ODYSSEY INSTITUTE FOR ADVANCED AND INTERNATIONAL STUDIES

BUCKEYE AZ

FTC ROBOTICS TEAM 6174

The Automatons

WHAT IS OIAIS?

- OIAIS is our High School, it stands for The Odyssey Institute for Advanced and International Studies in Buckeye, Arizona.
- We are an IB School with a focus on high academic achievement, character acquisition, and cultural awareness.
- The Odyssey Institute emphasizes global citizenship and personal values, and the bar is set nothing short of excellence for all team members and scholars.

WHO IS TEAM 6174?

- We are a ***FIRST*®** **FTC** Registered Robotics Team!
- We were founded by Coach Tom Kolberg in 2012 with 5 members (all freshman), our 1st year we finished last, but we never gave up!
- The faces may change throughout the years but our team is always comprised of like minded scholars anxious to explore the world of STEM and Robotics!
- We have traveled to the State Championship several times, as well as to Super Regionals in Spokane, and to the World Championship in Houston.
- We are the **Current State Champions** (defined by having won the Inspire Award at the 2018 State Championships).

WHAT IS FIRST?

For Inspiration and Recognition of Science & Technology.

FIRST ® Robotics Competition is the ultimate **Sport for the Mind**. High-school student participants call it "the hardest fun you'll ever have."

Under strict rules, limited resources, and an intense six-week time limit, teams of students are challenged to raise funds, design a team "brand," hone teamwork skills, and build and program industrial-size robots to play a difficult field game against like-minded competitors. It's as close to real-world engineering as a student can get. Volunteer professional mentors lend their time and talents to guide each team. Each season ends with an exciting ***FIRST*** ® Championship.

FIRST CORE VALUES

To further unify the mission of ***FIRST***® and create consistency as students progress through their programs, they have created a cross-program set of values that represents the ***FIRST***® experience and the ***FIRST***® community. They express the ***FIRST***® philosophies of Gracious Professionalism® and Cooperation® through our Core Values:

- **Discovery:** We explore new skills and ideas.
- **Innovation:** We use creativity and persistence to solve problems.
- **Impact:** We apply what we learn to improve our world.
- **Inclusion:** We respect each other and embrace our differences.
- **Teamwork:** We are stronger when we work together.
- **Fun:** We enjoy and celebrate what we do!

HOW FTC WORKS

FIRST ® Offers several leagues.

We are part of the **FTC**.

First Tech Challenge

WHAT IS *FIRST* ® TECH CHALLENGE (FTC)?

- It's ***way more*** than just building robots. FIRST Tech Challenge teams (Grades 7-12) are challenged each year to design, build, program, and operate robots to compete in a head-to-head challenge in an alliance format. Participants call it "the hardest fun you'll ever have!"

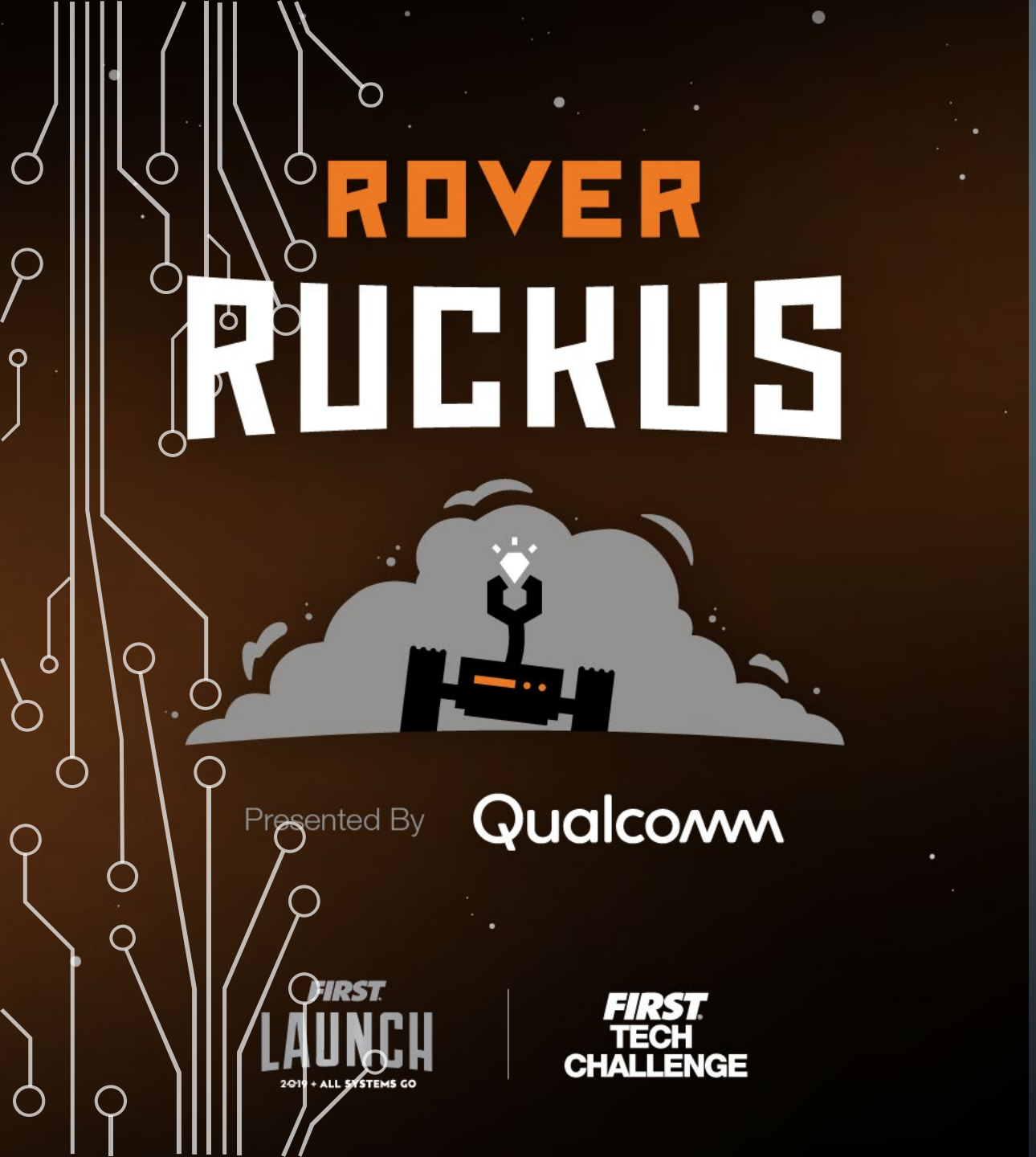
- Guided by adult Coaches and Mentors, students develop STEM skills and practice engineering principles (like keeping an engineering notebook), while realizing the value of hard work, innovation, and sharing ideas. Teams also must raise funds, design and market their team brand, and do community outreach.

- Each season concludes with a World Championship.

FIRST® TECH CHALLENGE

BEING ON A ROBOTICS TEAM WITH FIRST ® ALLOWS OUR SCHOLARS TO….

- Design, build, and program robots from scratch to accomplish a goal
- Get hands-on programming and rapid prototyping experience
- Apply real-world math and science concepts
- Document the engineering process
- Develop problem-solving, organizational and team-building skills
- Learn about Gracious Professionalism
- Compete and cooperate in Alliances at tournaments
- Meet like minded scholars from around the world
- Earn a place in the FTC World Championship
- Qualify for more than $10 Million in college scholarships
- Make life long friendships!



2018-2019 SEASON GAME

ROVER RUCKUS℠ presented by Qualcomm® Incorporated is played on a 12 ft. x 12 ft. (3.7m x 3.7m) square field with approximately 1 ft. (0.3 m) high walls and a soft foam mat floor. The object of the game is to attain a higher score than the opposing alliance by descending from the Lander, collecting Minerals from the Crater, sorting and scoring Minerals into the Cargo Hold of the Lander, performing Autonomous tasks, and navigating to specific parts of the Playing Field. The Scoring Elements for the game are 60 Silver Minerals and 90 Gold Minerals, and a team supplied Team Marker.

There are two alliances of two robots each – “red” and “blue”. There are two alliance-neutral Craters sit in opposite corners of the Playing Field and two Alliance- specific Depots are in the other corners. Unique navigation targets are placed in the center of each field wall. In front of each corner is a Mineral Sampling Field with 2 Silver Minerals and 1 Gold Mineral, randomly lined up. Field personnel will randomize the Minerals in the Sampling Field prior to the start of the Match. The remaining Minerals are divided approximately equally and placed in each Crater.

The Lander sits in the center of the field with Alliance- specific Landing Zones marked by red and blue tape surrounding it. Prior to the start of a match, robots may be Latched onto the Lander. Robots that cannot be Latched must start in the alliance’s Landing Zone under one of the Alliance’s Lander Support Bracket. Robots may also preload a Team Marker.

WHY DO WE NEED SPONSORS?

We are very thankful for ALL of our sponsors, every little bit helps and we could not do it without you!

Better Parts & Spare Parts	Every year we build a new robot to accomplish the tasks in the new game, we reuse what we can from the previous season but some parts wear out after several competitions. There is always a need for NXT, wheels, plexiglass, gears, motors, servos, etc. Part of being in FIRST, they teach us to be prepared for anything - extra parts are required to have on hand, such as extra gears, motors, servos, controllers, etc.
Technology	Part of the game is to run in autonomous mode, for this our talented programmers need current software, Wi-Fi routers and phone to control the robot. We also have a CAD team that is busy designing the robot as we speak!
Practice Facilities	In addition to building a functional robot, an imperative part of being a winning team is practice, practice, practice! This creates the need for FTC Regulated Mats, FTC Playing Field, carts and tool boxes to transport the robot and tools to competitions, and of course safety glasses!
Team Spirit	There is nothing better than looking into the stands or on the field and seeing all the support we have! A fun part of FIRST as well is to show our team spirit in the pits by having banners, T-Shirts, hats, posters, buttons and bracelets to hand out to other teams, etc.
Competition Fees & Travel Expenses	Each competition we enter gets us one step closer to State Championships and possibly World Championships, however with each competition there are entrance fees and travel expenses.
Community Outreach	We love reaching out to our community and spreading the word about STEM, robotics, and FIRST. At the end of the season there is also an award that FIRST presents to teams that have shown enthusiasm in getting out into their community both outreach and sponsor wise!

WHY ARE WE VISITING YOU TODAY?

It's simple, We need your support! The new season has just begun and we are excited to create our robot and get to qualifiers and competitions!

There are three fundamental and important steps to be an FTC Robotics Team with ***FIRST*** ®.

- **Step 1: Fundraising** to raise money to acquire parts to build the above mentioned robot.
- **Step 2: Build Innovative Robots** that can accomplish the tasks set forth in each year's game.
- **Step 3: Community Outreach** to not only help in our communities but also share how great robots are!

STEP 1.
FUNDRAISING

Section 1.1 Fundraising Plan Overview

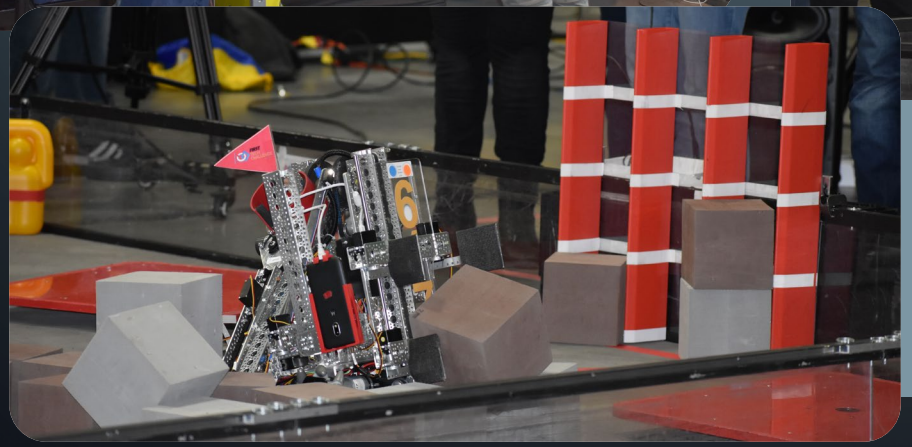
The FIRST Fundraising Plan Overview is a key component of a team business plan that is specifically focused on team fundraising and Sponsor benefits. The overview has been created to help teams organize their fundraising efforts. A team has to have a clear understanding of their strengths, weaknesses, benefits of sponsorship, and impact before they can start approaching Sponsors to create a partnership. The Fundraising Plan Overview helps a team:

- Discover areas of strengths and weakness.
- Organize a budget.
- Understand the impact of their program.
- Explain the benefits of a partnership with a sponsor.

- *FIRST* ® expects teams to raise their own funds for competition. Teams are not expected to be fully funded by their host school or organization.

- We also obtain life skills by raising our own money.
  - Helps us in our planning to create and maintain a sustainable club.
  - Expansion of our robotics program.
  - Reduces dependency on our parents & school.

STEP 2. BUILD ROBOTS AND COMPETE



Let's face it… building robots and competing against other robots built by scholars our age.. **is AWESOME!**

STEP 3. COMMUNITY OUTREACH

It is true that community outreach is a requirement to be a registered team of ***FIRST***® … however, as a team… we LOVE to give back to our community and spread the word about STEM!

TEAM 6174 IN THE COMMUNITY

Adopt a Road
Near Yuma & Airport
in Buckeye, AZ

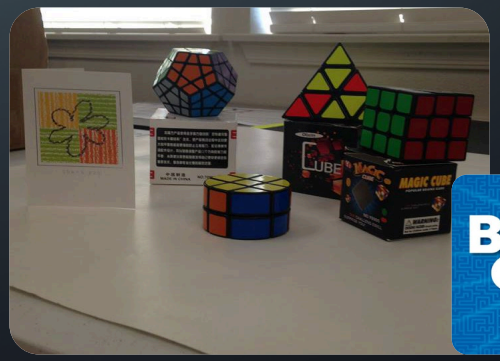
Future Freshman Night / Day

3-D Printing Workshop

ROBOTICS

Helping Boy Scouts and Girl Scouts to earn their robotics badges

Buckeye Brain Games
For City of Buckeye Parks
and Recreation



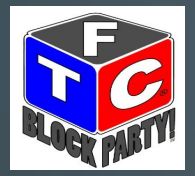
TEAM 6174 IN THE COMMUNITY

Our local Home Depot asked us to come out during the summer and help with their Kid's Workshops, we also bring our robot and introduce young kids to the world of robotics!

OUR HISTORY..WE'VE COME A LONG WAY!

2012-2013

- **5 MEMBERS** (all freshman)
- Our rookie season
- "No name" team
- Competed in only one competition and… finished dead last!



2013-2014

- **9 MEMBERS**
- We selected the name "Automatons"
- Reached the finals at the Arizona State Championship before being eliminated

2014-2015

- **11 MEMBERS**
- Nominated for 13 Awards and Won 4!
- 1st alternate to advance from States to Regionals

2015-2016

- **15 MEMBERS**
- 1st season with upper classman
- **Won the Inspire Award** FTC's highest honor!
- Nominated for 12 Awards and Won 3!
- Competed at the State Championship in Flagstaff
- 1st alternate to to advance to Regionals

2016-2017

- **11 MEMBERS**
- Nominated for 11 Awards and Won 4!
- 1st alternate to advance from States to Regionals
- Competed at the World Championships in Houston, TX

2017-2018

- **15 MEMBERS**
- **Won the Inspire Award** FTC's highest honor!
- Nominated for 12 Awards and Won 4!
- Competed in the State Championship, **Won the Inspire Award** making us the State Champs, and advanced to Regionals in Spoke, WA!

2018-2019

- **14 MEMBERS** (2 Seniors, everyone else are freshman and sophomores)
- Reigning State Champions!

THE SKY IS THE LIMIT!

THANK YOU TO OUR SPONSORS!

RECAP OF LAST YEAR….

GLENDALE QUALIFIER
December 2, 2017
- **Winning Alliance**
- ***Inspire Award Winner***
- Motivate Award Nominee
- Control Award Nominee
- Design Award Nominee

CHANDLER QUALIFIER
January 20, 2018
- ***Think Award Winner***

GOODYEAR QUALIFIER
February 10, 2018
- **Winning Alliance**
- ***Control Award Winner***

ODYSSEY AUTOMATONS
We Dream, We Achieve, We Lead
2017 2018

AZ NM STATE CHAMPIONSHIP
February 23-24, 2018
- **Enchantment Division Finalist Alliance**
- ***Inspire Award Winner***
- Control Award Nominee
- Rockwell Collins Innovate Award Nominee
- Think Award Nominee

on to…

SUPER REGIONALS!
Spokane, WA 3/8/18-3/11/18