following robotic platforms are accepted for the Inventions category: LEGO SPIKE Prime, Robot Inventor, EV3, NXT, and VEX IQ.
- If any of the above rules are not followed, the final score may not reflect the 20 additional points for the “Compliance of Rules” or may lead to the disqualification of the team.