SKYSTONE

PRESENTED BY Qualcomm

FIRST TECH CHALLENGE

FIRST RISE powered by STAR WARS

SKYSTONE
PRESENTED BY Qualcomm

FIRST TECH CHALLENGE
MISSOURI

Missouri/Kansas Kickoff

2019-2020

Sponsored by Kansas City STEM Alliance - Martha McCabe

Robert Dumler
Ken Pugsley
Jeff Ousley
Jared Fordham
Dan Justice
Jeff Grisham
Rory Smith
Abhinav Tilwar
Glenn Crocker
Robert Crance
Collin Robinett

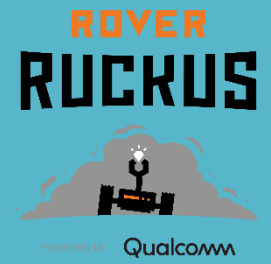
St. Louis Team

Laura Roth
Susie Mathieu
Tom Mc Govern
Robin Lady

Today's Agenda

- ROVER RUCKUS Season Highlights
- SKYSTONE Season Overview
- Kickoff Video
- Onsite Game Field Reveal
- Field Element Giveaway
  - one per team w/ RSVP

Numbers From



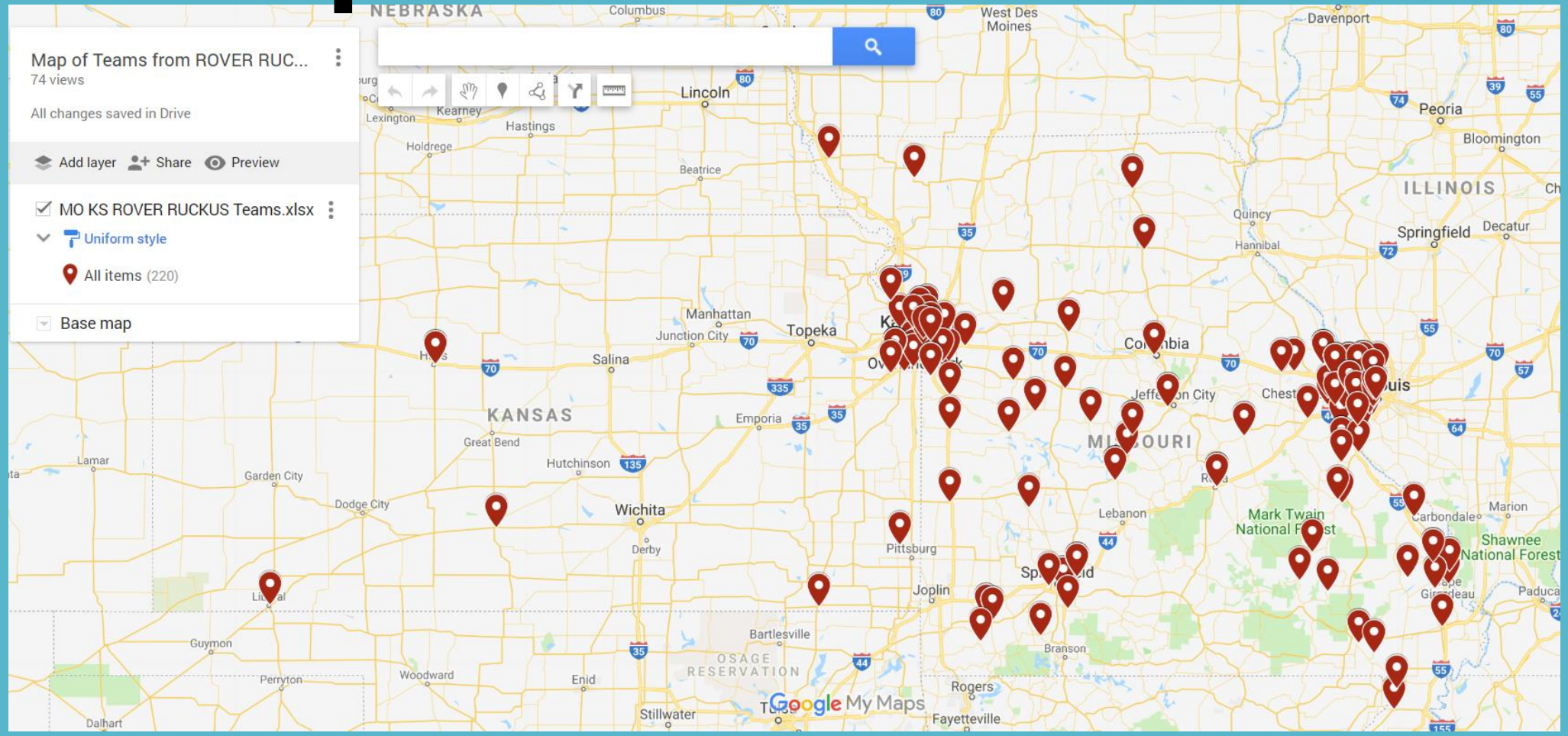
Events Run

- 36 Meets
- 7 Qualifiers
- 2 Conference Qualifiers
- 1 - 48 team Championship

Teams Served

- 215 Total
- 190 Missouri
- 24 Kansas
- 1 Tennessee (Memphis)

Map of Team Locations



Recognition From

Volunteer of the Year

- Jeff Ousley – FTA

Compass Award Winner

- Christina DeMuri – Team 9099 Ritenour Robohounds

Promote Award Winner

- Team 6507 Cobalt Colts

Dean's List Finalists

- Katherine Kostecki, 2408 – Shrapnel Sergeants
- Meagan Murry, 7547 – JoeBotics
- Phillipe Realina, 10127 – Tesla's Knights
- Ethan Voss, 9808 – Team Chargers

Our Inspire Award

Winner

3409 - Astromechs, Kansas City Robotics Foundation

2nd Place

3664 - Girls With Attitude, Chaffee Industrial Arts & Technology

3rd Place

4587 – The Red Hot Techie Peppers, LEARN

Our Advance to Houston

3409 – Astromechs
3664 – Girls with Attitude
4964 – Rolla Patriots
7357 – Team Titanium Tech
10265 - Force Green

3658 – The BOSONS
4587 – Red Hot Techie Peppers
6547 – Cobalt Colts
8461 – Elementary My Dear Botson

NOTE: $2,000 entry fee covered by Missouri grant

Also in Houston

9792 – GSA RoboNERDS

Advanced from Arkansas Championship

288 – Spare Parts

Advanced from *FIRST* Waitlist (waitlist also available 2019-2020)

NOTE: $2,000 entry fee NOT covered by Missouri grant

Team Titanium Tech (7357) Wowed the Judges in Houston!!

- Collins Aerospace Innovate Award Winners!
- That's what they won at MO Championship!

Cobalt Colts (6547) Rode to Success in Houston!!

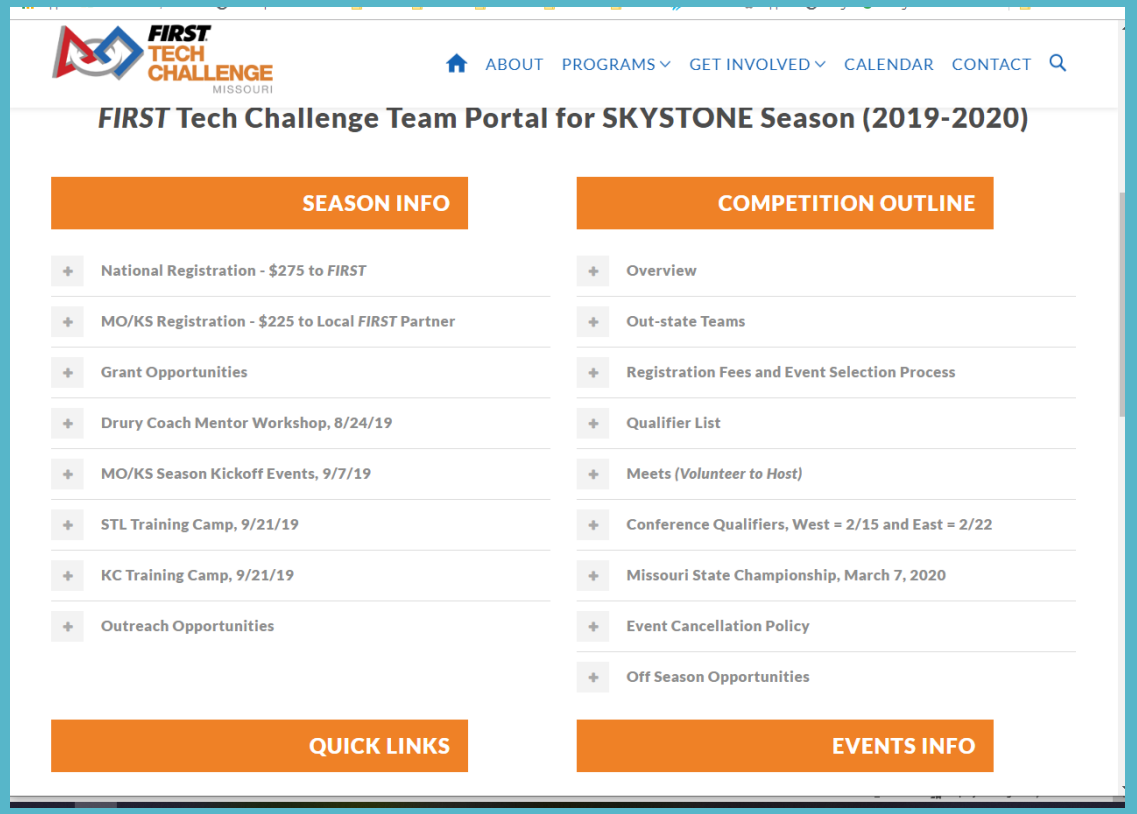
- Members of the Winning Alliance!
- Inspire Award Finalists!
- Got to play the finals on Minute Maid Field!

Now.....2019-2020

How to Know What's Happening

- Someone has to keep up with all news!
- Coach is automatically receiving news from HQ and MO.
- We are happy to share the MO/KS news with everyone.
- Here are our methods of communication:
  - Our Team Portal Website
  - Our Newsletter
  - Our Social Media
  - MOFTC Scores Website

Our Team Portal Website

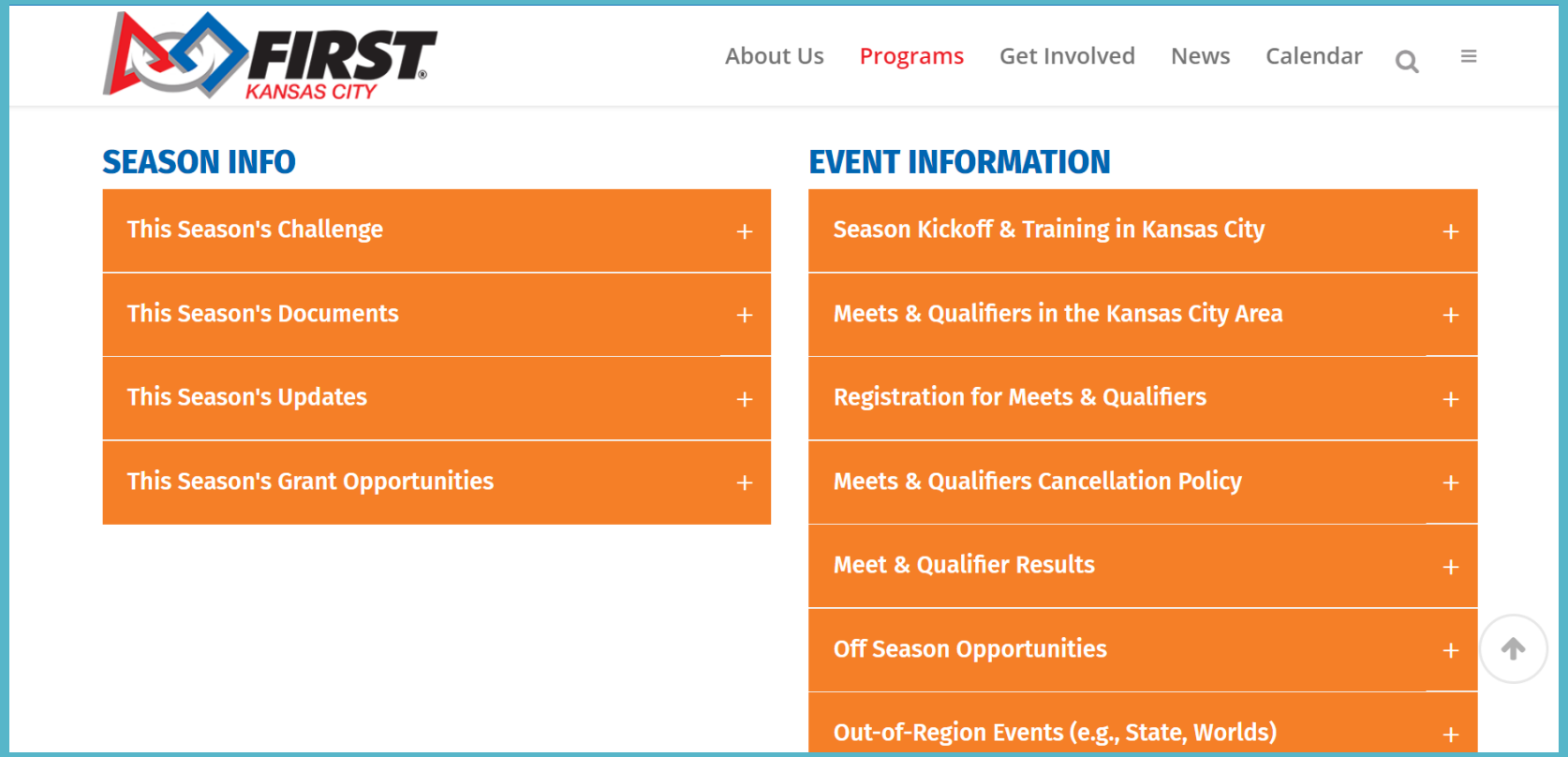


www.stlfirst.org/ftc-team-portal

BOOKMARK IT!

KC Team Portal Website

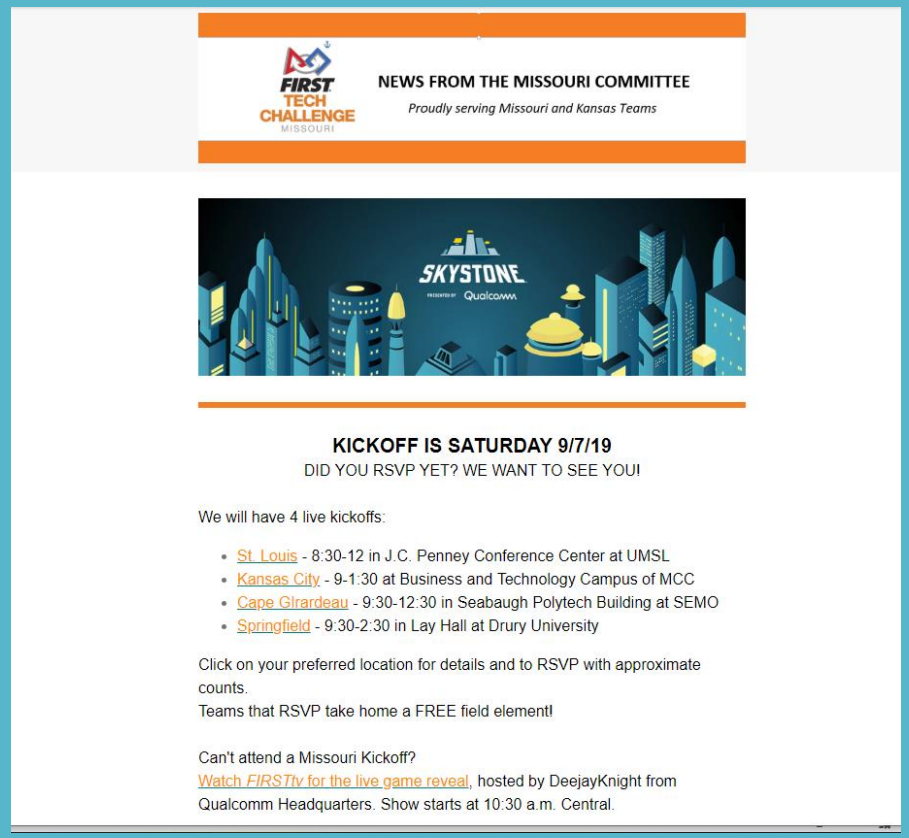
https://www.kcfirst.org/



Our Newsletter

- We use MailChimp. We import the addresses from *FIRST* registrations.
- Anyone else can subscribe. Sign-up links are available on our website and Facebook pages.
- Please let us know if you haven't been receiving these emails – some systems block.
- **Tuesday Tech Tales** is our weekly newsletter. Check your email.

Our Newsletter



NEWS FROM THE MISSOURI COMMITTEE

Proudly serving Missouri and Kansas Teams

KICKOFF IS SATURDAY 9/7/19

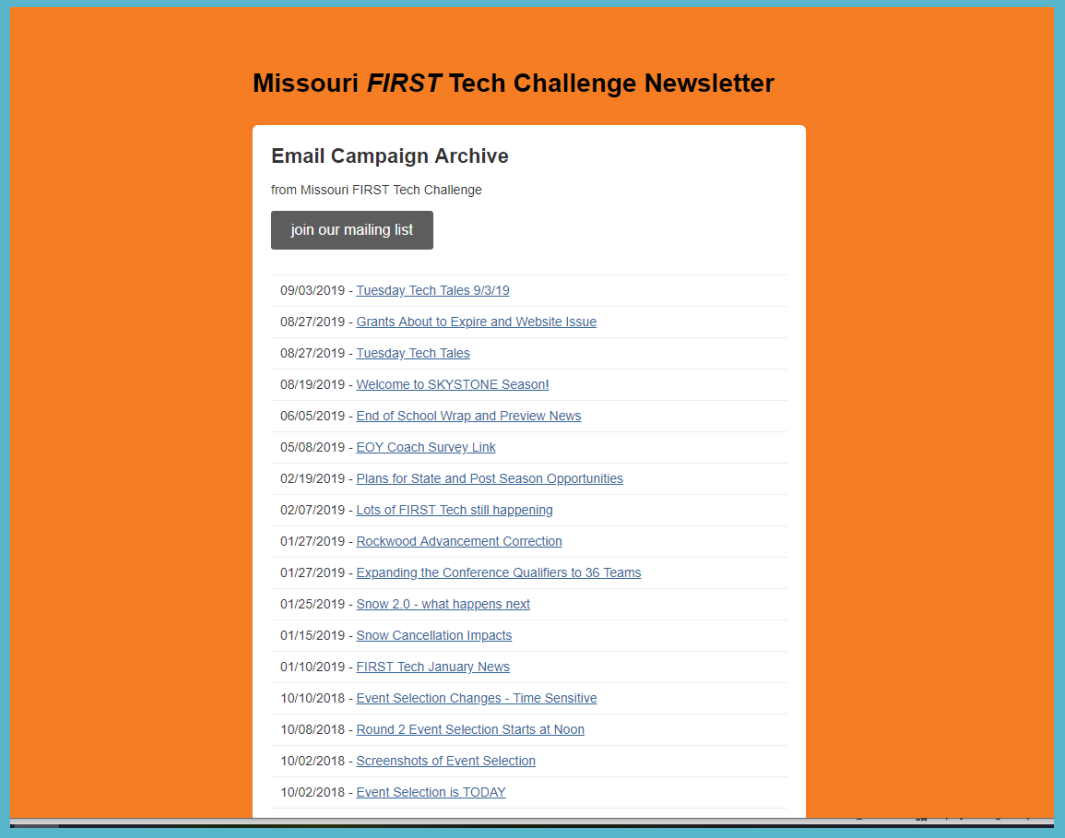
DID YOU RSVP YET? WE WANT TO SEE YOU!

We will have 4 live kickoffs:

- St. Louis - 8:30-12 in J.C. Penney Conference Center at UMSL
- Kansas City - 9-1:30 at Business and Technology Campus of MCC
- Cape Girardeau - 9:30-12:30 in Seabaugh Polytech Building at SEMO
- Springfield - 9:30-2:30 in Lay Hall at Drury University

Click on your preferred location for details and to RSVP with approximate counts.
Teams that RSVP take home a FREE field element!

Can't attend a Missouri Kickoff?
Watch *FIRSTtv* for the live game reveal, hosted by DeejayKnight from Qualcomm Headquarters. Show starts at 10:30 a.m. Central.



Missouri *FIRST* Tech Challenge Newsletter

Email Campaign Archive

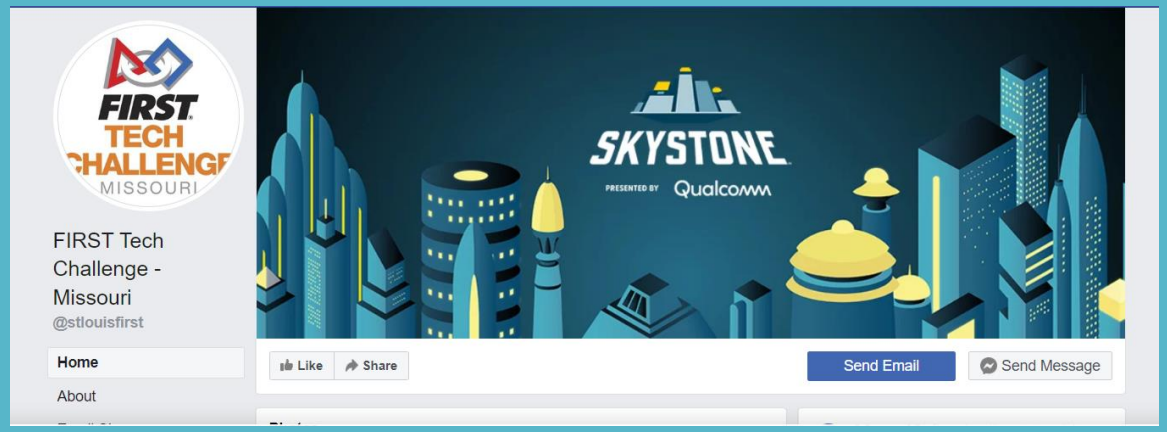
from Missouri FIRST Tech Challenge

join our mailing list

09/03/2019 - Tuesday Tech Tales 9/3/19
08/27/2019 - Grants About to Expire and Website Issue
08/27/2019 - Tuesday Tech Tales
08/19/2019 - Welcome to SKYSTONE Season!
06/05/2019 - End of School Wrap and Preview News
05/08/2019 - EOY Coach Survey Link
02/19/2019 - Plans for State and Post Season Opportunities
02/07/2019 - Lots of FIRST Tech still happening
01/27/2019 - Rockwood Advancement Correction
01/27/2019 - Expanding the Conference Qualifiers to 36 Teams
01/25/2019 - Snow 2.0 - what happens next
01/15/2019 - Snow Cancellation Impacts
01/10/2019 - FIRST Tech January News
10/10/2018 - Event Selection Changes - Time Sensitive
10/08/2018 - Round 2 Event Selection Starts at Noon
10/02/2018 - Screenshots of Event Selection
10/02/2018 - Event Selection is TODAY

Our Social Media

- We are currently on Facebook and Twitter. We love to share postings from teams so let us know you're out there. We also post other STEM related opportunities we come across.



@stlouisfirst

@FTCMO

Current National Registrations

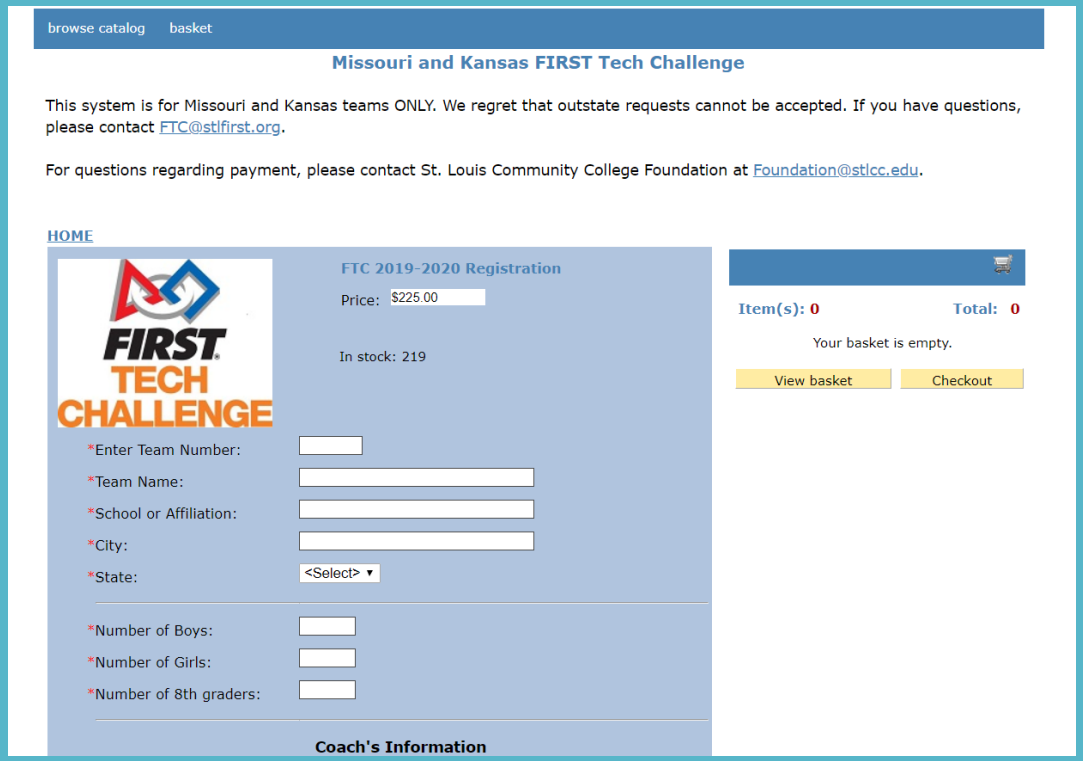
- Refers to paid/granted $275 *FIRST* fee from Dashboard
- 126 Missouri Teams Currently Paid
- 21 Kansas Teams Currently Paid
- Thanks to those 147 teams! We're eagerly watching for more teams. Projected 240 teams this year.
- Please complete your national registration so we can finalize our plans.

MO/KS Registration Fee

- One flat fee of $225
- Entitles team to everything below State Championship
  - 2 Meets
  - 1 Qualifier
  - 1 Conference Qualifier (if you earn advancement)

MO/KS Payment Process

- Open NOW – Link on Team Portal or go to https://commerce.cashnet.com/ftc
- Pay by 9/26 to be eligible for 10/1 Event Selection



Current MO/KS Registrations

- Refers to paid $225 MO/KS fee to STLCC Foundation
- 48 Missouri Teams Currently Paid
- 13 Kansas Teams Currently Paid
- When both National and MO/KS paid, team is added to MOFTCScores.
- You want to pay by 9/26 to be eligible for 10/1 Event Selection.

SKYSTONE Event Structure

- 42 Meets approximately (10/26/19 - 2/1/20)
- 7 Qualifiers (Dec. - Feb.)
- 2 Conference Qualifiers
  - West 2/12/20
  - East 2/19/20
- 1 State Championship – 48 teams (3/7/20)
- *FIRST* Championship in Houston, TX (4/15-18/20)

About Meets

- Teams can play in any Meet region wide.
- Meets are approx. 4 hour events – no judging, alliance selection or awards.
- Your scores (RP and TBP) from the Meet are used to determine your ranking for advancing to Conference Qualifier (we'll explain those later).

Host a Meet

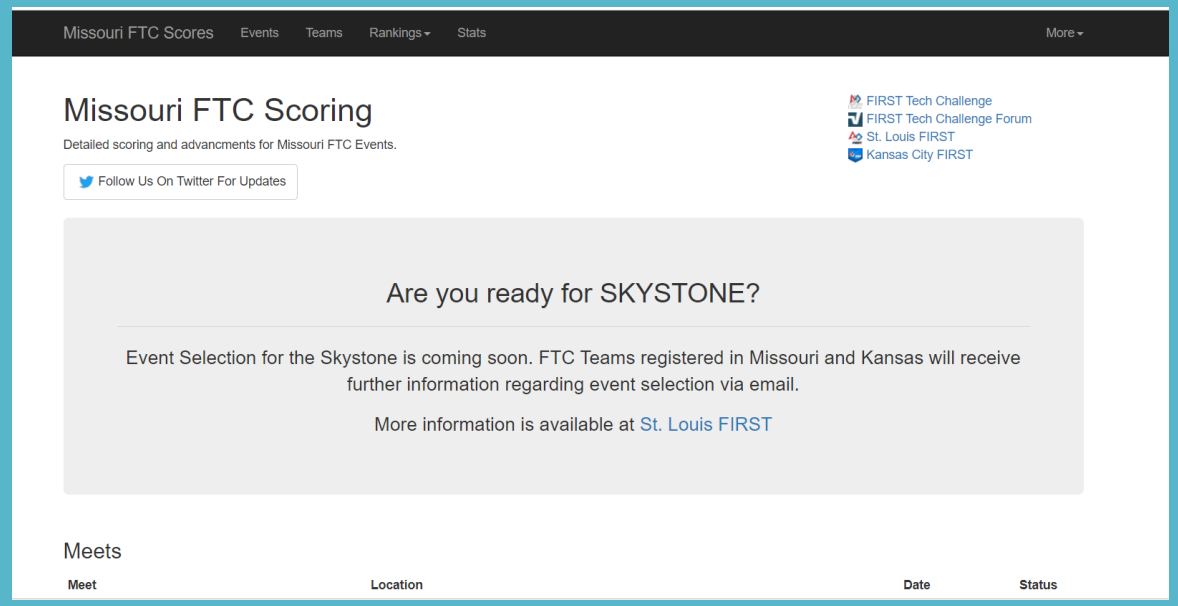
- You'll need:
  - Space for a field and 12 teams.
  - Power to the field and a charging station.
  - Seven trained key volunteers – FTA, Scorekeeper, Inspector and 4 Referees. Training is online.
- What you get:
  - Early choice of 1st meet for each host team
  - Concession stand revenue
  - Play close to home

About Qualifiers

- Full event experience for teams
  - Judging
  - Qualifying rounds
  - Alliance selection
  - Awards ceremony
- Team must compete in a Qualifier for chance to advance to Championship via Conference Qualifier
- ONE Qualifier per team

Registration/MOFTC
Ken Pugsley

Our MOFTCScores Website



http://moftcscores.net/

- Site for Event Selection
- Site for Event Results
- Site for Conference Rankings
- BOOKMARK IT!

Meets in NE Conf. (19)

Date	Time	Location
11/2/19	8 am - 12 pm	Boys & Girls Clubs of St. Charles County
11/2/19	1 pm - 5 pm	Boys & Girls Clubs of St. Charles County
11/16/19	8 am - 12 pm	Webster Groves High School
11/16/19	8 am - 12 pm	Girl Scouts of Eastern MO
11/16/19	1 pm - 5 pm	Girl Scouts of Eastern MO
11/23/19	8 am - 12 pm	Marquette High School
11/23/19	1 pm - 5 pm	Marquette High School
11/23/19	8 am – 12 pm	Pattonville
12/7/19	10 am - 2 pm	McCluer South-Berkeley High School
12/7/19	8 am - 12 pm	Webster Groves High School
12/14/19	10 am - 2 pm	Lutheran High School of St. Charles County
1/11/20	8 am - 12 pm	SLU Center for Global Citizenship
1/11/20	1pm - 5pm	SLU Center for Global Citizenship
1/16/20	5 pm - 9 pm	St. Joseph's Academy
1/18/20	8 am - 12 pm	Maryville University Donius University Center
1/18/20	1 pm - 5 pm	Maryville University Donius University Center
1/18/20	8 am - 12 pm	MICDS
1/18/20	1 pm - 5 pm	MICDS
1/25/20	8 am – 12 pm	Pattonville

** Meets are still being finalized. Some additional sites possible.*

Meets in NW Conf. (12)

Date	Time	Location
11/2/19	8 am - 12 pm	Notre Dame de Sion
11/2/19	1 pm - 5 pm	Notre Dame de Sion
11/9/19	8 am - 12 pm	Heritage Christian
11/9/19	1 pm - 5 pm	Heritage Christian
11/16/19	8 am - 12 pm	Center High
11/16/19	1 pm - 5 pm	Center High
12/7/19	8 am - 12 pm	KC Engineerign Zone
12/7/19	1 pm - 5 pm	KC Engineerign Zone
1/18/20	8 am - 12 pm	St. Teresa
1/18/20	1 pm - 5 pm	St. Teresa
1/25/20	8 am - 12 pm	Lee's Summit High
1/25/20	1 pm - 5 pm	Lee's Summit High

Meets in Southern Conf.

SE – 5 sites – need at least 6

Date	Time	Location
11/9/19	10 am - 2 pm	Jackson High School
11/23/19	10 am - 2 pm	Poplar Bluff High School
12/14/19	8 am - 12 pm	Notre Dame Cape
12/14/19	1 pm - 5 pm	Notre Dame Cape
1/25/20	10 am - 2 pm	Wyman Elementary
TBD	TBD	This could be you!

SW – 4 sites – need at least 6

Date	Time	Location
11/23/19	10 am - 2 pm	Kickapoo High School
1/11/20	10 am - 2 pm	Lake Christian Academy
TBD	10 am - 2 pm	Morgan Co. R-1 School District
1/18/20	10 am - 2 pm	Monett Middle School
TBD	TBD	This could be you!
TBD	TBD	This could be you!

Please sign up to host a Meet. Link is on Team Portal.

Scheduled Qualifiers

Qualifiers

Tournament	Location	Date	Status
SLU Qualifier	St. Louis University - Center for Global Citizenship, St. Louis, Missouri	December 07, 2019	Scheduled
Pleasant Lea Qualifier	Pleasant Lea Middle School, Lee's Summit, Missouri	December 14, 2019	Scheduled
STLCC - Flo Valley Qualifier	STLCC - Florissant Valley, St. Louis, Missouri	January 11, 2020	Scheduled
Yeokum Qualifier	Yeokum Center of Innovation, Belton, Missouri	January 11, 2020	Scheduled
SEMO Qualifier	SEMO - Student Recreation Center, Cape Girardeau, Missouri	January 18, 2020	Scheduled
Drury Qualifier	Drury University - Weiser Gym, Springfield, Missouri	January 25, 2020	Scheduled
Oakville Qualifier	Oakville High School, Oakville Township, Missouri	February 01, 2020	Scheduled

Event Selection Prep

- Pay National and MO/KS Registration by Sept 26th for Round 1 access. Later payment means later selection and less choices.
- Determine dates/locations the team can attend.
- Have alternate choices prepared in case events are already closed (sold out).
- You select Qualifier and Meets.
- You earn Conference Qualifier advancement.
- You earn Championship advancement.

Event Selection Process

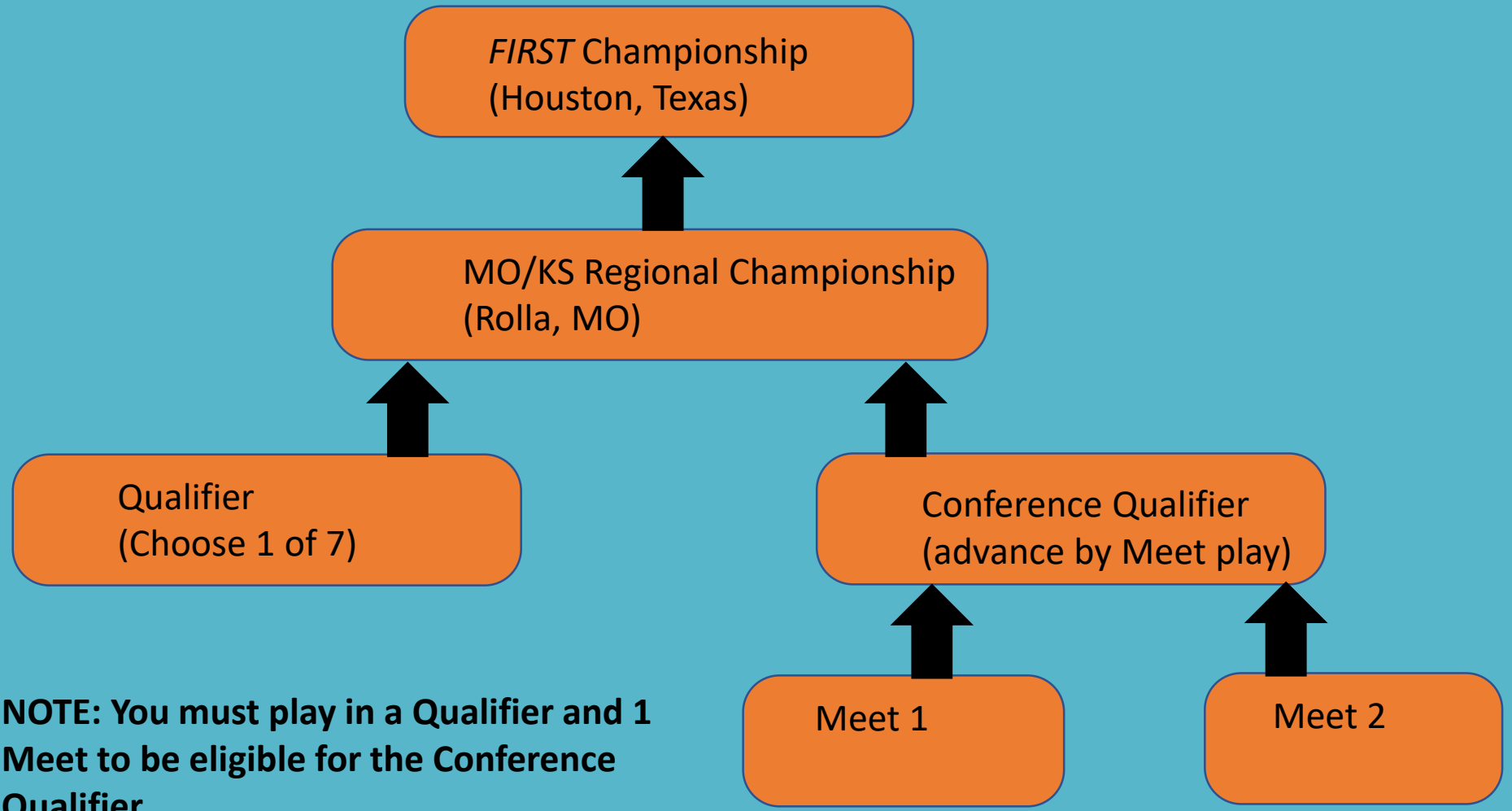
Round 1 - opens at 12 noon on Tues., Oct. 1st.

- Pick 1 Qualifier
- Pick a Meet
- If you can't pick it, its FULL – things fill FIRST COME FIRST SERVED

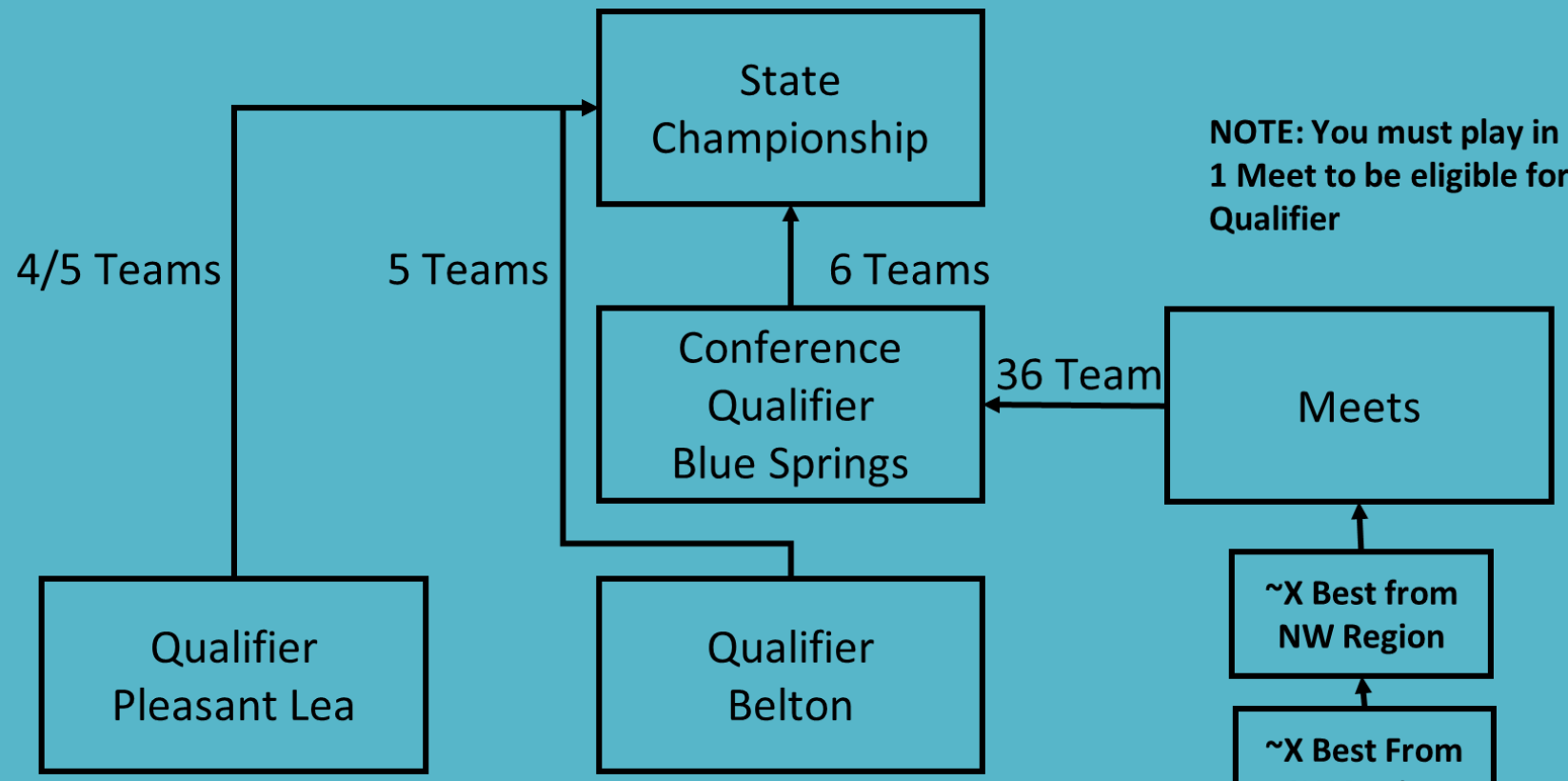
Round 2 - opens at 12 noon on Tues., Oct. 8th.

- Pick a Meet

Time for Demo…http://moftcscores.net/registration



NOTE: You must play in a Qualifier and 1 Meet to be eligible for the Conference Qualifier



NOTE: You must play in a Qualifier and 1 Meet to be eligible for the Conference Qualifier

TENTATIVE

Will be finalized after registration

http://moftcscores.net/

Conference Qualifiers

- Conference Qualifiers will be 36 team events.
- There will be one on the West side (NW and SW) and one on the East side (NE and SE).
- 18 slots will be divided between the N/S Conferences based on team density to the conference qualifier. (set Oct. 1st)
- 18 Wild Card slots are filled from the respective Con Qual ranking list. Highest ranked regardless of North or South within a Conf.

Advancements to State

Event Name	Team Capacity	Advancing to State
St. Louis University Qualifier	24	4
Pleasant Lea Middle Qualifier	24	4
STLCC-Florissant Valley Qualifier	36	5
Pirates Qualifier	36	5
Southeast Missouri State University Qualifier	36	5
Drury University Qualifier	36	5
Oakville Qualifier	36	5
West Conference Qualifier	36	TBD
East Conference Qualifier	36	TBD

- Data correct as of Kickoff, any possible changes will be communicated prior to Event Selection.
- Advancements are based on the size of the Qualifier, not attendance or registration.
- Conference Qualifier advancement numbers will be set after Oct. 1 based on team registration.

MO State Championship

- This is an earned advancement
- March 7, 2020
- Missouri S&T, Rolla, MO
- $150 entry fee (KCStem will pay entry fee)
- 48 team, dual division competition
- Judging for Promote and Compass
- Dean’s List Finalists Announced

FIRST Championship in Houston

- We have 10 slots for teams to advance from our MO Championship.
- *FIRST* Championship in Houston is April 15-18, 2020.
- Entry fee is $2,000.
- MO/KS Planning Committee has secured grants to cover entry fees for all 10 teams advancing from our Championship.
- HQ will have a Waitlist. MO/KS does not cover Waitlist team expenses. Keep this in mind when applying.

What About Weather?

- Sites determine if they will cancel based on local weather conditions. If you are travelling, you must decide if it's safe.
- Every Meet host can reschedule at their discretion.
  - If you can't attend, other Meet score is doubled.
- If only one Qualifier is cancelled in West, backup date is 2/1/20.
- If only one Qualifier is cancelled in East, backup date is 2/8/20.
- If more than one Qualifier is cancelled, alternate procedures are under development.

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FIRST TECH CHALLENGE
MISSOURI

Senior Mentor
Bob Crance

- ***FIRST* Senior Mentor (FSM)**
  - **Focus on recruiting, supporting and expanding all four *FIRST* programs**
  - **Support existing teams, mentors, and coaches**
  - **Identify and recruit volunteers, mentors, and coaches**
- **My Goals**
  - **Promote team sustainability within and across programs**
  - **Understand Team's personalities**
  - **Connect team needs with available resources, college scholarships**
  - **Encourage team participation in all awards**

BOB CRANCE

bcrance@firstinspires.org

816-223-2125

Judge Advisor
Jared Fordham

Judging

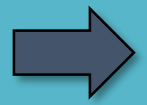
- Importance of Awards
- What is the process?
- Team Awards
- Individual Awards
- Scholarships
- Where do I learn more?
- Training Preview

Why?

- You design
- You build
- You connect
- You program
- You learn
- You share
- You play

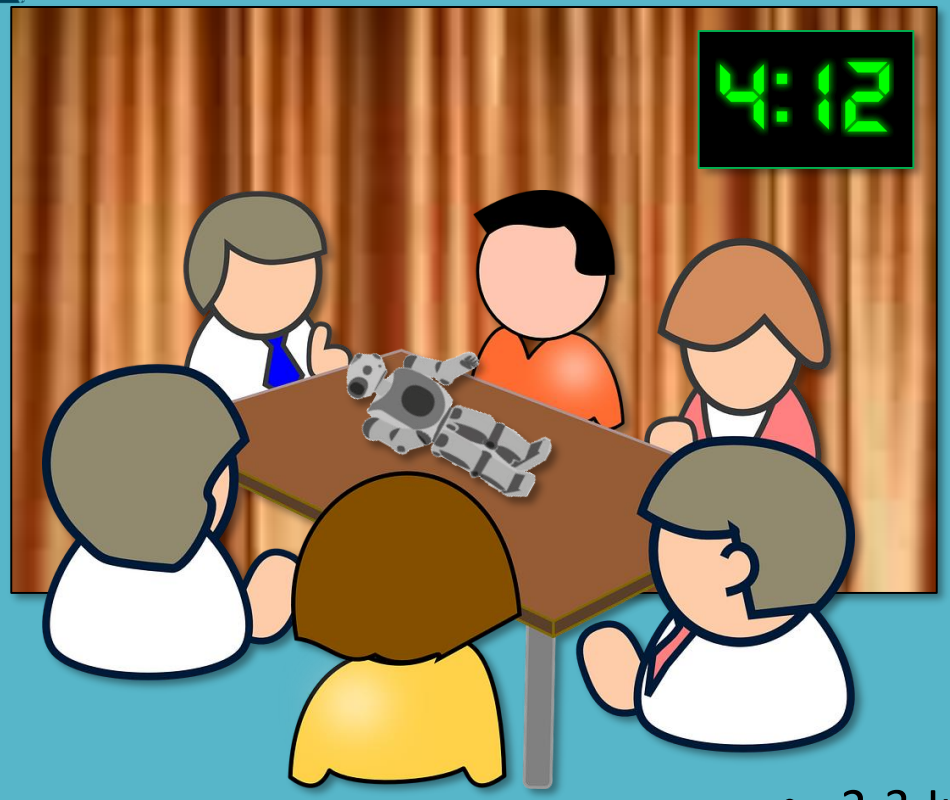
- It hurts
- It's stressful
- It's fun
- It's easy
- It's not
- **It's more than robots**

Judges listen to your story



FIRST Tech Challenge Awards are for recognizing your results

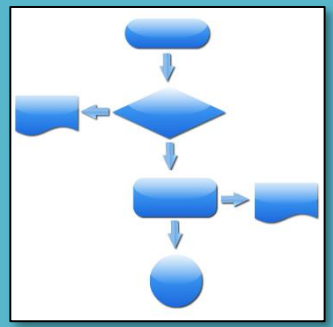
Process



Team Interview!

- 2-3 Judges
- 20 Minutes
- Robot
- Prepared Remarks

The Notebook!



- Engineering Section
- Business Plan
- Strategic Plan

Control Submission

Awards

Team	Individual
Inspire Award	FIRST Dean's List
Notebook Think Award	Promote Award ***Video***
Connect Award	Compass Award
Robot Collins Aerospace Innovate Award	***Coach or Mentor***
Design Award	
Community Motivate Award	
Control Award by ARM	
Judges Award (Optional)	

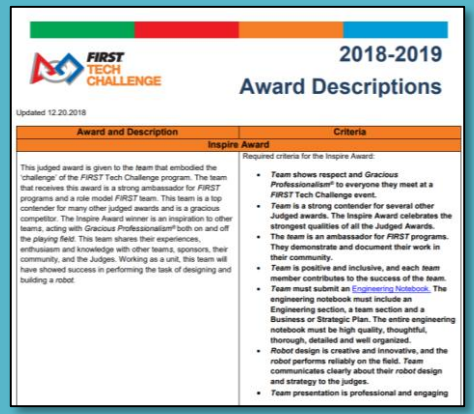
Gracious Professionalism ®

More

Cash for College!

Apply

Read The Docs



FIRST TECH CHALLENGE

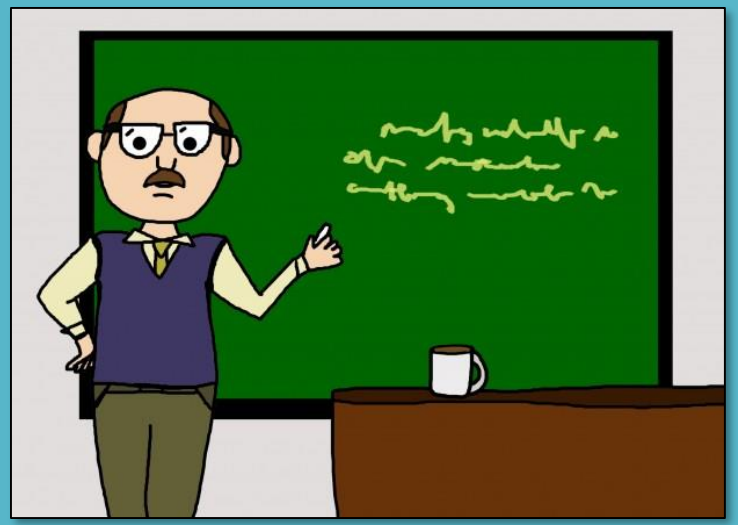
2018-2019

Award Descriptions

Updated 12.20.2018

Award and Description	Criteria
Inspire Award	
This judged award is given to the *team* that embodied the 'challenge' of the *FIRST* Tech Challenge program. The team that receives this award is a strong ambassador for *FIRST* programs and a role model *FIRST* team. This team is a top contender for many other judged awards and is a gracious competitor. The Inspire Award winner is an inspiration to other teams, acting with *Gracious Professionalism*® both on and off the *playing field*. This team shares their experiences, enthusiasm and knowledge with other teams, sponsors, their community, and the Judges. Working as a unit, this team will have showed success in performing the task of designing and building a robot	Required criteria for the Inspire Award: • *Team* shows respect and Gracious Professionalism® to everyone they meet at a *FIRST* Tech Challenge event. • *Team* is a strong contender for several other Judged awards. The Inspire Award celebrates the strongest qualities of all the Judged Awards. • The *team* is an ambassador for *FIRST* programs. They demonstrate and document their work in their community. • *Team* is positive and inclusive, and each *team* member contributes to the success of the *team*. • *Team* must submit an Engineering Notebook. The engineering notebook must include an Engineering section, a team section and a Business or Strategic Plan. The entire engineering notebook must be high quality, thoughtful, thorough, detailed and well organized. • *Robot* design is creative and innovative, and the *robot* performs reliably on the field. *Team* communicates clearly about their *robot* design and strategy to the judges. • *Team* presentation is professional and engaging

Training



Sep 21 @ KC EZ

- Why didn't we win?
- Engineering Notebook
- Dean's List
- Inspire

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FIRST TECH CHALLENGE
MISSOURI

Lead Referee
Collin Robinett

Referee

- Ruling Updates
  - Most current rules will come from the blog updates, then Team Updates, then the Game Manual.

- Score review after matches
  - Using tablets
  - Clear up any questions about scoring before teams leave the field
  - Could lead to cycle time increases if not done quickly

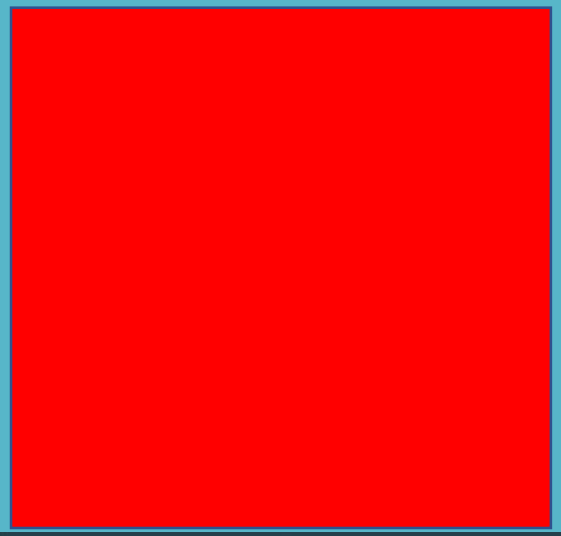
Referee

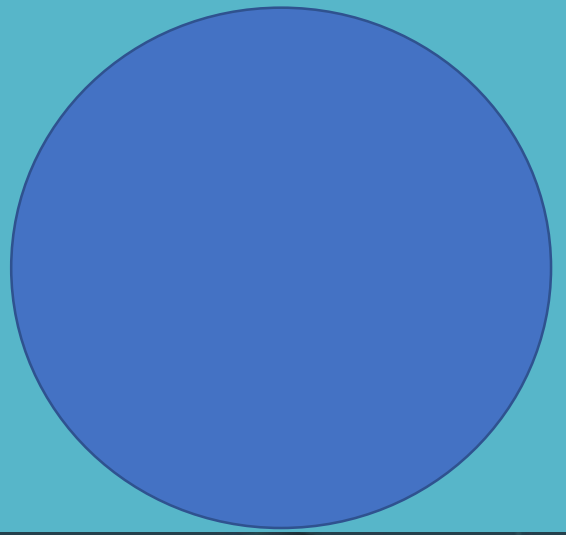
- Correct Player Station
  - Tables in Player Stations will be clearly marked with Red/Blue 1 or 2.
  - Teams need to stand by their assigned station on the schedule, regardless of robot placement.

- Human Player
  - There will be one extra person PER ALLIANCE that will interact with the field
  - Alliances will have to pick their Human Player before the match.
  - No decision defaults to Red 1 and Blue 1
  - We can talk about Human Player locations on the field during the Game Reveal

Referee

- Alliance Marker, Rule <RG06>
  - Each team must include a team supplied Alliance Marker on their robot on the same sides as the Team Numbers (two opposite sides, 180 degrees apart)
  - Must be removable in order to swap between matches
  - Red 2.5” Square or Blue 2.5” diameter Circle





Lead Robot Inspection
Abhinav Tilwar

Robot Inspection

- ***Self Inspection – Game Manual One***
  - Teams must complete self-inspection of their Robot and submit the completed Robot Inspection forms to the Robot Inspectors.
  - Teams should ensure that their Robot is made up of legal parts.
  - Re-inspect the Robot after making mechanical changes – ***Reference 8.4 Inspection rules <I1> and <I4>***

- ***Common Mistakes***
  - Know your robot – Confidence and knowledge about robot components
  - Wires should be properly tied to avoid unnecessary risk of entanglement - ***Reference 8.4 Inspection rules <RE14>***
  - Being aware of the weight and size requirements of the robot

Robot Inspection

- ***Changes***
  - Alliance flag are no longer be in use during the match – Replaced by Alliance marker - ***Reference 8.4 Inspection rules <RG06>***
  - Team numbers must be visible
  - Battery Mount - Batteries must be securely attached to the Robot in a location where they will not make direct contact with other Robots or the Playing Field - ***Reference 8.4 Inspection rules <RE02>***
  - Three phones will be phased out next season
  - Modern Robotics Control Module will be phased out
  - A new Rev Control Hub being piloted but can NOT be used in competition in our region

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FIRST TECH CHALLENGE
MISSOURI

Lead FTA
Jeff Ousley

FTA

- ***Assistance through out the season***
  - ***Contact Phil via email and we will get you the support you need***
- ***Assistance at an event***
  - ***As soon as possible let us know you have a problem***
- ***Programming support***
  - ***Tesla's Knight class for rookie teams – Sept 14***
  - ***Training day – September 21***
  - ***Programming Classes – October 19***

Grants

- Check out all the grants we know about on the STLFIRST website FTC Team Portal.
- KC STEM deadline is 9/11/19.
- REV Robotics deadline is 9/30/19.
- Don’t miss an opportunity!

Volunteering

- Judge at competition you are not attending.
- Volunteer in a role at a competition you are attending.
- Provide a volunteer for a Meet (playing at or not).
- Get friends, neighbors and sponsors involved.
- Volunteer from your *FIRST* dashboard.

Game Manual 1

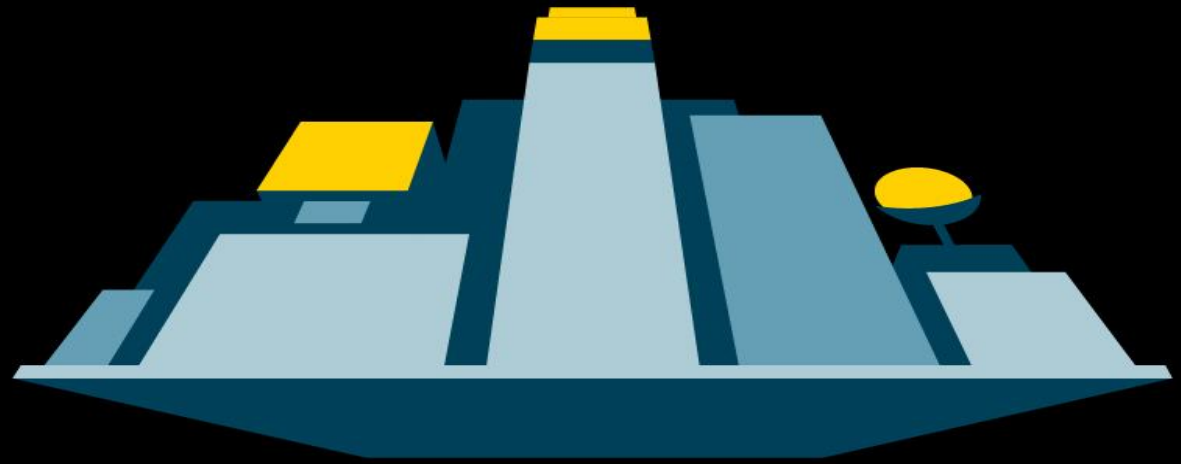
- Self-Inspection forms – required in MO/KS this year
- Weight – no more than 42 pounds (plan accordingly)
- Numbers – regulation size and position
- Power Switch – accessible and legal type
- Alliance Marker – NEW this year
  - Red square 2.5 in x 2.5 in
  - Blue circle 2.5 in diameter
  - No FLAGS
- Human Player – NEW this year

Closing Thoughts

- Our website www.stlfirst.org/ftc-team-portal
- *FIRST* website http://www.firstinspires.org/robotics/ftc
- YouTube https://www.youtube.com/user/FIRSTTechChallenge

Contact Us at FTC@stlfirst.org

Thank you for being part of the MO/KS *FIRST* Community!



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