

**ALPHABET SOUP**



**Robotics**

Student Activities Conferences 2022

David Trussell, Director of STEM Activities



# Before We Get Started...



**Session  
Number:  
140**



**Attendance**



**Online Handouts**



**Session Evaluations**



# Robotics Alphabet Soup

**BEST**

**FIRST**

**RECF**

**UIL**

**VEX**

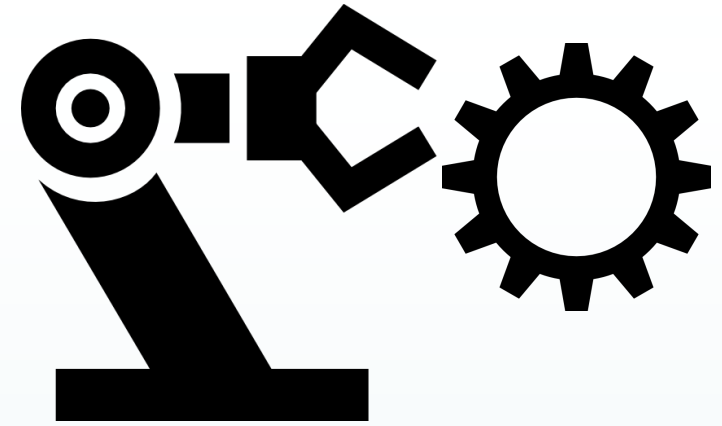
**FRC**

**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



# 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

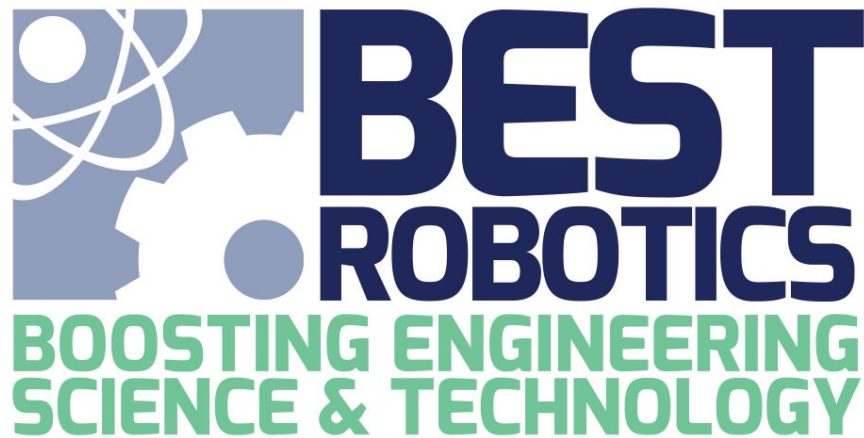


# Decoding the Alphabet Soup

- ▶ 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





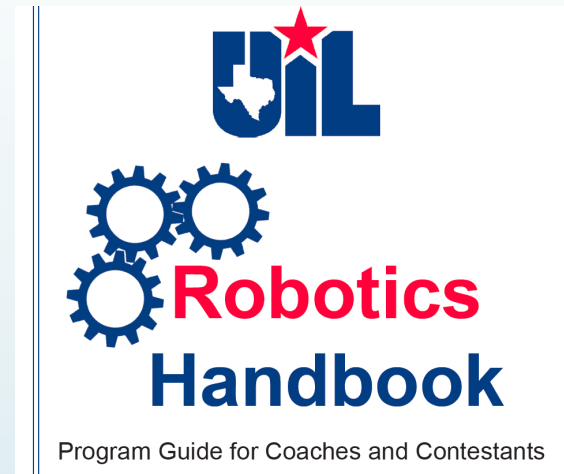
# New for 2022-2023 – VEX Robotics Pilot

- ▶ 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 1<sup>st</sup> place – 6 points; 2<sup>nd</sup> place – 4 points; 3<sup>rd</sup> 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





# 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"

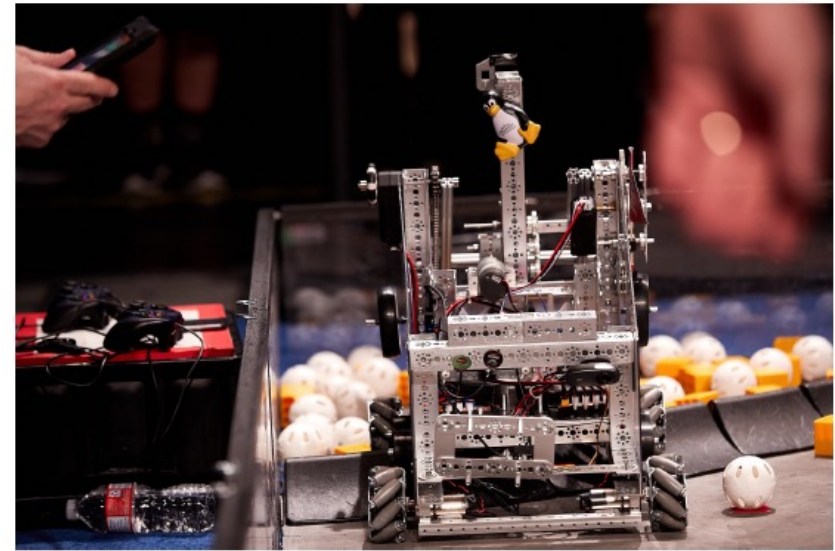




# Competition Season - *FIRST*

- ▶ 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

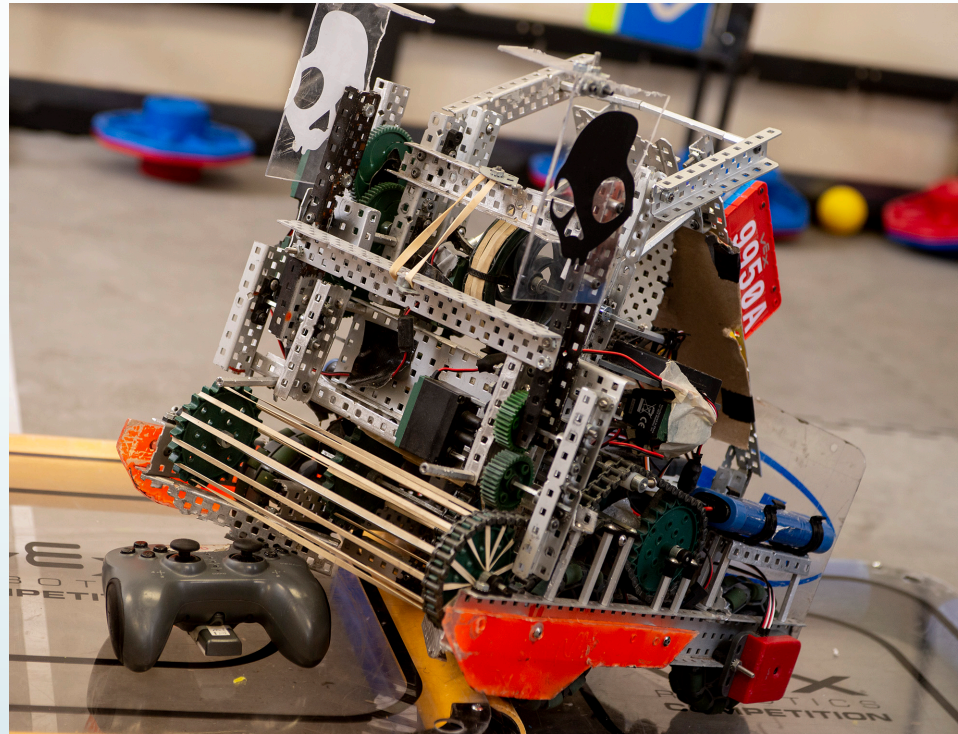




# Competition Season – RECF - VEX

- ▶ 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](http://www.bestrobotics.org)
  - ▶ [www.firstinspires.org](http://www.firstinspires.org)
  - ▶ [www.roboticseducation.org](http://www.roboticseducation.org)
- ▶ Texas affiliates will help you
  - ▶ [www.bestoftexasrobotics.org](http://www.bestoftexasrobotics.org)
  - ▶ [www.firstintexas.org](http://www.firstintexas.org)
  - ▶ RECF Texas contacts



# 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

