



# Competition Guidelines

## TSA VEX IQ Challenge (VIQC) National Championship



### THEME

Squared Away

### LEVEL

Middle School



### LOCATION

2020 National TSA Conference  
Nashville, TN

### OVERVIEW

Participants design and build a robot using the engineering design process that will best address the designated VEX game design for the VIQC Challenge. Teams compete in Robot Skills Challenges that showcase programming and robot operation prowess. Robots should be structurally efficient, capable of scoring in both robot and programming modes of operation, and demonstrate real-time scoring ability in tournament matches.

### 2020 GAME DESCRIPTION

Matches are played on a field set up as illustrated in the figures throughout. The Robot Skills Challenge and the Teamwork Challenge use the exact same field and setup. In the Teamwork Challenge, an alliance of two (2) robots, operating under driver control, work together in each match.

In the Robot Skills Challenge, one (1) robot attempts to score as many points as possible. These matches consist of Driving Skills Matches, which will be entirely driver controlled, and Programming Skills Matches, which will be autonomous with limited human interaction. A maximum of three (3) attempts is allowed for each skill.

The object of the game is to attain the highest score by scoring balls in or on cubes, and scoring cubes in corner goals or on platforms.

Entries must be started and completed during the current school year.

### ATTIRE

Competition attire, as described in the [national TSA dress code](#), is required for the duration of the event. Teams will be subject to a 20-point deduction in their final Excellence Award Score for any violation.

### PROCEDURE

- A. **TSA event registration:** TSA state advisors approve and submit eligible VIQC teams for the national TSA VEX Championship event based on advancement guidelines. Additional teams may be waitlisted by TSA state advisors.

- B. **Check-in:** Participants check in their robots at the time and place stated in the TSA conference program.
- C. **Inspection:** Robots are inspected using official VIQC inspection sheets.
- Participants are required to be present for the robot inspection.
  - Robots must pass inspection in order to be eligible for competition.
  - Repairs and adjustments may be made by participants only in order for robots to pass inspection.
  - Inspection must be completed within the designated timeframe and before a team competes in any component of the competition.
  - Re-inspection of a robot may be ordered at any time throughout the competition by a referee to verify that a robot meets inspection requirements.
- D. **Sample Event Agenda** (please note that this is an example only. The final agenda will be available with the release of the official event program):
- **Check-In:** 8:00 - 9:00 AM
  - **Inspection:** 8:00 - 9:15 AM
  - **Team Meeting:** 9:15 - 9:30 AM
  - **Qualifying Rounds:** (6 Matches on a schedule):
    - Skills: (3 Max) 9:30 AM - 1:30 PM
    - Qualifications: 9:30 AM - 12:00 PM
    - Lunch Break: 12:00 - 12:30 PM
  - **Qualifications:** 12:30 - 2:00 PM
  - **Finals:** 2:00 - 3:00 PM;  
Top 20 teams in alliances of 2 they get 1 last match
  - **Awards:** 3:15 PM
- E. In order to participate, driving team members are required to remain at the event for the entire duration. For VIQC, two (2) are required.
- F. Participants may swap drivers as needed; however, at least two drivers must be present. Drivers from other teams may not be substituted. Refer to the regulations regarding the “Driver Controlled Period” in the event manual.

### OFFICIAL VEX GAME MANUAL

Squared Away: [bit.ly/SquaredAwayManual](http://bit.ly/SquaredAwayManual)

### REGISTRATION

[bit.ly/2020TSAVEX](http://bit.ly/2020TSAVEX)

*Fee waived for the 2020 TSA VEX National Championship.*