



JROTC ROBOTICS

PROGRAM OVERVIEW

DIRECTOR OF ARMY INSTRUCTION
CLARKSVILLE-MONTGOMERY COUNTY SCHOOL SYSTEM
CLARKSVILLE, TENNESSEE



MISSION STATEMENT



**THROUGHOUT SY 18-19
CMCSS JROTC AND STEM TEACHERS
PARTNER TO MAXIMIZE VEX RESOURCES
IN ORDER TO
EXPAND CADET & STUDENT EXPOSURE
AND OPPORTUNITIES IN SCIENCE,
TECHNOLOGY, ENGINEERING AND
MATHEMATICS (STEM) FIELDS OF
STUDY.**

See STEM come alive through Robotics Competitions



CADET & STUDENT BENEFITS



- **INCREASES STEM EXPOSURE & INTEREST**
- **BETTER PREPARED AND EQUIPPED FOR TECHNOLOGICALLY COMPETITIVE SOCIETY**
- **ENHANCES JROTC MISSION OF “MAKING BETTER CITIZENS”**
- **MODERNIZES JROTC VISION (RELEVANT)**
- **EXPANDS TEAM BUILDING AND PROBLEM SOLVING ACROSS PROGRAMS THAT TYPICALLY DO NOT INTERACT**



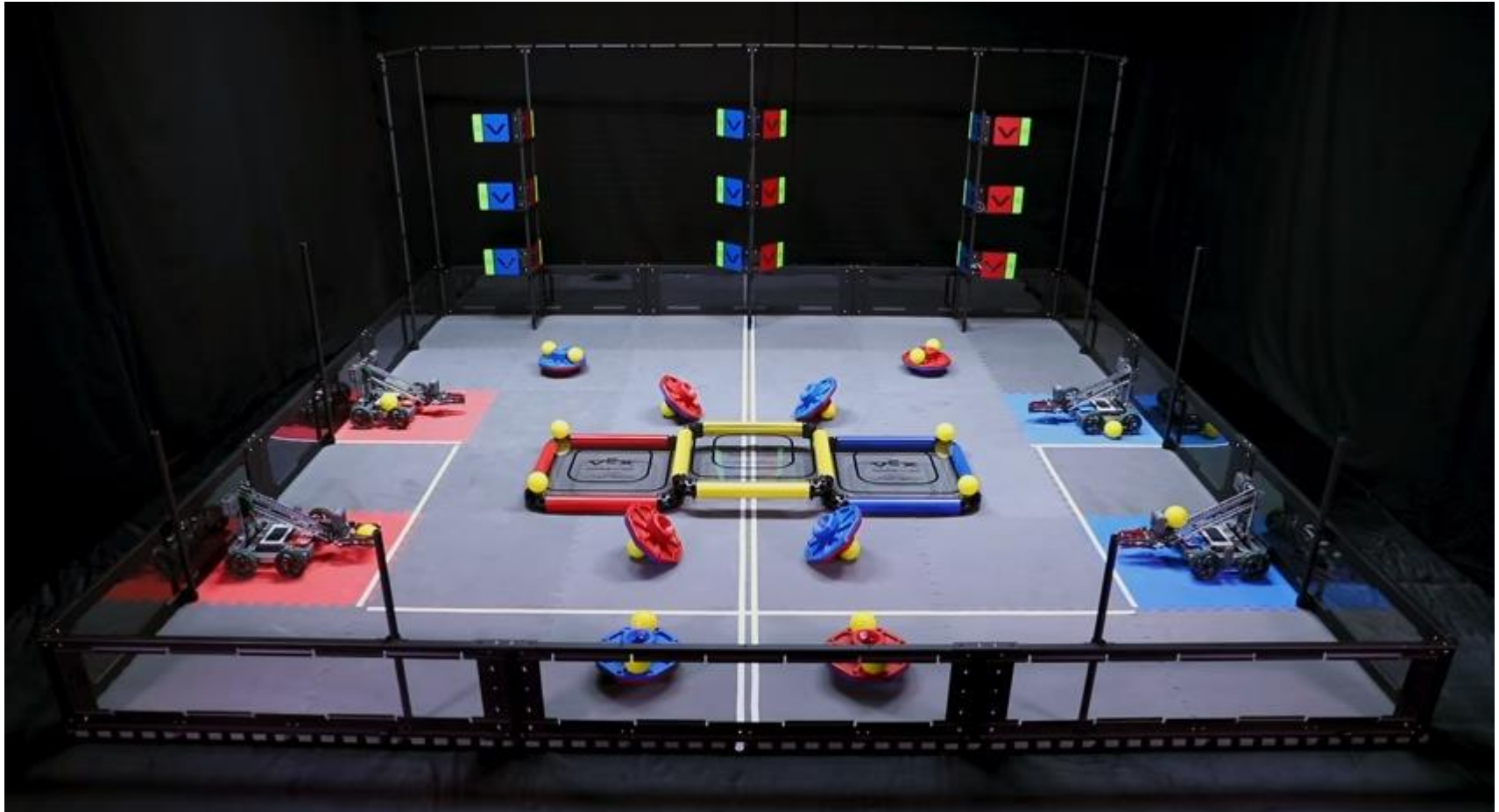
CHALLENGES



- **TIME – BALANCING SCHOOL INTERESTS**
- **CADET RATIOS VERSUS OTHER TEAMS**
- **RESOURCES**
- **SPACE**
- **LANGUAGE**
- **TYPES OF STUDENTS**
- **PARTNER TEACHER WITH EXPERIENCE**



WHAT'S IT LOOK LIKE?



<https://www.youtube.com/watch?v=CDDGBcs0TFM&feature=youtu.be>



WHEN?



- **AFTER SCHOOL**
- **WEEKENDS AS REQUIRED TO PREPARE**
- **LONG DAYS PRIOR TO COMPETITIONS**
- **TYPICALLY 3-4 COMPETITIONS TO**
“QUALIFY” FOR STATE OR NATIONALS



TEAM COMPOSITION



4 - 6 MEMBERS = TEAM

TEAMS CONSIST OF CADETS AND STUDENTS

- **DESIGNERS**
- **BUILDERS**
- **DRIVERS (2 MINIMUM)**
- **PROGRAMMERS**
- **ENGINEER NOTEBOOK MANAGERS**

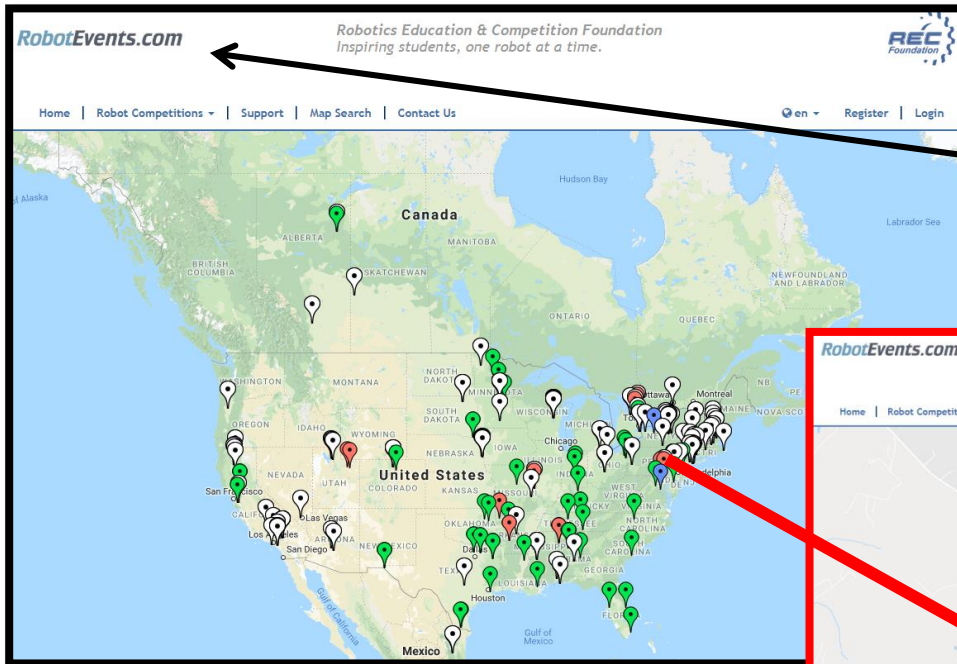


COMPETITIONS

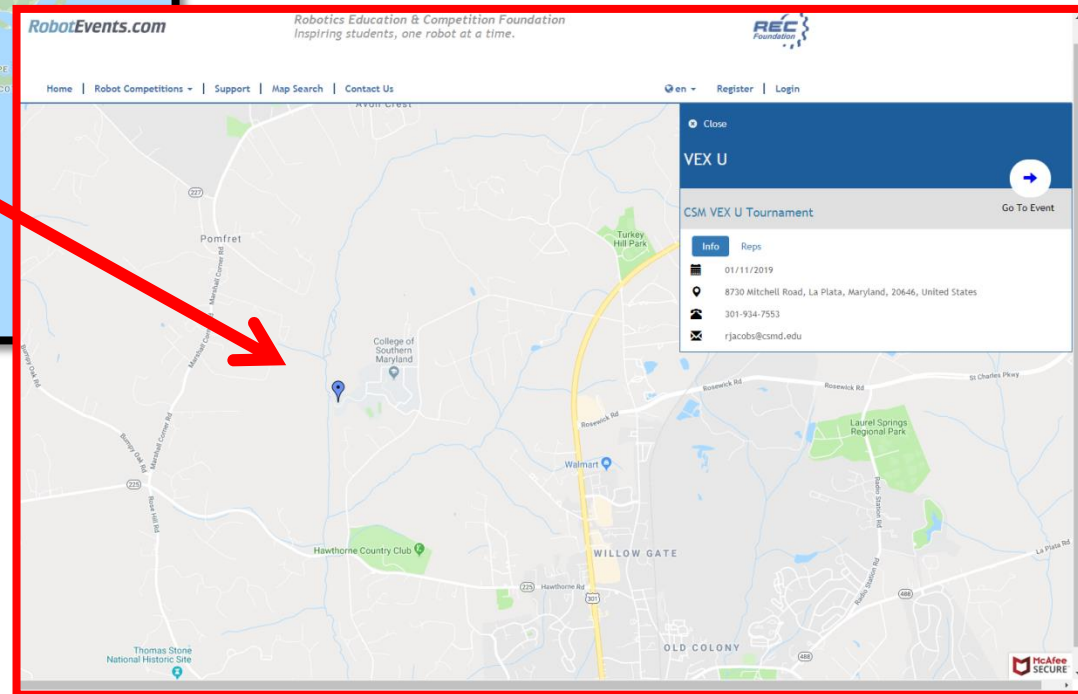
- **REGISTER YOUR VEX TEAM**
- **TEAM CHECK IN, ASSIGNED PREP AREA, TURN IN ENGINEERING DESIGN NOTEBOOKS & ROBOT INSPECTION**
- **DRIVERS' MEETING**
- **INDIVIDUAL DRIVING SKILLS AND TEAM QUALIFICATION MATCHES**
- **AFTERNOON: ALLIANCE SELECTION (BASED ON RANKINGS) AND MATCHES**
- **AWARDS CEREMONY**
- **TYPICALLY COMPETITION IS 8-10 HOURS**



ROBOTICS EDUCATION & COMPETITION FOUNDATION



Locating Competitions





ROBOTICS EDUCATION & COMPETITION FOUNDATION



VEX Robotics Competition

[+ Register a Team](#)[📍 Map of Local Events](#)[🔥 World Skills Standings](#)[? VEX Q&A Forum](#)

For information on hosting a VRC competition, please e-mail event@robotevents.com

Season

All Active

Event Type

All Types

Event Name

Event Name..

From Date

06/12/2018

To Date**Country**

United States

State / Region

-- Please Select --

City**Max Distance From City (miles)**

10

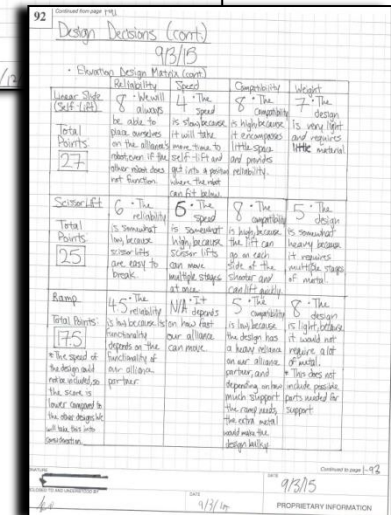
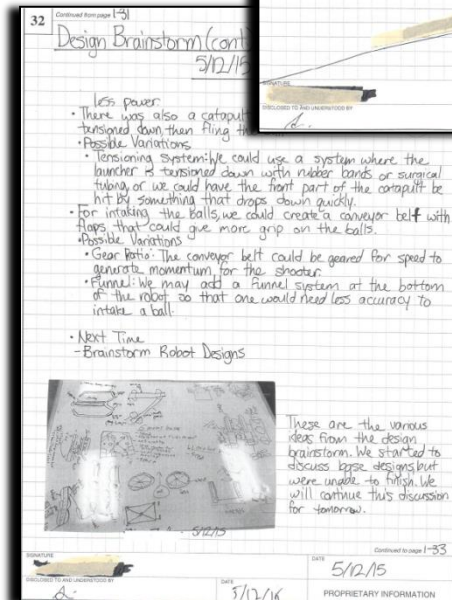
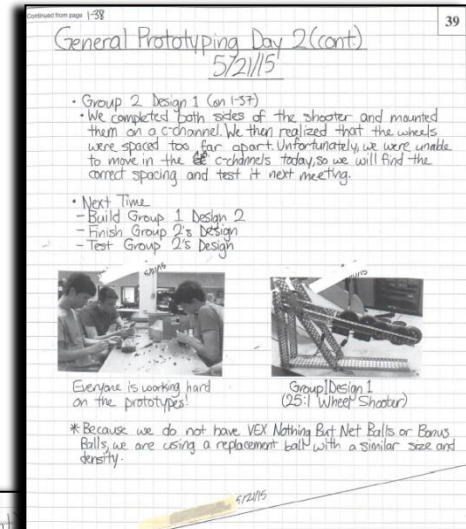
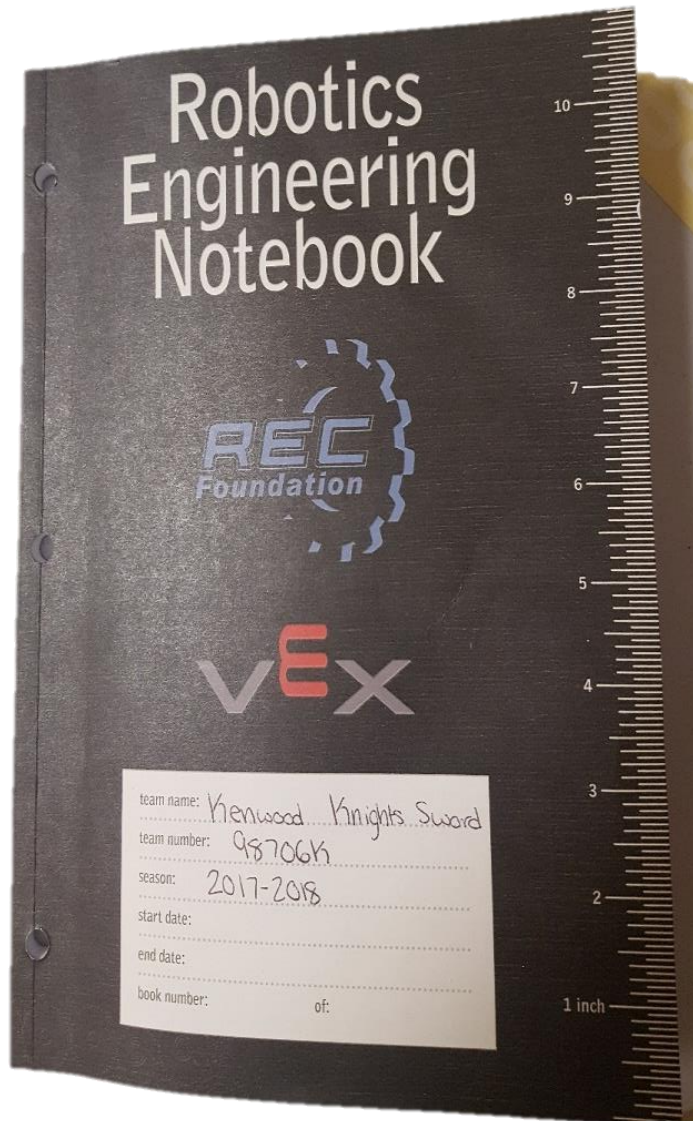
Only Show TSA?☐[Filter](#)[+ Reset](#)Search:

Status	Spots Open	Event Code	Event Date	Location	Type	Name
Open	40	RE-VRC-18-5245	06/30/2018	New Zealand	Scrimmage	Feilding VRC Central Robotics Combined Scrimmage 2
Open	49	RE-VRC-18-5261	06/30/2018	New Zealand	Scrimmage	Auckland VRC Scrimmage #1
Closed	20	RE-VRC-18-4859	07/13/2018 - 07/15/2018	Estes Park CO, United States	Scrimmage	2018 Robotics at Estes Park Comic Con - VEX
Closed	16	RE-VRC-18-5376	07/13/2018 - 07/15/2018	Estes Park CO, United States	Scrimmage	2018 Robotics at Estes Park Comic Con - VEX Scrimmage
Open	50+	RE-VRC-18-5083	07/21/2018	Australia	Tournament	AYRS - Turning Point season opener
Open	50+	RE-VRC-18-5262	07/21/2018	New Zealand	Scrimmage	Auckland VRC Scrimmage #2
Open	50+	RE-VRC-18-5364	07/22/2018	Shanghai Shanghai, China	Tournament	China Qualifier SJTU EDR Divisional Championship No.1
Opens on 07/25/2018	-	RE-VRC-18-5067	07/26/2018 - 07/29/2018	Honolulu HI, United States	Tournament	The International Hawaii Robotics Invitational Hosted by Saint Louis School



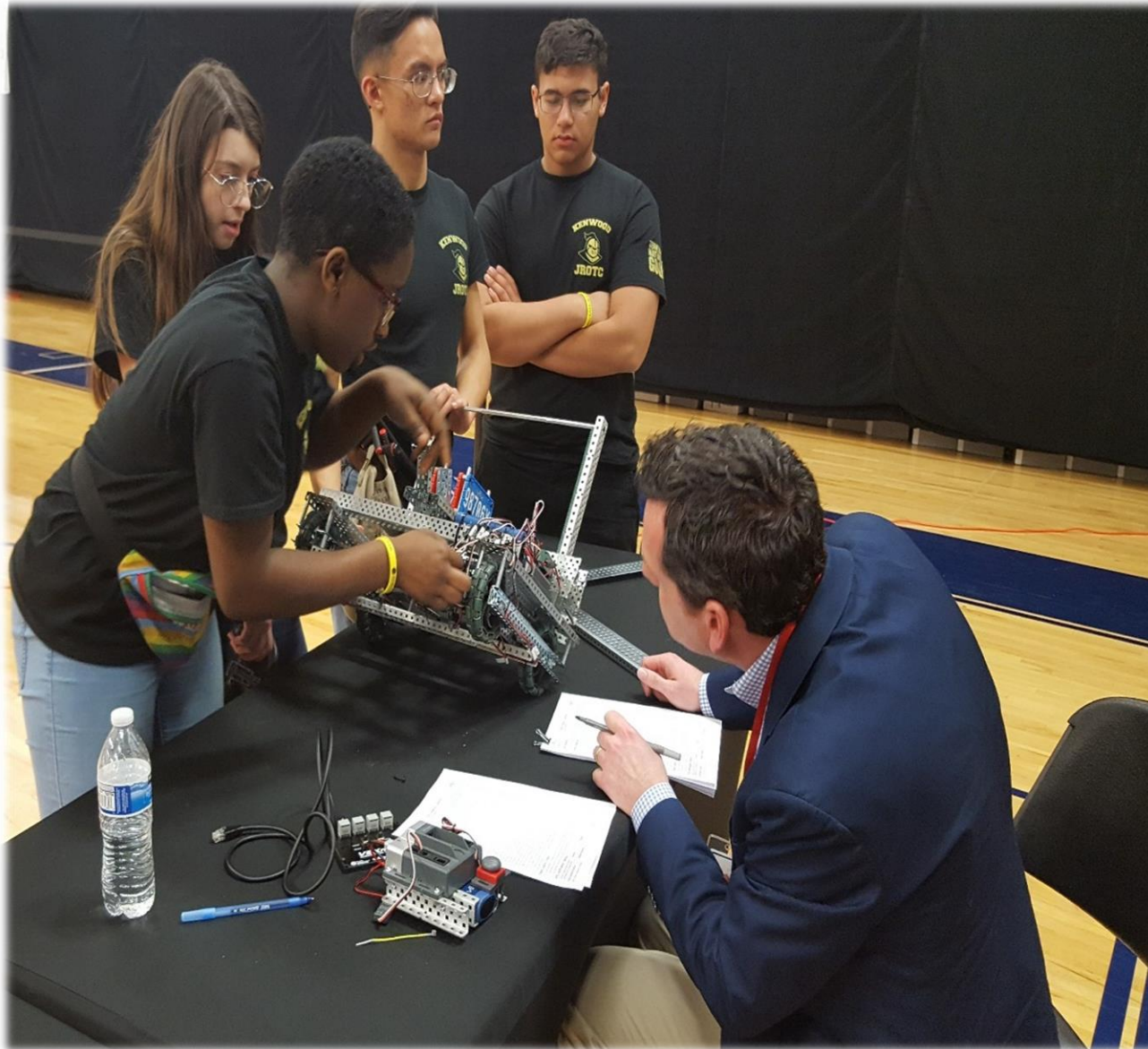


THE DESIGN AND ENGINEERING NOTEBOOK



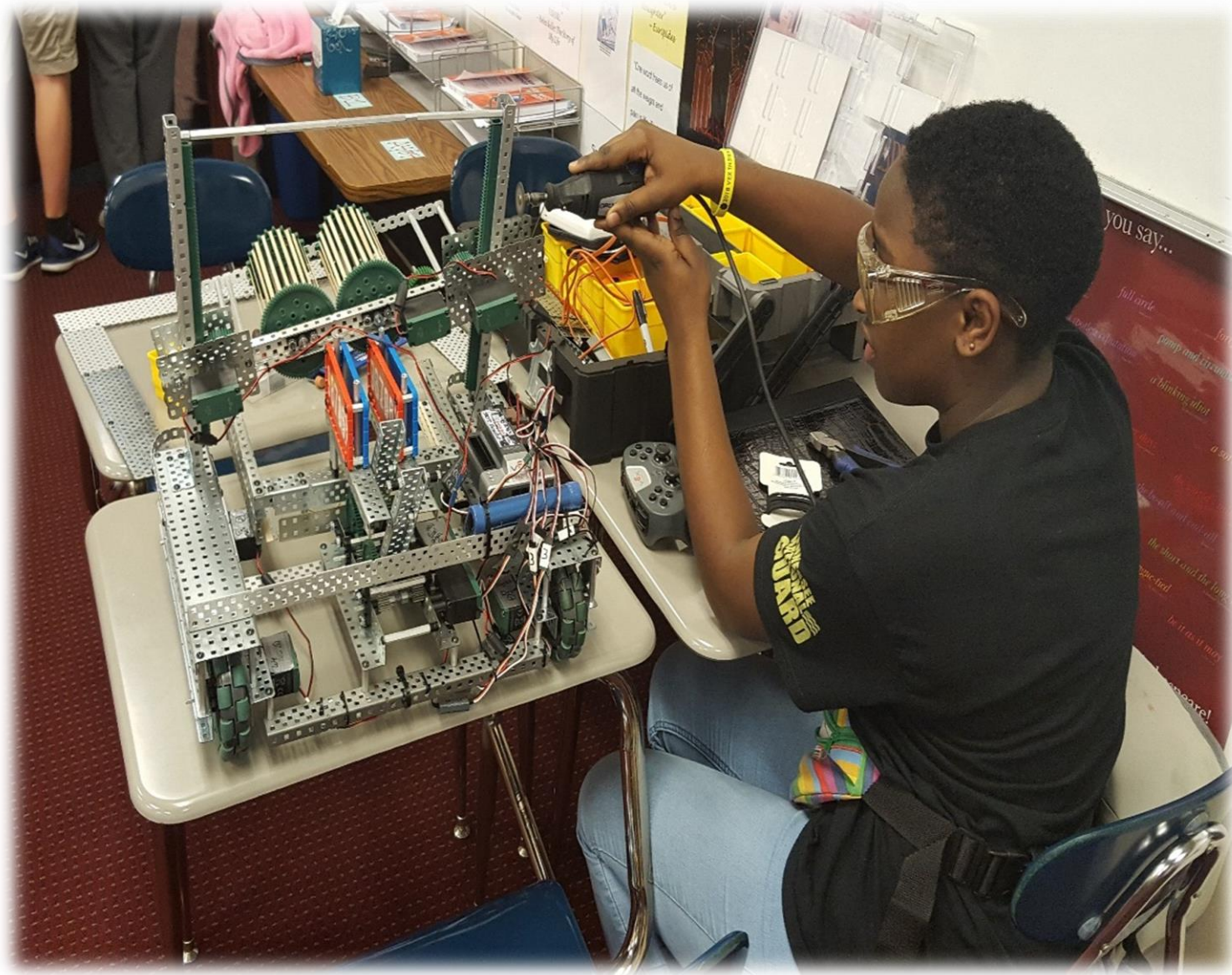


ROBOT INSPECTION





TEAM WORK AREA





TEAM WORK AREA





JUDGES INTERVIEW



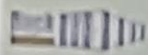


QUALIFICATION MATCH





RANKINGS



Qualification Rankings



Rank	Team	WP	AP	SP	W-L-T
13	3631C Iron Knights	4	0	172	2-1-0
14	98706Z Karnwood Knights Sabre	4	0	116	2-1-0
15	98706D Karnwood Knights Siege	2	20	109	1-2-0
16	37409A The A Team	2	10	164	1-2-0
17	63303B IronBots	2	10	160	1-2-0
18	98706X Karnwood Knights Excalibur	2	10	150	1-2-0
19	5999W Electric Legend Engineering	2	10	116	1-2-0
20	3073S The Swash	2	10	108	1-1-0
21	98706K Karnwood Knights Sword	2	10	104	1-1-0
22	97283A Patriot Force	2	0	163	1-2-0
23	37409D 1-21 Engineering	2	0	148	1-2-0

Match Schedule and Results

Q19	3631C	99905B	51
	99905C	37409A	64
Q20	9364B	5999A	86
	3631D	63303B	44
Q21	9364A	3631Z	81
	98706S	97934U	106
Q22	9364D	97934W	
	3073S	99905A	
Q23	98706K	99905C	Field 2
	9364E	98706X	On Field
Q24	99905B	3631Z	Field 3
	50455A	98706S	10:47 AM
Q25	73973B	3631C	Field 1
	37409D	97934W	10:51 AM
Q26	99905A	5999W	Field 2
	63303B	97283A	10:54 AM



ALLIANCE MATCH RESULTS



Semifinal Match 2-2
Red advances 2-0

VF
ROBOTICS
COMPETITION

Seed	Team	Seed	Team
7	98706S Kenwood Knights Shield Clarksville, Tennessee, United States	6	37377B B Signal Mountain, Tennessee, United States
	37409B Skrub Skwad Chattanooga, Tennessee, United States		73973A White House Gear Heads White House, Tennessee, United States
	59734A Zogg's Minions Chattanooga, Tennessee, United States		73972A White House Gear Heads White House, Tennessee, United States

63 **48**



AWARDS

- **EXCELLENCE (TOP ALL AROUND)**
- **TEAMWORK CHAMPIONSHIP AWARD**
- **DESIGN AWARD**
- **ROBOT SKILLS CHAMPION AWARD**
- **JUDGES AWARD**
- **BUILD AWARD**
- **SPORTSMANSHIP AWARD**

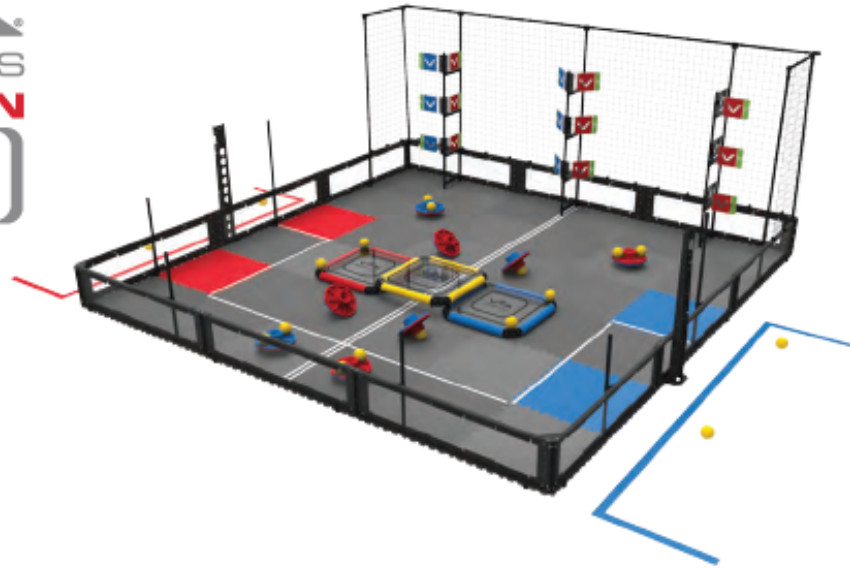
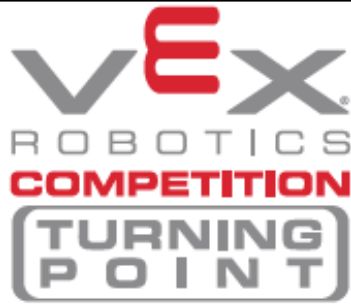


RESOURCES

- **VEX FIELD PERIMETER (12x12) \$800**
- **FIELD TILE KIT \$230**
- **FIELD ELEMENTS \$500 (COMPLETE KIT)**
- **CLAWBOT KIT \$440**
- **ANNUAL TEAM REGISTRATION FEE \$150,
\$100 EACH ADDITIONAL TEAM**
- **COMPETITION FEES \$50-\$75 PER TEAM**
- **TRAVEL COSTS**
- **CLASSROOM SPACE (12x12)**



FOR SY 18-19



The Game:

VEX Robotics Competition Turning Point is played on a 12'x12' square field configured as seen above. Two (2) Alliances – one (1) "red" and one (1) "blue" – composed of two (2) teams each, compete in matches consisting of a fifteen (15) second Autonomous Period followed by one minute and forty-five seconds (1:45) of Driver Controlled Period.

The object of the game is to attain a higher score than the opposing Alliance by **High Scoring** or **Low Scoring Caps**, **Toggling Flags**, and by **Alliance Parking** or **Center Parking** Robots on the **Platforms**.

Toggled High Flag	2 points
Toggled Low Flag	1 point
High Scored Cap	2 points
Low Scored Cap	1 point
Robot that is Alliance Parked	3 points
A Robot that is Center Parked	6 points
Autonomous Bonus	4 points

The Details:

There are eight (8) **Caps**, six (6) **Posts**, nine (9) **Flags**, twenty (20) **Balls**, two (2) **Alliance Platforms**, and one (1) **Center Platform**.

Caps can be **Low Scored on the field tiles**, or **High Scored on Posts**, for the Alliance whose color is facing up at the end of the match. Flags can be **Toggled** to red or blue, and are **Scored for the Alliance whose color is Toggled** at the end of the match. Low Flags can be Toggled by Robots, but High Flags can only be Toggled by Balls. Turning Point is intended to be a back and forth game, no scored object is safe!

Alliance Platforms can be used for **Alliance Parking** by Robots of the same color Alliance as the Platform. The Center Platform can be used by Robots from either Alliance for **Center Parking**. An additional bonus is awarded to the Alliance that has the most total points at the end of the Autonomous Period.



The VEX Robotics Competition, presented by the Robotics Education & Competition Foundation, is the world's largest & fastest-growing middle and high school robotics competition. Each year, an engineering challenge is presented in the form of a game. Students, with guidance from their teachers and mentors, build innovative robots and compete year-round in a variety of matches.



How to get involved

1. Register as a VEX Robotics Competition team at RobotEvents.com
 - \$150 for the first team from a school
 - \$100 for additional teams
 - Registration includes a welcome kit that contains practice game elements and materials to help you get started.
2. Competition information about this year's challenge is available online at RoboticsEducation.org
3. Design & build your competition robot. Robot kits are available at vexedr.com
4. Register for an event and play the game! A full list of events and registration is located at RobotEvents.com



1 MILLION STUDENTS
REACHED WORLDWIDE THROUGH
ALL VEX ROBOTICS PROGRAMS,
CLASSROOMS, AND COMPETITIONS

