

ALPHABET SOUP



Robotics

Student Activities Conferences 2022

David Trussell, Director of STEM Activities



BEFORE WE GET STARTED

Remember to register your attendance and
complete session evaluations.

Session numbers are in your program.



Attendance



Online Handouts



Session Evaluations



Robotics Alphabet Soup

BEST

FIRST

RECF

UIL

VEX

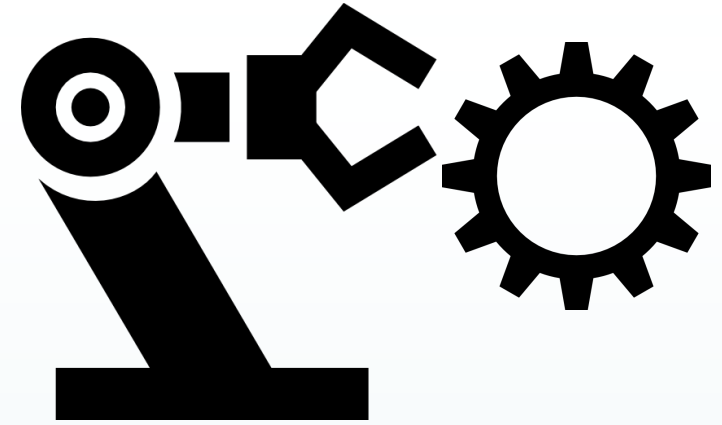
FRC

FTC

You might be thinking...



UIL Robotics Nuts & Bolts



- It's all about options
 - Finding the right fit for your school
- Program structure and participation
- News and Updates
- Rules
- Robotics in your school community

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Decoding the Alphabet Soup

- ▶ BEST – Boosting Engineering Science & Technology
 - ▶ Nationwide robotics organization with Texas roots
 - ▶ Texas has the most BEST participation of any state
- ▶ FIRST – For Inspiration and Recognition of Science & Technology
 - ▶ Worldwide robotics organization with strong participation in Texas
 - ▶ Founded by Dean Kamen and Woodie Flowers
- ▶ FRC – FIRST Robotics Competition
 - ▶ The inaugural competition for FIRST, and still the “main event”
 - ▶ Features the largest robots and largest playing fields

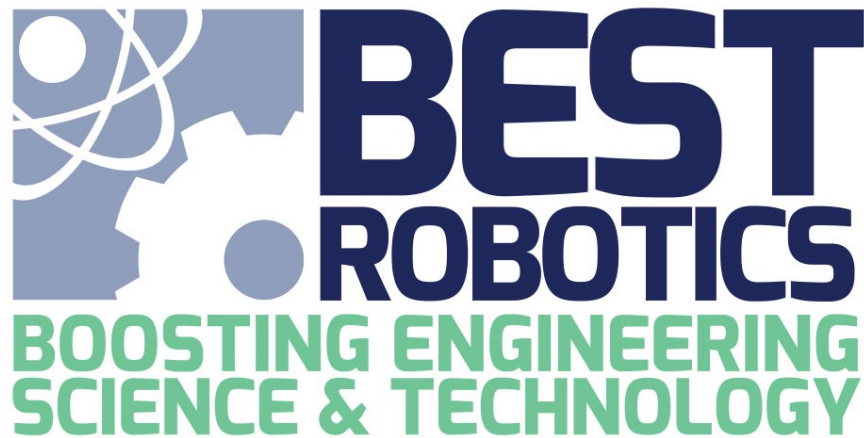


Decoding the Alphabet Soup

- ▶ FTC – FIRST Tech Challenge
 - ▶ Another FIRST program also included in UIL Robotics
- ▶ RECF – Robotics Education & Competition Foundation
 - ▶ The organization that administers VEX competition programs
- ▶ VRC – VEX Robotics Competition
 - ▶ New to UIL Robotics for 2022-2023
 - ▶ VEX is not an acronym – a Texas-based company that produces educational robotics products

Program Structure

- UIL Robotics is a collaboration
- Two partner organizations since 2016



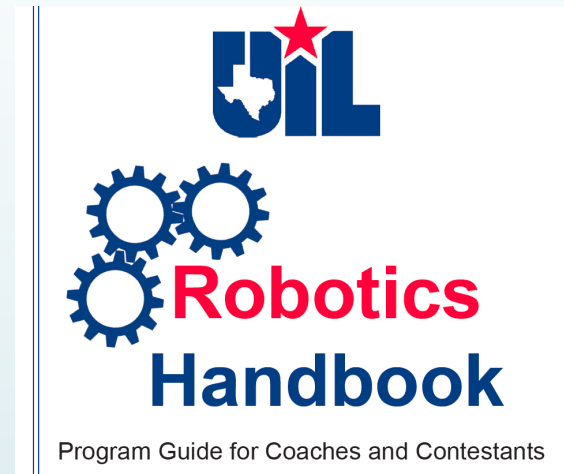
New for 2022-2023 – VEX Robotics Pilot

- ▶ RECF - VEX Division
 - ▶ Pilot Program
 - ▶ VEX competition programs are administered by the Robotics Education & Competition Foundation (RECF)



Who Makes the Rules?

- ▶ UIL rules determine team eligibility to compete for UIL Championships and specify championship criteria
- ▶ UIL Robotics Handbook
 - ▶ Updated edition will be posted this month
- ▶ BEST, FIRST and VEX rules determine how the contests are run - contest specifications, qualifier structure, judging, scoring, etc.





Local Policies - FAQs

- ▶ The following are school district decisions:
 - ▶ Policies for which students receive letters or letter jackets
 - ▶ Policies concerning teacher compensation (stipends paid to coaches, etc.)
 - ▶ Policies on use of school facilities, transportation, etc.



Robotics and UIL Classifications

- ▶ Robotics is not split into conferences 1A-6A
- ▶ BEST Division – two competition groups
 - ▶ Small school (1A-4A) and large school (5A-6A)
- ▶ FIRST Division FTC – three competition groups
 - ▶ Conference 6A, Conference 5A, Conference 4A and below
- ▶ FIRST Division FRC – one single competition group
- ▶ VEX pilot – four competition groups
 - ▶ Conference 6A, Conference 5A, Conference 4A, Conference 3A and below

UIL Points and TILF Scholarships

- ▶ Does not apply for RECF - VEX as a pilot program
- ▶ Robotics receives points toward overall Academics State Championships
 - ▶ 1st place = 20 points; 2nd = 16 pts.; 3rd = 12 pts.; 4th = 10 pts.
(When placement is determined by elimination bracket, non-advancing semifinalists split 3rd and 4th place points)
 - ▶ No district or regional points
- ▶ Lone Star Cup points
 - ▶ State 1st place – 6 points; 2nd place – 4 points; 3rd place – 2 points; State championship berth – 1 point
- ▶ TILF eligibility
 - ▶ Students on teams that finish in the top 10 for their competition group at the state championships



Team Composition and Student Eligibility

- ▶ To be eligible for UIL honors, teams must be:
 - ▶ High school-based
 - ▶ Have a majority of students in grades 9-12
- ▶ High school-based teams that include some middle school students (composite teams) are eligible for UIL state championships
- ▶ Teams that include students from multiple high schools (combined teams) are NOT eligible for UIL state championships

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Team Composition

- ▶ Robotics groups are independent organizations with participation rules that include teams that do not fit UIL eligibility requirements
- ▶ Teams that do not meet the criteria for UIL eligibility can continue to participate with BEST, FIRST or VEX
- ▶ Non-UIL teams (home school teams, club-based teams, etc.) are not eligible to receive UIL awards or championships, but can receive awards from the Robotics groups and advance in those organizational structures
- ▶ Also applies for middle school-based teams



Concurrent Scheduling

- ▶ A UIL Championship and a BEST/*FIRST*/VEX Championship in a single event
- ▶ Two scoring tracks
 - ▶ UIL Awards track – only UIL eligible teams, awards presented by UIL
 - ▶ Robotics Awards track – UIL and non-UIL teams, awards are presented by the robotics organization
- ▶ Why concurrent versus standalone UIL championship?
 - ▶ Large-scale Robotics events are complex (and expensive) to organize and to host
 - ▶ Reduce travel and loss of school time

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Competition Season - BEST

- ▶ Runs entirely in the fall
- ▶ Kickoff events in early September (this year beginning Sept. 10)
- ▶ Six-week build season
- ▶ Practice days and qualifier meets in October through early November
- ▶ UIL State Championships and Texas BEST Regional
 - ▶ December 1-3, 2022
 - ▶ Frisco, TX
 - ▶ Comerica Center and Frisco Convention Center

Example Robots - BEST



Some robots from 2017 BEST competition: "Crossfire"

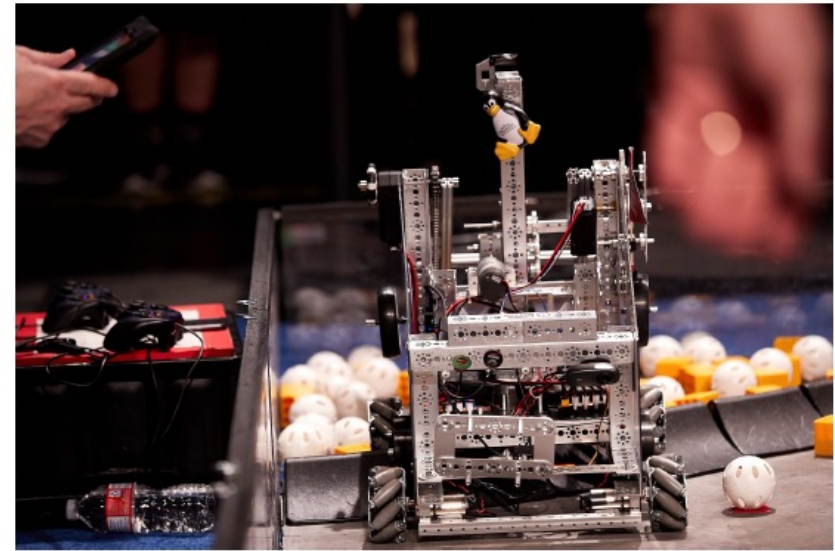
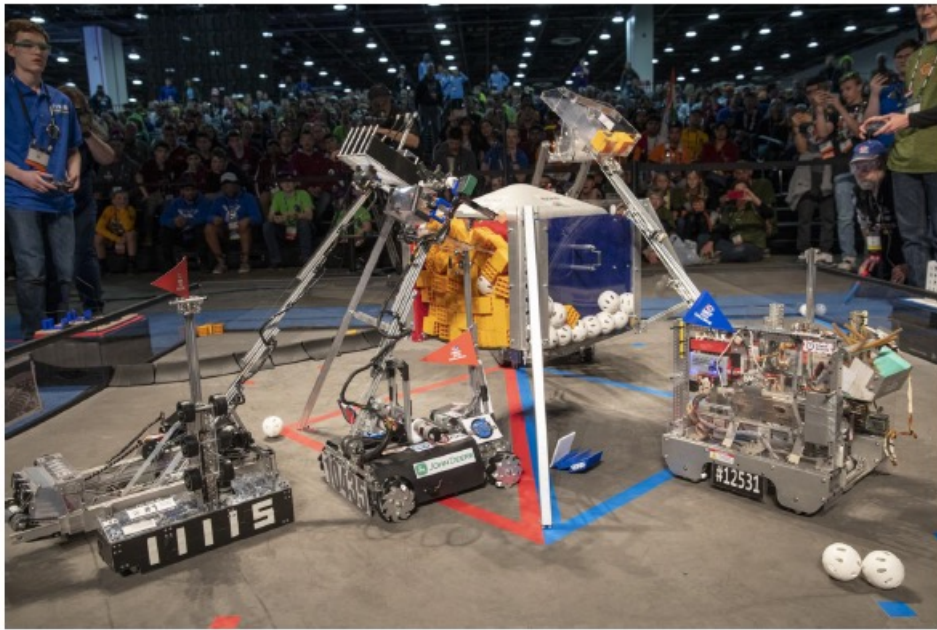




Competition Season - *FIRST*

- ▶ FTC (*FIRST* Tech Challenge) kickoff in early September (this year Sept. 10)
 - ▶ Open build season
 - ▶ Qualifier meets December-February
- ▶ FRC (*FIRST* Robotics Competition) kickoff in early January (Jan. 7, 2023)
 - ▶ Six week build season
 - ▶ Qualifier meets late February-March
- ▶ UIL State Championships – FTC and FRC
 - ▶ Tentative – April 6-8, 2023 in Houston

Example Robots - FTC



Example Robots - FRC

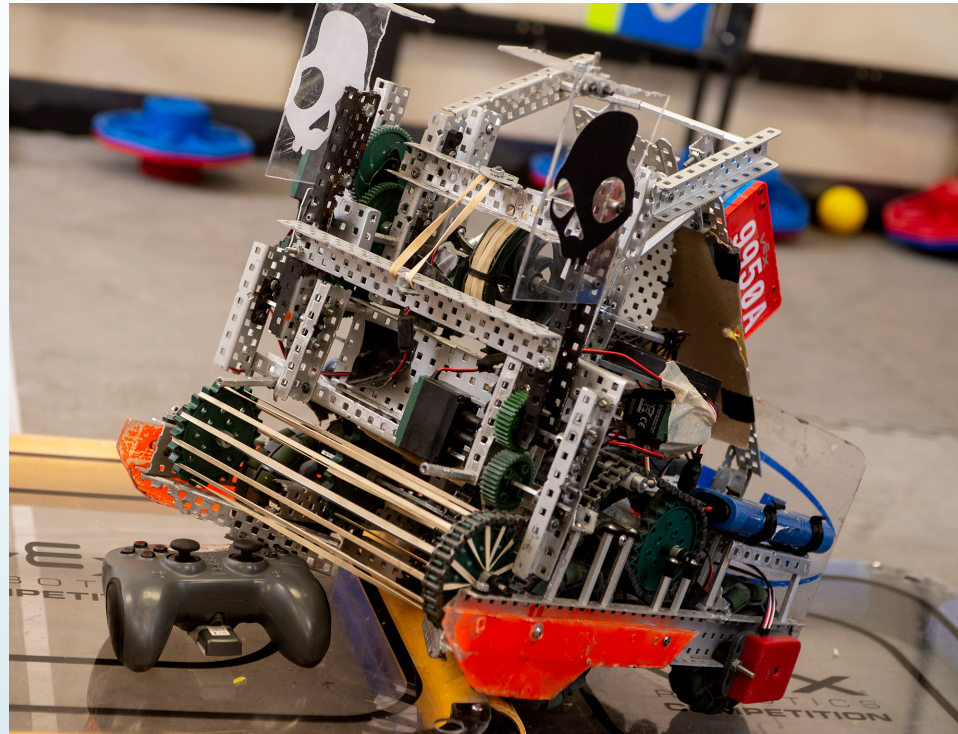




Competition Season – RECF - VEX

- ▶ VRC (VEX Robotics Competition) kickoff in early September
 - ▶ Game announced over the summer
- ▶ Open build season
- ▶ Qualifier meets November - January
- ▶ UIL State Championships in February
 - ▶ February 10-11, 2023
 - ▶ Clear Creek ISD

Example Robot - VRC





Participation in Robotics

- ▶ Which competition is the right fit for my school community?
- ▶ Your school can compete in any or all UIL divisions
- ▶ More schools are including multiple competition platforms in their robotics programs
 - ▶ Your school can participate in any combination of robotics competition platforms
- ▶ Participation can change over time



Participation in Robotics – First Steps

- ▶ Register a team with the organization you have chosen
- ▶ Team registration happens through the national offices of BEST, FIRST or RECF
 - ▶ www.bestrobotics.org
 - ▶ www.firstinspires.org
 - ▶ www.roboticseducation.org
- ▶ Texas affiliates will help you
 - ▶ www.bestoftexasrobotics.org
 - ▶ www.firstintexas.org
 - ▶ RECF Texas contacts

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Participation in Robotics – First Steps

- ▶ Attend workshops and other events
- ▶ Network – other coaches are happy to help you!
- ▶ Connect with your local competition group
 - ▶ BEST – hubs
 - ▶ FIRST – areas or regions
 - ▶ VEX – regions
 - ▶ Texas affiliates will help you make those connections

Program Structure - Qualifiers

- ▶ Robotics does not fit the traditional “Spring Meet” structure
 - ▶ Other newer contests - Congress, Theatrical Design, Film
- ▶ No UIL district or regional contests
- ▶ Qualification to the UIL Robotics State Championships is based on your team’s scores in *FIRST* or BEST qualifier meets
 - ▶ BEST – Hub Competitions
 - ▶ FTC – League play, regional* contests
 - ▶ FRC – District* model
 - ▶ VEX – League play, regional* contests
- ▶ Qualifier meets are organized and administered by the robotics organizations, not by UIL
 - ▶ Collaboration --> Championships

* - *FIRST* and VEX districts and regions are not linked in any way to UIL districts and regions – just similar terminology



Program Structure – State Championships

- The UIL State Championships are invitational
- Invitations are based on performance in BEST, *FIRST* or VEX qualifier meets plus consideration of the number of competing teams at the meet
- Points/rankings systems from Robotics organizations
 - UIL collaboration on specifications and priorities for advancement
- The number of slots available is based on the number of qualifier meets and participating teams, plus what the venue and schedule will allow
- Waiting lists are maintained



Robotics In Your School

- ▶ Potential to be a program, not just a contest
- ▶ What makes a program?
 - ▶ Ties to curriculum
 - ▶ Dedicated funding, facilities, personnel
 - ▶ Year-round student engagement
 - ▶ Multiple platforms for competition
 - ▶ Engagement of the larger school community
- ▶ Reach new groups of students
- ▶ Build a culture
- ▶ Think of other programs at your school – band, theatre, speech/debate, athletics



Which Program to Choose?

Some Factors to Consider...

- Scheduling
 - BEST – compact fall season
 - FRC – compact spring season
 - FTC – spread out season (UIL championship in April)
 - VRC – spread out season (UIL championship in February)
- Cost and available resources
 - BEST, FTC and VRC are comparable in cost, FRC costs more
 - Lots of variables – available facilities/equipment, travel considerations, etc.
- Personnel
 - What is the best fit for the educator(s) who will be working with the robotics program at my school?



Which Program to Choose?

Some Factors to Consider...

- ▶ Educational focus
 - ▶ In general, BEST and FRC will include a heavier engineering component, while FTC and VEX incorporate more programming
 - ▶ BEST – build from raw materials
 - ▶ FRC – build with higher-end machining
 - ▶ FTC and VRC – build from prefabricated parts
- ▶ Additional competition elements
 - ▶ Presentations, engineering notebooks, etc.

Questions

