

Mississippi *FIRST*[®] Tech Challenge **SKYSTONESM Kick-Off** **September 7, 2019**

(Updated 8/29/19)

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Mississippi **FIRST**[®] Tech Challenge
SKYSTONESM Kick-Off
September 7, 2019



Welcome

We're glad you are a part of the 2019-2020 *FIRST* Tech Challenge Season and this year's game: SKYSTONESM presented by Qualcomm. There are some new hurdles to go over and some awesome robot designs that I'm sure you are going to build in order to compete successfully. SKYSTONE is part of a whole new adventure for *FIRST* as we partner with *Star Wars: Force for Change*.

We've planned it. We've shaped it. Now our city is on the move.

The more we grow, the more important it is for us to work together—both droids and lifeforms—to adapt to our surroundings and find flexible solutions to the challenges that come.

Our city is growing, and we're growing with it. We're rethinking, repositioning, and reworking plans to ensure that our burgeoning home is the best it can be. We're pushing forward and up into the skies – and shifting the way we think about our place in the galaxy.

Our superstructures are designed to support our community and our lives, and we should support them, too—with a strong foundation, a strategic position, and the most adept technology at hand.

As we move each structure into its optimal space, we'll top it off with a crown of achievement—a final capstone to symbolize our reach into the sky, and dreams of a peaceful future.

Together we RISE. Join Us.

I wish you the best of luck on the upcoming season. If you have any questions, concerns, issues, or kudos, please feel free to contact me.

Mannie Lowe

FIRST Program Manager

Center for Mathematics and Science Education

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Agenda

***Times and locations may change. Updated 8/29/19*

MORNING AGENDA		
8:45 – 9:30	Arrive & Check-in Pay for Lunch (if applicable) Meet and Greet with Teams and Coaches	Building C Lobby
9:00 – 9:30	Guess the Game Element	Building C Lobby
9:30 – 10:00	Welcome and Keynote Angela Trigg, <i>Coach Team #6302</i> TBD, Keynote	Auditorium
10:00 – 10:45	<i>FIRST</i> Tech Challenge Kickoff Video and Game Reveal	Auditorium
10:45 – 11:30	Field Observations Mannie Lowe, <i>Game Design Committee</i> Dr. Kevin McKone, <i>Mississippi Head Referee</i>	Auditorium
LUNCH BREAK		
11:30 – 12:30	Provided by Hartfield Academy and Team #6302 - NEKOS Lunch: \$5.00 provides an all-beef hot dog, bag of chips, cookie, and a drink. Please email Angela Trigg with the number of lunches you would like to order. Deadline for lunch orders is Wednesday, 9/4 at 3:00PM. Team #6302 – NEKOS will be running a concession stand throughout the day.	



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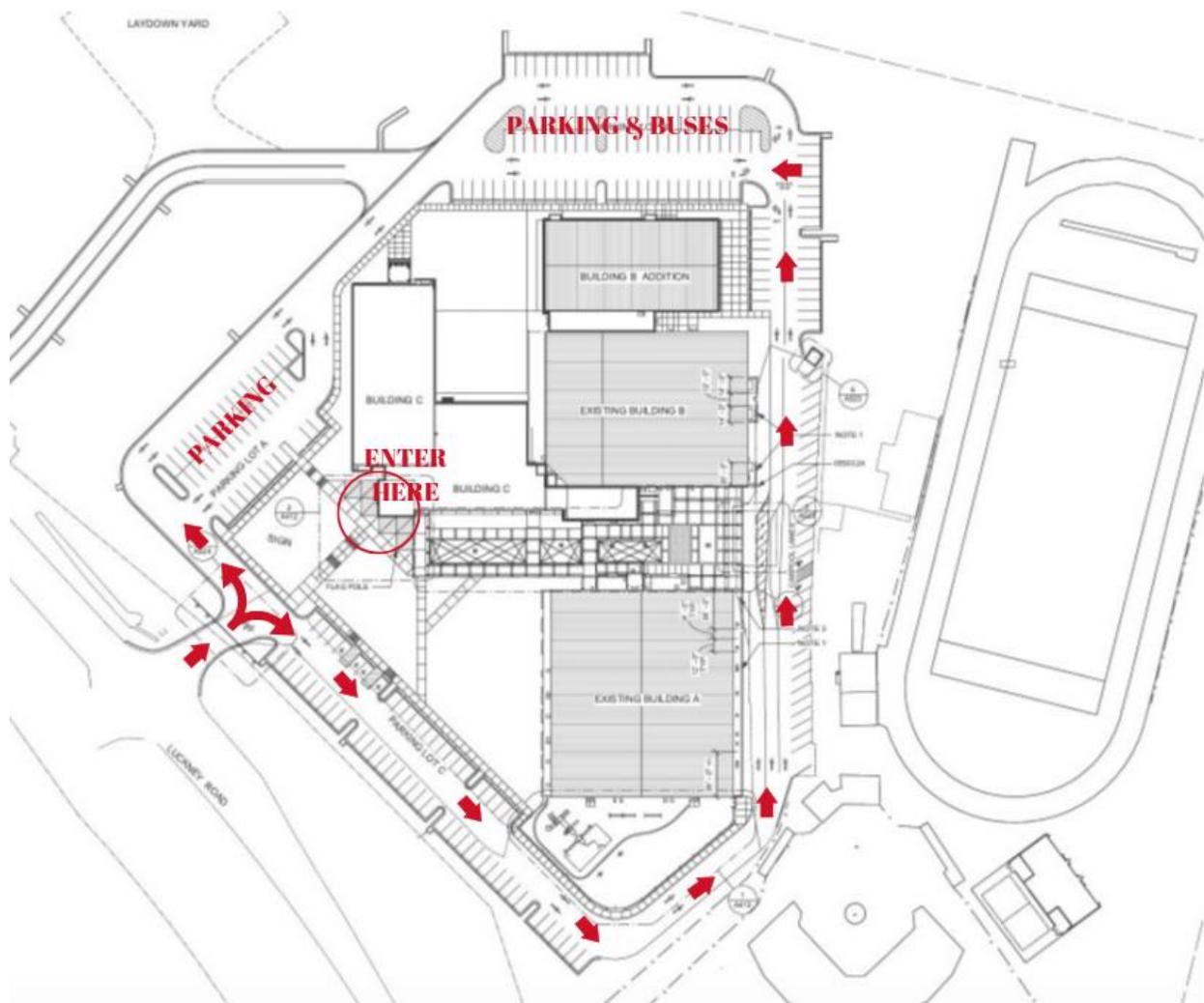
AFTERNOON AGENDA								
Time	Rm. 107	Rm. 109	Rm. 110	Rm. 111	Rm. 203	Rm. 205	Rm. 207	Auditorium
12:30 – 1:20	Tips, Tricks, and Ideas for Teams	How to Prepare for Judging	How to Make the Engineering Notebook Shine	TensorFlow and Vuforia - What and How	Introduction to Assembly Techniques in CAD	How to be an Emcee / Game Announcer	Basic Program Logic and Pseudocode	Field and Game Rules
1:30 – 2:20	Tips, Tricks, and Ideas for Teams	How to Prepare for Judging	How to Make the Engineering Notebook Shine	TensorFlow and Vuforia - What and How	Intermediate JAVA: Switches, Subsystems, and More	Who's the Boss? Effective Drive Teams	FIRST LEGO League Jr. - Team Outreach	Field and Game Rules
2:30 – 3:20	Tips, Tricks, and Ideas for Teams	Rookies: What You Need to Know	How to Make the Engineering Notebook Shine	TensorFlow and Vuforia - What and How	Intermediate JAVA: Switches, Subsystems, and More	Who's the Boss? Effective Drive Teams	Promoting Equity, Diversity, and Inclusion	Coach / Mentor Roundtable

FINAL SESSION		
3:30 – 4:00	Final Q&A for the Game and Season Awards and Giveaways	Auditorium

Directions and Maps

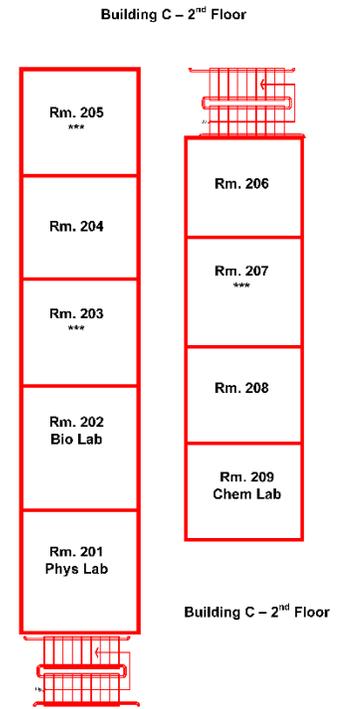
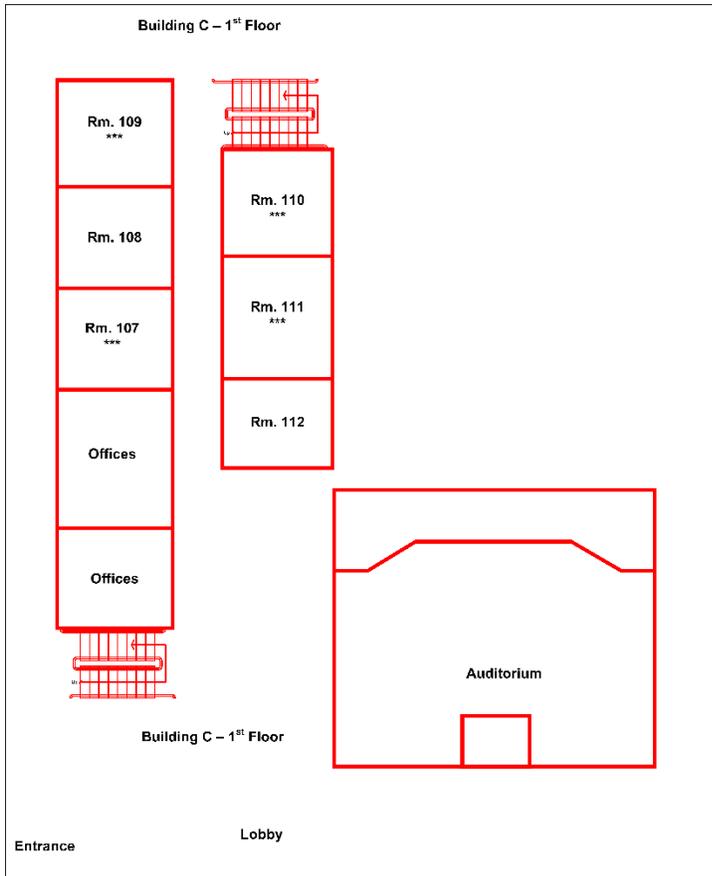
Hartfield Academy is located at 1240 Luckney Road; Flowood, MS 39232.

Upon arrival from Luckney Road, follow the map below. Buses should turn left when entering campus and park behind Building B. Kickoff will take place in Building C and the Auditorium (part of Building C). Please enter the building at the red circle shown below.



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The Main Event will take place in the Lobby of Building C and the Auditorium. After lunch, sessions will take place in Building C classrooms (1st and 2nd floor). See the agenda for more information. See below for building map.





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Session Descriptions ***Times may change.*

Basic Programming Logic and Pseudocode

Amanda Pham, FIRST alumna

12:30 PM – Room 207

Learn about the problem solving basics of coding and using pseudocode to document your programming process. Participants will learn about programming logic through interactive activities and exercises that they can share with their teams. The session will not focus on the technical aspects of programming in a certain language, but will focus on concepts and strategies for programming in any language. This session is targeted at coaches and students new to programming and aren't sure where to start.

Coach and Mentor Roundtable - (tell us what you want/need)

Facilitated by Mannie Lowe,

MS FIRST Tech Challenge Program Manager

2:30 PM – Auditorium

For coaches and mentors only. Let's discuss the upcoming season among peers by sharing ideas, thoughts, and wishes. Let's collaborate on upcoming qualifiers and scrimmages in order to develop friendships and veteran/rookie pairings. Let's talk about the future. This will be an open dialog among friends.

Field and Game Rules with Head Referee and GDC

Dr. Kevin McKone, MS Head Referee

12:30 PM – Auditorium

Mannie Lowe, GDC Member

1:30 PM – Auditorium

A thorough walk-through of the game rules will be reviewed. Highlights of new and updated rules among other topics will be discussed. Ask questions of our Mississippi Head Referee and a member of the Game Design Committee to make sure you understand everything before you design and build.

**this session will occur two times*

FIRST LEGO League Jr. - Team Outreach With an Impact

Ryan Melton, FIRST Certified Trainer and Coach Team #11279

Amanda Pham, FIRST alumna

1:30 PM – Room 207

Learn how your team outreach can have an impact by building *FIRST* in your community with the early-elementary-aged *FIRST* LEGO League Jr. program. This session will give an overview of the *FIRST* LEGO League Jr. season, BOOMTOWN BUILD, including an opportunity to get a hands-on look at season materials. This session is targeted towards any *FIRST* Tech Challenge teams interested in learning about ways to increase their community outreach through support of younger teams.

FIRST Resources for Promoting Equity, Diversity, and Inclusion

Amanda Pham, FIRST alumna

2:30 PM – Room 207

As an organization, *FIRST* aims to create a welcoming environment where every student can succeed. In order to fulfill this mission, *FIRST* has developed resources to help the community take proactive steps towards increasing inclusion and addressing inequities. This session will provide an overview of the coach, volunteer, and student resources available from *FIRST* to promote Equity, Diversity, and Inclusion. These resources will include the *FIRST* Inspiring Success for All training modules, student training modules, and recently launched Allies and Influencers initiative. This session is open to everyone - information will be beneficial to coaches, mentors, parents, and students.



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How to be an Emcee/Game Announcer (the FIRST way)

Nathan Rodgers, FIRST alumnus

12:30 PM – Room 205

For seniors, FIRST alumni, and adult volunteers only. Learn the tips and tricks of being a Master of Ceremonies (emcee) and Game Announcer. Led by FIRST alumnus, Nathan Rodgers, who will discuss what to do and what NOT to do. Nathan was trained by FIRST Headquarters to be an emcee or game announcer and has proven his worth in all programs and at the World Championships. We need more alumni and volunteers to learn these skills to help spread FIRST throughout the state.

How to Make the Engineering Notebook Shine

*Kylynne Mockridge, FIRST alumna
Team #6302 - NEKOS*

12:30 PM – Room 110

1:30 PM – Room 110

2:30 PM – Room 110

The Engineering Notebook (ENB) is, more often than not, left to the end of meetings or (worse) filled out the night before competition. In this session, learn why that is a no-no and how to implement your notebook throughout your meetings and season. Note: The ENB is required for all awards given at Qualifiers.

**this session will occur three times*

How to Prepare for Judging

Mississippi Judge Advisory Group (JAG)

12:30 PM – Room 109

1:30 PM – Room 109

Learn about the newly created Judge Advisory Group (JAG) and details about the awards. This session will discuss the similarities and differences of the awards, what the judges look for, and things you need to know prior to your interview.

**this session will occur two times*

Intermediate JAVA – Switches, Subsystems, and More

Ryan Dahms, FIRST alumnus

1:30 PM – Room 203

2:30 PM – Room 203

Participants in this session will gain an understanding of more advanced JAVA programming techniques through lecture, discussion, and examples. Topics that will be touched on include the use of control loops, switch statements, and sub-systems. This session is suggested for students taking primary responsibility for programming their team’s robot.

**this session will occur two times*

Introduction to Assembly Techniques in Computer-Aided Design (CAD)

Ryan Dahms, FIRST alumnus

12:30 PM – Room 203

This session will introduce participants to the basics of Computer Aided Design (CAD) with a focus on its use in assembling a robot made from commercially available parts. The session will consist of lectures, demonstrations, and open discussion. Autodesk Fusion 360 will be used for examples but techniques are applicable across all common CAD software. Students and coaches wanting a basic understanding of CAD are encouraged to attend this section.



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Rookies: What You Need to Know about FIRST Tech Challenge

Team #11279 – Pure Imagination

2:30 PM – Room 109

Taught by a 4-year veteran team, learn what you need to know as a relatively new team in *FIRST*, including what to do, and what not to do. Information to be shared include: Things that you shouldn't let fall through the cracks and others that you can, temporarily; what happens at a scrimmage and qualifier; and what you should do with all the information that Mannie sends.

TensorFlow and Vuforia - What and How

Team #8651 – Wait For It...

12:30 PM – Room 111

1:30 PM – Room 111

2:30 PM – Room 111

FIRST Tech Challenge teams have access to some very powerful tools to use for programming their robots. TensorFlow (by Google) gives students the ability to teach their robot to learn things based on visual cues provided throughout the field. Vuforia (by PTC) introduces students into the field of Augmented Reality. Team #8651 – Wait For It... used both tools to help them navigate around and identify items on the field. Learn their tricks of the trade in this session.

**this session will occur three times*

Tips, Tricks, and Ideas for FIRST Tech Challenge Teams

Team #3486 – Techno Warriors Advanced

12:30 PM – Room 107

1:30 PM – Room 107

2:30 PM – Room 107

Led by our longest running team in the state, Team #3486 – Techno Warriors Advanced. Learn from their vast knowledge of tools, tips, ideas, and suggestions on how you can excel in the *FIRST* Tech Challenge.

**this session will occur three times*

Who's the Boss? How to Work Together as an Effective Drive Team

Nathan Rodgers, FIRST Alumnus

1:30 PM – Room 205

Jon Rodgers, FIRST Alumnus

2:30 PM – Room 205

Every robot is only as good as its drive team. Find out how to make an effective drive team through this session by *FIRST* alumni Nathan and Jon Rodgers as they discuss drive team member roles, tips and tricks, and the nitty-gritty details of being on a drive team.

**this session will occur two times*