

## TEAM HANDBOOK

CREATING STRONG FIRST IMPRESSIONS, AND A  
LASTING IMPACT SINCE 1992

*FIRST*® ROBOTICS COMPETITION

UPDATED FALL, 2021



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Current team schedule available at: <http://www.technokats.org/calendar/>

## Purpose

The purpose of this handbook is to be an information source for members of *FIRST* Team 45, the TechnoKats Robotics Team, its supporters, and their families, and a reference tool for other *FIRST* Robotics teams. It includes information on the team, leadership opportunities, financial information, and team member expectations. Safety training information is included in a separate Safety Manual. Specific Mentor Information is included in a separate Mentor Handbook.

## A Student-Led Team

The TechnoKats is a student-led team. This means that students, under the guidance of team coaches, have the responsibility of leadership roles, develop leadership skills, and take part in decision making.

## Community Partnership

*FIRST* Team 45, the TechnoKats, is a Kokomo High School organization which partners with community sponsors and organizations. Coaches, mentors, and team members are expected to uphold the values of *FIRST*.

The Team also partners with our community, Indiana *FIRST*, and the entire *FIRST* community in a variety of ways, including:

- Participating in the Kokomo New Year's Eve Ball Drop
- Providing technological support for Relay for Life
- Participating in Kokomomentum and KSC events and activities
- Supporting and volunteering and for various community organizations, such as Bona Vista, the Community Foundation of Howard County, Bridges Outreach, and other organizations
- Hosting the City of *FIRST*'s Lego League Qualifying Tournament
- Hosting and volunteering at FRC Competitions
- Co-hosting of the Indiana Robotics Invitational (IRI) Tournament
- Participating in the Howard County Robotics Coalition
- Providing electrical set-up for Indiana *FIRST* events

## Sponsorship Opportunities

There are several levels of sponsorship available, appropriate for both individuals and businesses. For more information on sponsorship opportunities, contact Dr. Dewing at [joy.dewing@technokats.org](mailto:joy.dewing@technokats.org).

## ***FIRST***

*FIRST* was founded in 1989 to inspire young people's interest and participation in science and technology. Based in Manchester, NH, the 501 (c) (3) not-for-profit public charity designs accessible, innovative programs that motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills.

### FIRST's Vision

*"To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology heroes."*  
~ Dean Kamen, Founder

### FIRST's Mission

Our mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

Find out more at <http://www.usfirst.org/>

### TechnoKats' Mission

TechnoKats is a student-led team dedicated to promoting STEM and life skills, including creativity, critical thinking, communication, and collaboration. Members maintain the legacy of Team 45 with partnerships within the team, within the local community, and within FIRST.

### Team Goals

- Inspire students in the areas of science, technology, engineering, and math
- Prepare students for leadership roles
- Promote Gracious Professionalism
- Increase community and state awareness of STEM education opportunities
- Promote teamwork
- Mentor students through positive role models
- Boost the level of competition in *FIRST* by providing technical assistance and organizational mentoring to other *FIRST* teams
- Continuously improve

## History of TechnoKats

Kokomo High School's robotics team has participated in the *FIRST* Robotics Competition since its inception in 1992. In that year, the Delco Electronics/Kokomo-Center Schools "DEKCS" partnership formed the Science Kats, one of 28 teams to compete in the inaugural *FIRST* competition. Since then, *FIRST* has grown to include over 5,000 high school teams in countries around the world. Today, the TechnoKats are one of six remaining original, or Legacy, teams.

During the past 25 years, the team has grown and developed. The team adopted its current name, the TechnoKats, Delco became a division of Delphi, and other sponsoring partners have joined the team. From 1998 to 2018, the team's shop was provided by Duke Energy. In 2000, the team started the first off-season event, Hoosier Havoc, which later came to be known as the Indiana Robotics Invitational (IRI). In 2004, two team mentors, Andy Baker and Mark Koors, started robotics supplier AndyMark, Inc. In 2011 the team began hosting a FLL Qualifying Tournament, and in 2015 hosted one of the first Indiana District Events. During its 28 year history, the team and has assisted in starting and supporting numerous other FRC teams throughout Indiana and the U.S. Team alumni have gone on to become mentors of teams across the U.S. Through high levels of competition, volunteer activities, and sponsoring new programs and competitions, the TechnoKats have made a name for themselves in Howard County and in the *FIRST* community.

The team is proud of this history. The TechnoKats have a strong tradition of competing at a high level in *FIRST*, while also being a model team by demonstrating gracious professionalism and being innovative within the *FIRST* community. The TechnoKats continually strive to uphold the *FIRST* values and to improve ourselves.

TechnoKats alumni have gone on to work as engineers, scientists, and entrepreneurs in various fields. Alumni work in the automotive industry for such companies as Lockheed Martin, Delphi, and GM. Others work in robotics fields, aerospace, information technology, consumer electronics, and health care. It is certain that being a TechnoKat played a role in their career choices. Since the team began in 1992, over 80% of the team's alumni have studied and/ or worked in STEM-related fields.

The success, stability, and longevity of the team is a direct result of the strong partnerships and support from the community, support from Kokomo school Corporation, and the dedication of mentors, sponsors, parents, and students.

## Awards

Although we are proud of our past achievements and awards, the development of character and of skills is much more important. Numerous leadership opportunities are available to TechnoKats team members, and the *real* successes are seen when students succeed in finding how they can make this world a better place through a STEM-related career and working within their communities.

### **Past Awards:**

1992 National Competition Finalist  
1992 Ultimate Keeper Award  
1994 Chairman's Award Finalist  
1995 Chairman's Award Finalist  
1998 National Competition Champion  
1998 National "Technical Excellence" Award  
1998 Great Lakes Regional Runner-Up  
1998 Great Lakes Regional "Best Play" Award  
1999 National Competition Runner-Up  
1999 Midwest Regional "Outstanding Defense"  
2000 National "Xerox Creativity" Award  
2000 Midwest Regional Champion  
2000 Great Lakes Regional Runner-Up  
2000 Scholarship: \$20,000 Kettering University, Vinny Cothorn  
2001 National Competition #1 Seed & Division Finalist  
2001 Midwest Regional GM Industrial Design Award & Finalist  
2001 W. Michigan Regional Leadership in Controls Award & Finalist  
2001 Scholarship: \$20,000 Kettering University, Philip Lundberg  
2002 Championship Competition #4 Seed & Division Semi-Finalist  
2002 Championship Autodesk Animation Technical Excellence Award  
2002 Midwest Regional Chairman's Award Winner  
2002 Midwest Regional Runner-up  
2002 Indiana Vocational Education Excellence Award  
2003 Championship Competition #3 Seed  
2003 Midwest Regional Champion  
2003 Midwest Regional Judges Award for Exemplary Sportsmanship  
2003 St. Louis Regional Sportsmanship Award  
2003 Pittsburgh Regional Sportsmanship Award  
2003 Championship Woodie Flowers Award Winner, Andy Baker  
2004 Championship Competition, Division Finalist  
2004 Midwest Regional Champions  
2004 Midwest Regional Sportsmanship Award  
2005 Championship Competition, Division Semi-Finalist  
2005 Midwest Regional Engineering Inspiration Award  
2005 Midwest Regional Safety Award  
2005 Boilermaker Regional Judges' Award for Outstanding Excellence  
2005 Scholarship: \$30,000 Delphi/Purdue University FIRST 2005 Scholarship, Austin Butler  
2005 Scholarship: \$2,000 Boilermaker Regional Scholarship, \$1,000 IRI Scholarship, Greg McCoy,  
2006 Boilermaker Regional Chairman's Award  
2006 Boilermaker Regional Woodie Flowers Award, Mark Koors  
2007 St. Louis Regional Motorola Quality Award  
2007 St. Louis Regional Champions

2007 Boilermaker Regional Motorola Quality Award  
2007 Championship Volunteer of the year award, Mark Koors  
2008 St. Louis Regional Finalist  
2008 St. Louis Regional Engineering Inspiration Award  
2008 Boilermaker Regional Finalist  
2008 Boilermaker Regional Industrial Design Award  
2009 Washington DC Regional General Motors Industrial Design Award  
2009 Washington DC Regional Winner  
2009 Boilermaker Regional Chairman's Award  
2009 Boilermaker Regional Finalist  
2009 Boilermaker Regional Xerox Creativity Award  
2010 Boilermaker Regional Champions  
2010 Boilermaker Regional Motorola Quality Award  
2011 CAGE Match, \$1,000 Art Anderson Memorial Scholarship winner, Glenda Hernandez  
2012 Boilermaker Regional Website Award  
2012 Queen City Regional Winner  
2013 Regional Woodie Flowers Winner, Mike Carmain  
2013 CAGE AndyMark Award for Awesomeness, Alan Anderson  
2014 Boilermaker Regional Innovation and Control Award  
2014 Arkansas Regional Safety Star of the Day Award, Cameron Ellison  
2015 Kokomo District Gracious Professionalism Award  
2015 Kokomo District Underwriters Laboratory Hard Hat Safety Award  
2015 Dean's List Semi-Finalist, Kyle Heaton  
2015 Boilermaker District Team Spirit Award  
2015 Indiana State Finals Underwriter Laboratory Hard Hat Safety Award  
2015 Indiana State Finals Woodie Flowers Winner, Alan Anderson  
2016 Tippecanoe District Champion  
2016 Perry Meridian District Champion  
2016 Indiana State 4<sup>th</sup> Seed and Semifinalist  
2016 Indiana State Underwriters Laboratories Hard Hat Safety Award  
2016 World Championships – 7<sup>th</sup> Seed and Quarterfinalist in Archimedes Division  
2016 Indiana Robotics Invitational – 7<sup>th</sup> Seed and Quarterfinalists  
2019 Tippecanoe District Creativity in Design Award, sponsored by Xerox  
2019 Tippecanoe District 8<sup>th</sup> seed alliance captain  
2019 World Championship 17th seed in Carson division  
2021 Imagery Award for Game Design Challenge entry: Barnstorm!

## Team Projects

### **RECENT OFF SEASON PROJECTS**

Discount card sales  
Other fundraising activities  
Developing sponsor relationships and new sponsors  
Howard County Relay for Life  
Indiana Robotics Regional (IRI) Host  
Kokomomentum Summer Camp and/ or TechnoKittens Summer Robotics Camp (as available)  
Shop cleaning and equipment training  
Shop organization and inventory  
CAD, electrical, and software training  
C.A.G.E. Match offseason competition  
FLL Qualifying Tournament Host and Organizers  
New Year's Eve Ball Drop/ Markland Mall display  
Safety & CPR Training

### **PAST PROJECTS**

1994-1997: Pop Can Regatta  
1998-2000: TechnoKat Challenge  
1998-2000: Haynes-Apperson Parade  
1999-present: New Year's Eve Ball Drop  
1999: KHS Technical Library  
2000: Haynes Car Turntable  
2000-2003: TechKnowFest (Ivy Tech)  
2000-present: Indiana Robotics Invitational (IRI)  
2001-2003: Delphi Technical Forums  
2001: FIRST Lego League team sponsorship & startup  
2001: ChiefDelphi Invitational Robot Build  
2002: Bona Vista TechnoBox  
2002- Presented Indiana FIRST Workshops & Leaders Meetings  
2003: Tinkertoy Challenge  
2003-2004: RibFest Pig Drop  
2003-2009: RoboEducators (Ivy Tech)  
2003-2008: Bona Vista putt-putt course construction and participation  
2004: United Way Donation Tracking with Lighted Ball  
2004: Woodie Flowers Award mobius assembly  
2005: FIRST Lego League Mentoring  
2005-2009: IRI Vex Challenge (Ivy Tech & Team 447)  
2005-2009: Boilermaker Regional Planning Committee  
2006: All Girls Vex Team  
2006-present: American Cancer Society Relay for Life team  
2006-2007: TechnoKats History Project  
2007: Bona Vista Playground Cad Model  
2007-present: Relay for Life Lumanaria Ceremony video display  
2008-2009: *FIRST* President's Circle  
2009-2013: Built trailer for Tearwood Medical Clinic in Guinea  
2011- present: Host FIRST Lego League Qualifying Tournament  
2012: Partnered with Green Alternatives to use collected solar energy to power New Year's Eve ball  
2012: Began midnight Dodgeball Game during Relay for Life  
2013: Bona Vista Robot Room  
2013: Fall Robotics Game: Not in My House  
2014: Fall Robotics Game: Skee Bowl

2014: Began working with Kokomomentum Summer Camp & after school program  
2015: Developed Team Safety Manual and Training Program  
2016: TechnoKittens Summer Robotics Camp  
2016-2019: Designed and built new ball for the Kokomo New Year's Eve Ball Drop

Many team projects focus on training students, preparing for the season, and improving the Kokomo, Howard County, and *FIRST* communities. These projects prepare the team not only in technical aspects of completing a project, but also in being prepared to work together.

## Competition Season

The competition season begins the weekend following the Stop-Build in late February or early March and runs through World Championships at the end of April. All team members who meet the expectations are eligible for travel.

## Schedule

Year Round:

Tuesday Team Meetings 5:30-6:00

Fall:

Sept.: Student/ Parent Kick-off Meeting, KHS Cafeteria

Work on awards  
Safety Animation video  
Fall Robotics Game, project, or competitions  
Homecoming Spirit Sheet  
Various Projects and events  
Machine and Safety Training  
CPR Training  
HoCoRoCO Training Sessions

Oct.: CAGE Match

Nov.: FIRST Lego League Tournament host

Winter:

Dec.: NYE Ball Drop or mall display

Jan.:

First Saturday in January: Season kick-off webcast,  
Meet and plan strategy

Kick-off – Spring Break: (tentative - finalized schedule will be announced at kick-off)

Study Tables: KHS 2:30-3:30

Days and location TBA in January

Shop Sessions: 5:30-8:00 (clean-up at 7:45)

Days TBA in January (typically 3 days per week)

Saturday Shop Sessions: 9:00 a.m. – 3:00 p.m. (clean up at 2:45)

Lunch will be served (sign-up sheet in January)

Feb.:

Shop sessions continue

March & April:

During March and April, the team will compete in at least 2 district competitions within Indiana. The team is responsible for electrical set-up and tear-down at all Indiana district competitions and at Indiana State Finals. Dates of events we will be competing at will be available in November, and posted on the team website and in team meeting minutes.

Shop sessions will continue as needed – schedule will be posted

May:

Senior and Sponsor Recognition Dinner

Summer:

Indiana Robotics Invitational (date TBA)

Tuesdays: Shop Sessions 5:30-7:30 (as scheduled)

Other activities TBA

For other events and the most current schedule, see the team website at [www.technokats.org](http://www.technokats.org)

- The team will follow the school schedule for closures due to weather. If school is closed, the shop will also be closed.

# Finances

## Annual Student/ Family Costs:

- \$45.00 – Team Participation Fee – due by Tuesday before fall break
- \$350.00-\$500 – World Championship Travel Fee (covers hotel and travel – price depends on location and travel costs)
  - \$100 deposit due by first Tuesday in February
  - \$100 due by first Tuesday in March
  - \$150 due by last Tuesday in March
- Individual meals at events
- Additional, optional team activities
- \$30-40 (optional)– team sweatshirt or other team gear

All team members will receive:

- 1 pair of safety glasses for their (up to) 4 years on the team
- Bag/ Case for safety glasses
- Team uniform shirts each year
- Training on machines, software, safety, etc.

## Fundraising Opportunities

- Fall semester: optional work sessions at AndyMark, as scheduled. Students earn \$10 per hour for their team account
- Ongoing: Discount Card Sales -\$5. Students earn \$4 for their team account for each discount card sold
- Other fundraisers organized by the parent committee
- Students may apply for a need-based travel scholarship for World Championships once during their time on the team

## Costs covered by Kokomo School Corporation:

- ◆ Teacher coach contracts
- ◆ Bus transportation
- ◆ Substitute teachers during team travel

**Costs covered by TechnoKats not-for-profit “club fund”** (funded by sponsors, grants, donations, and fundraising) include:

- ◆ *FIRST* Competition entry fees
- ◆ Robot parts and materials
- ◆ Playing field costs
- ◆ District & State competition travel
- ◆ Senior scholarships
- ◆ Non-*FIRST* competition costs
- ◆ Various materials and supplies
- ◆ Team Open House
- ◆ Team uniforms
- ◆ Travel expenses
- ◆ Hotels for district events
- ◆ Special projects

## Team Benefits

There are many potential rewards for TechnoKats members.

### Scholarships

- Each graduating senior who applies for will receive a TechnoKats college scholarship of \$100 per full year of team membership. An application will be available each spring and is due by the third Tuesday in May
- More than 16 million dollars in other scholarships were available for *FIRST* Team members last year. Check out the list on the *FIRST* web site: <http://www.usfirst.org/scholarships>

### Internships

- Experienced TechnoKats are exposed to and preferred for internships with local companies.
- Delphi, FCA, and AndyMark have hired college-aged, former TechnoKats as interns at their Kokomo facilities.

### Experience

- Many corporations across the nation participate in *FIRST* and want to hire *FIRST* students. Being on a *FIRST* team exposes students to these corporations, and also helps teach the skills that these companies look for in employees.

### High School Varsity Letter

- Students who meet travel requirements, are active members for 2 years, participate in at least 50% of off-season activities, attend at least 50% of meetings, attend at least 3 competitions per year, and take a lead role on a special project can earn a KHS TechnoKats varsity letter. See application in Appendix F.

## Team Leadership

The TechnoKats offer many leadership opportunities for both students and mentors. The chart on the following pages show the current leadership opportunities, as updated by a student committee in November, 2018. A more detailed list of expectations for these roles and an application is in Appendix I.

The TechnoKats encourage students to take on leadership roles throughout their time on the team. The TechnoKats is a Student-Led Team. This means that students, under the guidance of team coaches and mentors, have the responsibility of leadership roles, develop leadership skills, and take part in team decision making. A working flow-chart of responsibilities and coaches overseeing responsibilities for each role is included in Appendix A.

Student lead roles are assigned through an application and voting process, an application and appointment process, or on a volunteer bases. Additional information on applying for leadership roles is included in this handbook and will be provided during team meetings. Leadership roles may vary slightly from year to year, based on team needs.

## Leadership Cabinet

A Leadership Cabinet made up of coaches and mentors makes recommendations for the team.

The responsibilities of the Leadership Cabinet include:

- recruiting and overseeing mentors
- recruiting new sponsors
- making recommendations for the running of the team
- providing a sounding board for team members
- managing team projects and programs and making project recommendations to the team

## Team Captain

- oversees and runs team meetings
- works with coaches to set meeting agenda and make agenda and meeting minutes available to team
- oversees projects and team managers
- supports team managers
- sends team updates regularly
- travels to all competitions
- other duties and required/ needed

## Technical Manager

- oversees team shop and building projects
- assigns team members jobs
- oversees workflow of technical projects
- works with team captain
- travels to all competitions
- other duties as required/ needed

## Strategy Manager

- oversees team strategy/ planning for robot game
- develops strategy program for pit and match scouting
- oversees team safety training
- oversees team safety implementation
- oversees robot software
- works with business manager to plan safety video, awards, and planning for judges
- works with spirit team
- works with Safety Captain
- works with coaches to develop game test and safety test
- travels to all competitions
- other duties as required/ needed

## Business Manager

- oversees team awards submissions
- works with coaches to take photos and video
- works with coaches to develop sponsor relationships and increase sponsorships
- oversees team marketing and publications, including website and social media
- works with parent committee and coaches on button design
- travels to all competitions
- other duties and required/ needed

## Shop Rules

While at the shop, students are expected to follow the rules below, as well as all instructions from coaches and mentors.

- Students should not enter the shop without at least one coach or mentor present.
- Wear closed-toe shoes at all times.
- Safety glasses must be worn when in the shop, regardless of the activity.
  - o Students will be provided with their own safety glasses and case their first year on the team, after all paperwork has been submitted.
  - o Safety glasses will have the student's name on them.
  - o Students are expected to be responsible for their own safety glasses, including having them in the shop at each work session, and bringing them to all competitions and events.
  - o If students lose or damage their safety glasses, they may purchase a replacement pair for \$5.00
- Only students with completed permission slips and proper machine training, signed off by a mentor, will be permitted to use tools and machines.
- Food and drinks are not permitted in the shop.
- Work in a safe, courteous way. Follow all safety rules.
- Demonstrate Gracious Professionalism.
- Clean up your work area in the shop and in teachers' classrooms before leaving. Put away tools and materials, and complete shop checklist at end of every shop session. Don't assume someone else will do it.
- Students working in an unsafe way or not following instructions of coaches or mentors will be asked to leave for the remainder of the day.

## Travel Requirements

### Student Travel Eligibility

Recognizing that students are involved in other activities, the TechnoKats accommodate various levels of student participation. In order to be eligible for travel, a student must meet these requirements:

- Meet team Academic Requirements
- Earn the required number of Travel Credits
- Be productive on the team and comply with TechnoKats shop rules
- Pass game test with at least 70% (90% for drive team, strategist, and other team leads)
- Complete all required forms and registrations (field trip form, FIRST forms, Student Contract, etc.)
- Complete safety training and pass Safety Test with at least 70%

### Academic Requirements

Participation in TechnoKats provides students with many opportunities not available to other students. This includes travel throughout the state and country. According to the student contract (see Appendix G) each student must maintain a C- (70%) or better in *each* course with *no missing assignments* in order to be eligible for team travel. This grade policy applies to all courses, including IB and AP courses, and to all students. This grade requirement is firm. Schoolwork is a greater priority than team activities.

Students who do not meet grade requirements will be contacted individually by a coach. They may have the opportunity to travel with the team on non-school days if they meet individual "grade recovery" requirements. These students will be permitted to ride the bus and sit in the stands with the team, but will not be eligible to serve in a leadership role or on drive team at the event.

Students are expected to be proactive regarding their grades, and utilize study table and tutoring opportunities prior to grade checks. Students who are struggling with their grades should approach a coach for grade assistance in advance of grade checks.

### **Grade Checks**

- Student grades will be checked regularly throughout the school year.
- Study tables and tutoring sessions will be available regularly during the build and competition season.
- A coach will contact students whose grades do not meet the requirements.
- A grade check deadline will be set in advance of each competition (both on and off-season)
- The final grade check deadline is firm. Grades must be maintained from the grade check deadline until the team leaves for an event.
- The TechnoKats expect students to demonstrate gracious professionalism on and off the competition field. This includes demonstrating gracious professionalism towards teachers and using class time appropriately.
- Negative reports from teachers may impact travel eligibility.

### **Grade Assistance**

In order to help the students meet the grade requirement, study tables and tutoring are available for students who are in need of help. Students should work with coaches for personal tutoring assistance if needed.

- Study tables will be offered after school during the build and competition season
- Students attending study tables are expected to use the time to study.
- Students will earn travel credits (see below) for time spent studying.
- Students who do not use the time to study or to work on a specific assigned team task will be asked to leave and will not earn study credits.
- Individual tutoring may be arranged upon request. Tutoring hours should be arranged with a coach, and may earn travel credits.

### **Travel Credits**

Students can earn travel credits through activities that benefit the team including working on awards, participating in team study table, working on robot design and build, and attending team meetings during the season. To earn travel credits, students will complete a Google Form, e to document attendance and shop hours (see form in Appendix H). The form must be completed within 24 hours. Coaches will check the document and assign travel credits each week.

Unless otherwise noted, students will earn 1 Travel Credit for every 30 minutes of work in the shop, beginning with kick-off in January.

### **Activity**

Awards Work\*+  
Contacting Sponsors\*+  
Interviews, Media Work+  
Kick-off Meeting  
Robot Design & Build  
Robot Programming & Testing  
Scouting Work (outside of competitions)+  
Shop Organization/ Inventory/ Cleaning  
Study Table+

Team Meeting (per full meeting attendance)  
 Tutoring+ (arranged with coach)  
 Video or photography+  
 Website\*+  
 Other activities assigned by coaches+

\* May begin earning these credits during the fall semester.  
 +May be earned at location outside of the shop

Required Credits			Event
Rookies	Veterans	Team Leaders	
30	30	30	Earn team uniform shirts
60	75	75	1st District Event
75	90	90	All District Events & State Championships
80	100	100	Other Competitions/ Events during School
100	125	125	World Championships

Coaches will keep track of earned travel credits in PowerSchool.

## Competition Roles

In addition to the year-long leadership roles, there are a variety of ways students can take on leadership and participation roles during the competition season. These include:

- Scouting Assistant Manager/ strategist
- Scouting Team (12 people, plus 2 leads)
- Mo Team Mascot (2 people)
- Spirit Lead (1-2 people)
- Spirit Team (as many people as available; may overlap other roles)
- Pit Design & Inventory Lead (1 person)
- Pit crew (2-5 people)
- Drive Team (3 people)
- Safety Captain (1 person)
- Other positions as needed

These roles require the completion of an application (See Appendix C) and are selected by team coaches and mentors. Applications for competition roles must be submitted to the head coach by the **last Tuesday in January**. Roles will be selected before the end of build season. Descriptions of the roles are included in Appendix B.

The Drive Team consists of the robot driver, operator, human player, and a drive coach. Descriptions of each role can be found in Appendix D. Drive team members are expected to put in more hours during the competition season than any other role, maintain grades, and attend all competitions. Drive team members must complete an application (See Appendix E), as well as participate in drive team try outs. The application must be turned in to the head coach by the **last Tuesday in January**.

## Travel Expectations

Our goal is to travel with 24-32 students for each competition.

### General Expectations:

Students should always be in groups of 2 or more (minimum of three if there are mixed genders).

Be alert! If there is anything suspicious, report it to a mentor.

### Bus Expectations:

Every seat on the bus will be all-male or all-female – no co-ed seating. The only exception to this is family.

### Hotel Expectations:

Students are not allowed to be in the hotel room of someone of the opposite gender.

Bed checks will occur each night, according to the schedule.

After bed checks, students are expected to stay in the room (no ice or vending machine runs). The student doors will be taped.

The tape will be removed a half hour before breakfast.

Be respectful of other hotel guests by walking in the halls, and keeping a low voice level in the hallways and rooms.

Keep track of and move your own luggage. All luggage should have a tag on it.

Keep hotel rooms clean. The coaches will check room cleanliness at check-out.

### Venue Expectations:

Students should report to the coach or mentor in charge of their sub-group (scouting, pits, and drive team) before leaving that area.

### Relationships

As the team travels, as well as in the shop and at all team activities, school rules expressed in the Lens will be followed:

- Students are expected to refrain from Public Displays of Affection (PDA) including hand-holding, kissing, back massages, etc.
- Students who are dating will be expected to meet with the head coach prior to and as a condition of travel, to review expectations.

## Travel and Commitment Deadlines

Only active team members are permitted to travel with the team and participate in team competitions. Students must also meet the team grade requirements in order to be active, as described in this handbook.

While traveling with the team, students will stay in hotels. There will be up to four students in each room, sharing two double or queen beds. Students need to communicate any special needs regarding travel to the head coach at least a week in advance of the trip.

Family members are encouraged to attend competitions with the team. They can either plan their own travel or work through the head coach for travel arrangements. If parents are using team arrangements, they must abide by team guidelines will be responsible for all costs associated with travel.

Any person traveling to World Championships with the team must commit by meeting the payment deadlines. The initial \$100 down-payment is due on or before **the first Tuesday in February**, and can be paid either through money fundraised and in your individual team account, or by writing a check to TechnoKats and giving it to the

head coach. This is a commitment deadline for **all** team members. This applies to students, parents, mentors, volunteers, siblings, and anyone else traveling with the team. All adults traveling with the team must pass the Kokomo School Corporation background check and the *FIRST* background check before traveling.

Final payment for Championships, for everyone, is due on **the last Tuesday in March**.

During the 2020 competition season, we plan to attend at least two District Competitions, the Indiana State Championships, and the *FIRST* World Championship. We are fortunate to be pre-qualified for World Championships as one of six remaining Legacy Teams who have been active in the *FIRST* Robotics Competition each year since it began in 1992. World Championships are in Detroit, Michigan this year.

## Mentor & Volunteer Involvement

There are many ways for adults to be involved with the TechnoKats based on their interests:

Coaches: Team coaches are employed by Kokomo School Corporation.

Technical Mentors: Technical Mentors have an expertise in a specific work area in the shop. They teach students specific technical skills.

Volunteers/ Parent Volunteers: Volunteers and Parents are always welcome in the shop and at team events, but do not necessarily have a specified lead role with the team.

### Technical Mentor Expectations

A team mentor is expected to commit to the following:

#### GENERAL EXPECTATIONS:

- Complete Kokomo Schools and *FIRST* background checks
- Assist the team
- Remain student-focused
- Promote Gracious Professionalism and the ideals of *FIRST*
- Promote the team within the community
- Work with and teach students skills and leadership qualities
- Follow all team and shop rules
- Promote safety

#### OFF SEASON:

- Attend team meetings regularly (at least 2 per month)
- Attend scheduled mentor meetings (apx. 2 per year)
- Plan/ organize activities or projects in your area
- Train students in your area
- Complete projects/ meet deadlines
- Participate in team activities and events regularly

#### BUILD & COMPETITIONS SEASON: (JANUARY-APRIL)

- Attend Kick-off (first Saturday in January)
- Attend and lead shop work sessions at least two weekdays per week
- Attend Saturday work sessions as available (at least 4 during season)
- Monitor progress in area of responsibility

- Attend competitions (as available)

#### Additional Coach Expectations

- Monitor student grades & behaviors
- Monitor student accounts
- Monitor student Travel Credits
- Maintain student paperwork
- Communicate between team, school, and parents
- Coordinate school policies and expectations
- Coordinate travel and events
- Complete requirements of specific coaching area
- Other duties as needed

#### Volunteer Expectations

- Complete Kokomo Schools and *FIRST* background checks
- Work with Coaches and Mentors
- Assist the team as needed
- Remain student-focused
- Promote Gracious Professionalism and the ideals of *FIRST*
- Follow all team and shop rules
- Promote safety

## Appendix A: Team Role Descriptions

Appendix A includes the work areas on the team. Students and mentors are needed in all areas, and many include leadership opportunities.

### Shop & Safety Coach/ Technical Manager

Students and Mentors in all areas are responsible for ensuring a safe area, and that all areas are clean with tools put away daily.

#### Design and Fabrication

##### CAD

- Train students to use CAD software
- Design robots, pit, book boxes, and other items using CAD software
- Work with technical lead and mechanical area leads to meet CADing needs

##### Mechanical – Drive Base

- Determine whether using kit drive base (AM14U)
- Determine size and wheel type
- Work with CAD, electrical, and mechanical subsystem teams

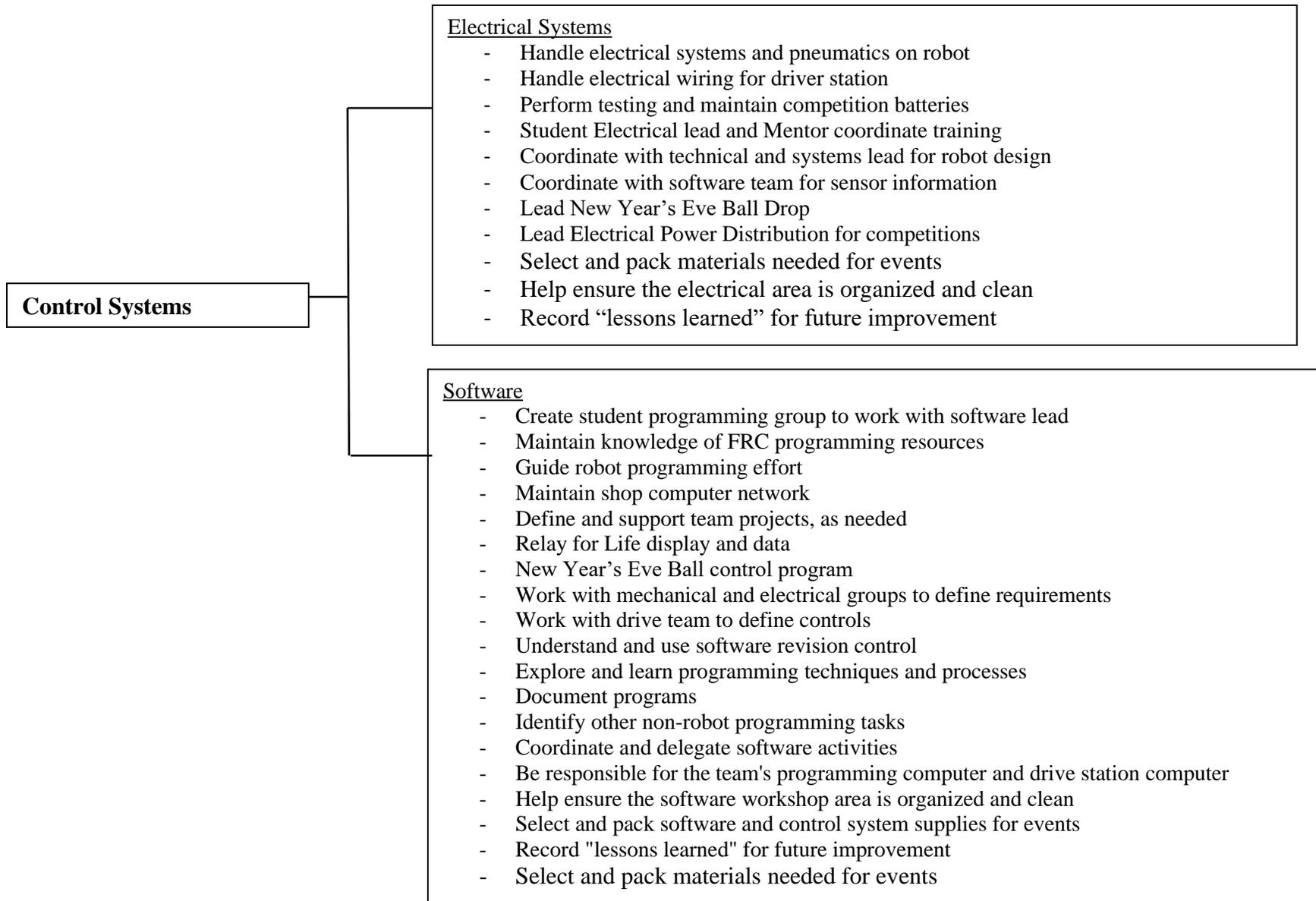
##### Mechanical Sub-Systems

- Work with strategy team to determine how to best play game
- Determine what parts are needed
- Work with CAD team to design subsystems
- Work with electrical and mechanical subsystem teams
- Select and pack materials needed for events

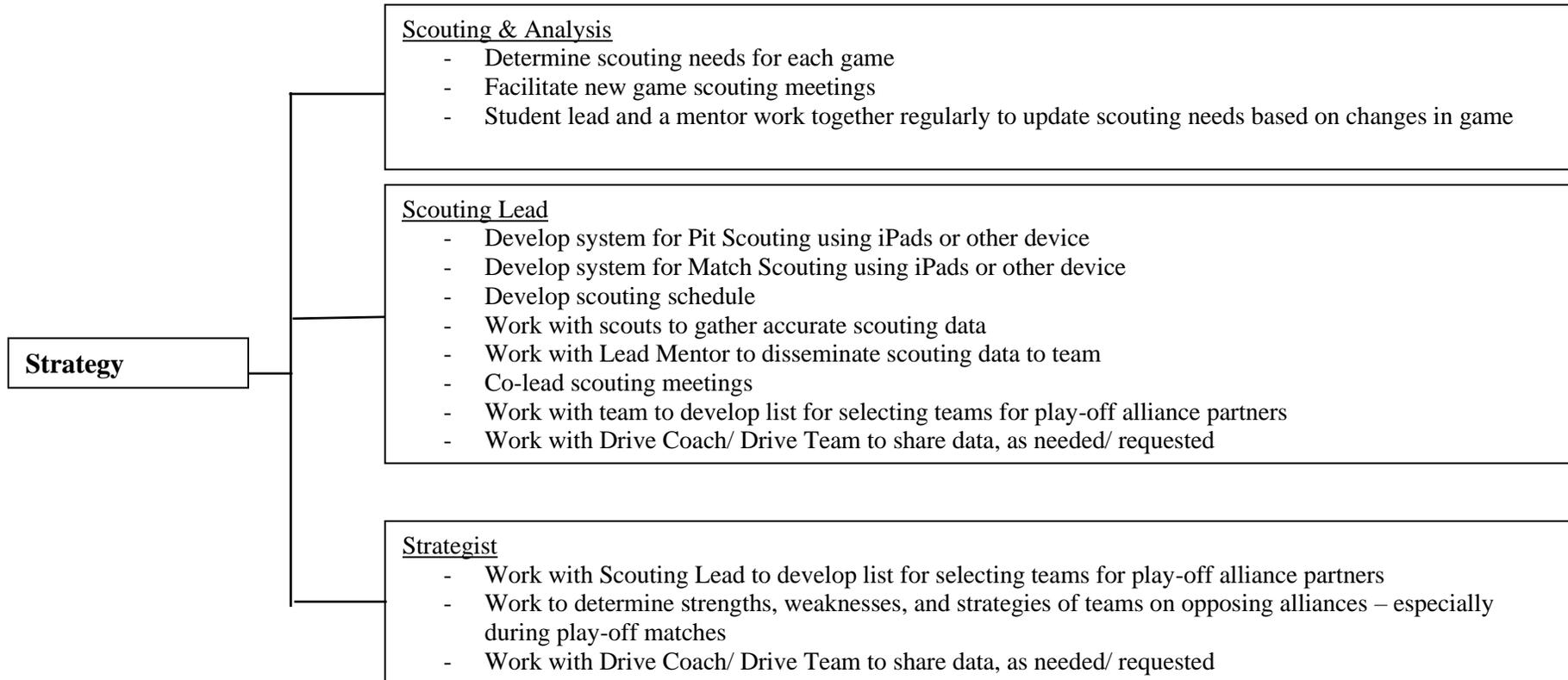
##### Field Design & Construction

- Acquire current year's field drawings
- Procure materials
- Make sure students are trained before working on field
- Build field to game specs
- Update field as necessary between competitions

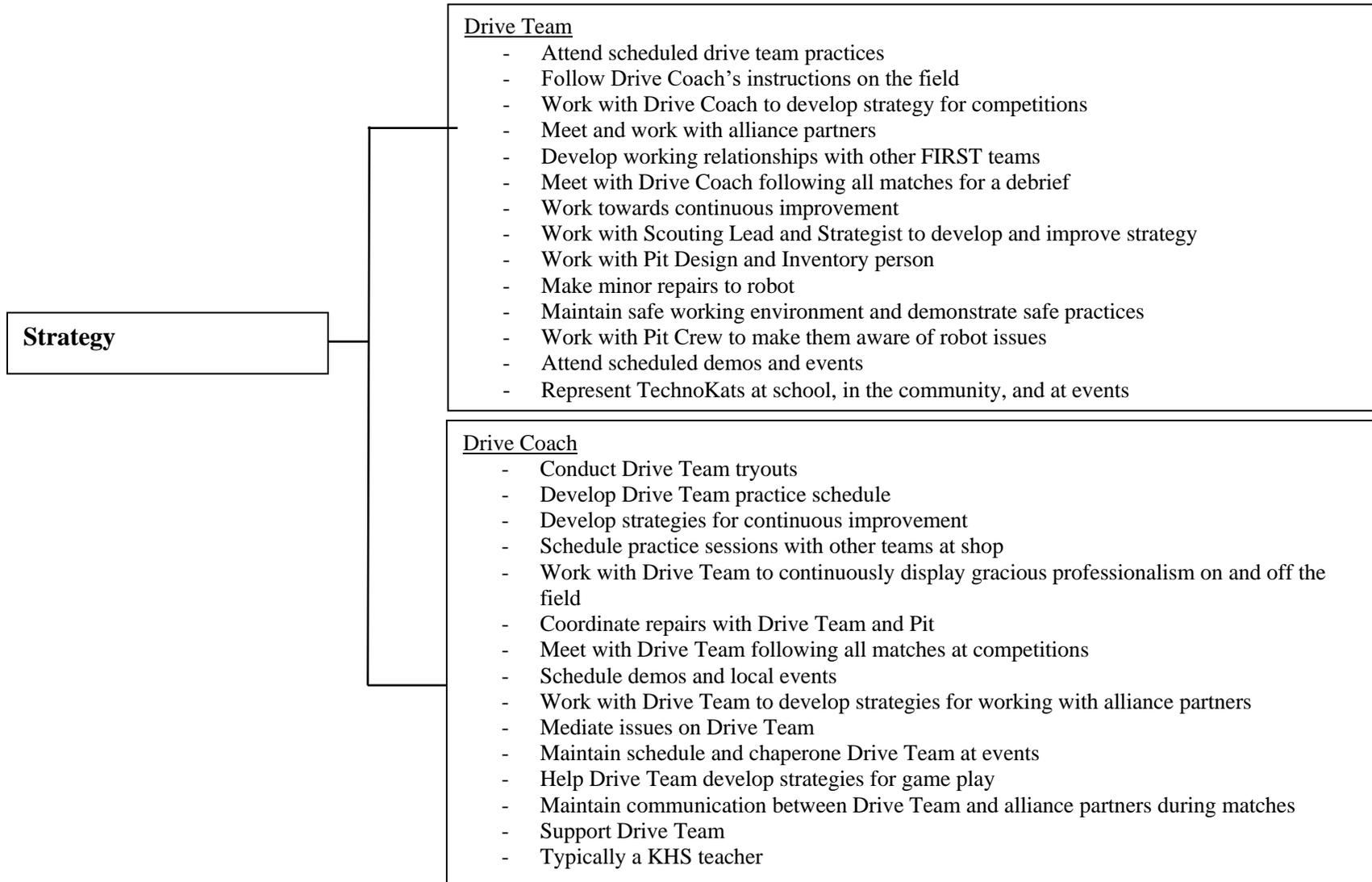
## Shop & Safety Coach/ Strategy Manager



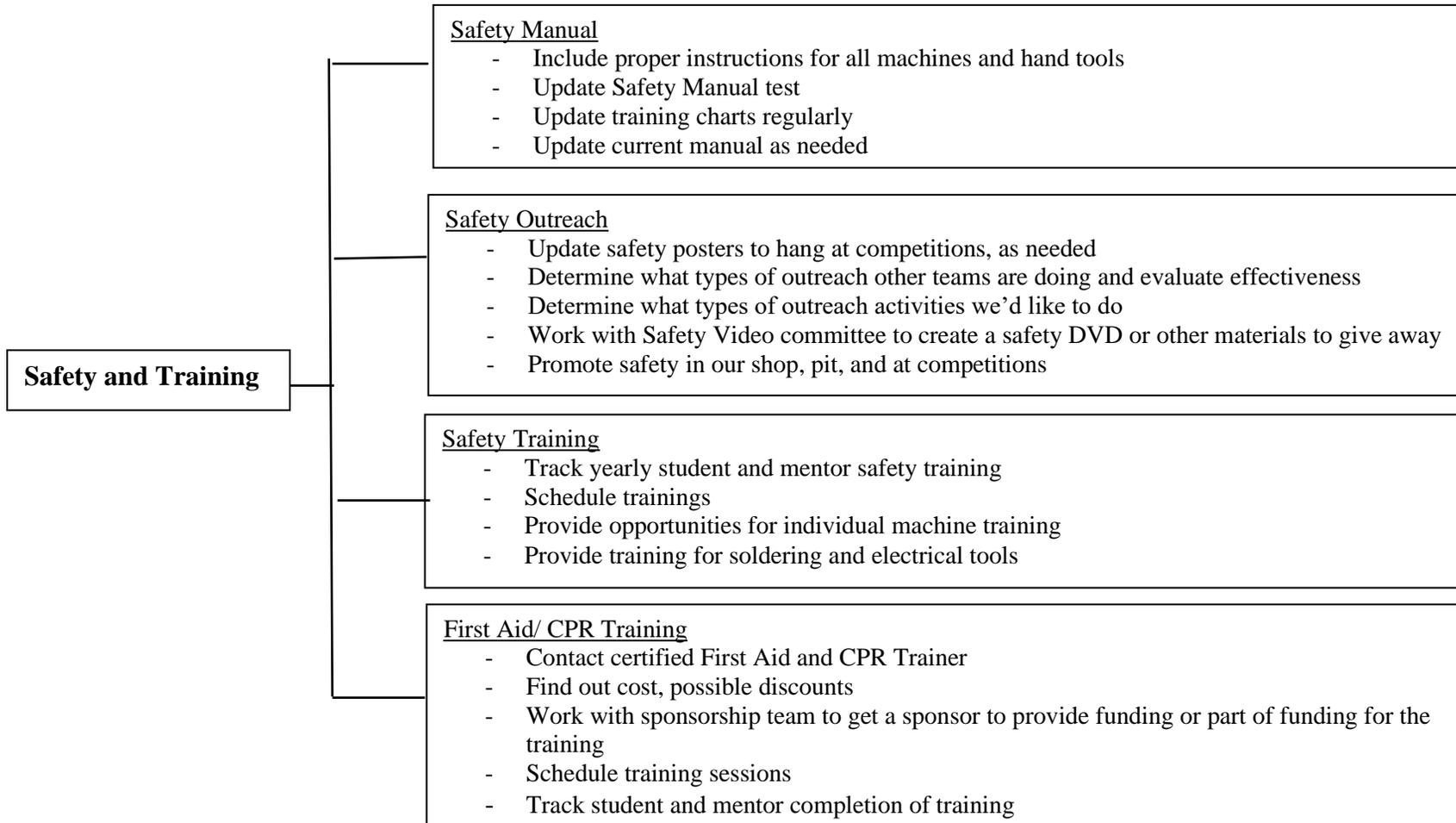
## Students & Parents Coach/ Strategy Manager



## Head Coach



## Shop & Safety Coach/ Strategy Manager



## Shop & Safety Coach/ Strategy Manager

### Safety and Training

#### Safety Captain

- Year-round role
- Work with Shop & Safety Coach to maintain safety manual
- Maintain safe practices in the shop and pit
- Make sure all students have their own pair of safety glasses
- Work with Shop & Safety Coach and Delphi to maintain safety equipment: fire extinguishers, gloves, first aid kit, eye wash station, etc.
- Work on safety outreach activities and safety video
- Train students on safety
- Make sure all students know safety expectations, have read safety manual, and have passed safety test
- Share safety tips with team
- Encourage safety among team members
- Work with mentor to inventory First Aid Kit and keep it maintained
- Work with Shop & Safety Coach to maintain MSDS binder and pack binder to competitions
- Work with Shop & Safety Coach to maintain eye way station
- Maintain binder with safety manual, etc. and pack for events
- Share team safety activities with judges at competitions
- Represent the team, and always demonstrate safe practices

#### Machine Training

- Students must be trained by a mentor and demonstrate usage of each machine
- Students must pass Safety Test
- Makes sure that students read safety instructions for each machine prior to use
- Maintains training lists
- Maintains training and safety signage in shop

#### HoCoRoCo

- Work with business and mechanical leads to determine training sessions
- Communicate with other teams to organize events and trainings
- Organize and find leader for each training
- Help update group Facebook page

## Media & Awards Coach/ Business Manager

### Team Outreach

- Mentors and students work together to determine best outreach/ volunteer activities for team to participate in
- Schedule event with relevant organization and plan event/ activities
- Share event with team and establish list of participants

### Website

- Work with head coach to meet expectations and school policy
- Update regularly
- Update countdown timers on website
- Mentor students in maintaining website
- Update photos using team Dropbox
- Maintain Google drive
- Update all handbooks, calendar, etc. on website

### Social Media

- Currently have Facebook, Twitter, and Instagram accounts
- Remember that what you post represents the team
- Demonstrate Gracious Professionalism
- Post interesting things frequently during build and competition season; off season as appropriate

### Photography

- Take pictures at major events
- Good quality photos that capture essence of event are better than lots of pictures to sort
- Think about how photos will be used
- Make sure you photograph the content you'll need
- Share photos on team Dropbox

## Marketing and Publications

## Media & Awards Coach/ Business Manager

### Awards

#### Chairman's Award Essay & Booklet

- Determine whether or not to apply for Chairman's award each year based on team activities of previous year; may consider Entrepreneurship Award instead some years
- Check deadlines and current year's requirements
- Plan/ create theme
- Create outline of key points
- Make action plan
- Write first draft
- Revise and edit essay
- Submit essay in advance, as there can be issues with the submission system
- Find photos to support the essay. Make sure photos are formatted according to the guidelines
- Create booklet(s) to support presentation
- Revise and edit booklet
- Send booklet for professional printing and binding before first competition

#### Chairman's Presentation

- Review online resources for ideas
- Follow instructions online
- Coordinate presentation with written essay
- 3 member team
- Plan chairman's presentation
- Practice, practice, practice
- Dress well
- Present to judges at competitions

#### Chairman's Video

- Check deadline and current year's requirements
- Video should capture what you're trying to convey in essay
- Find a quiet location/ good backdrop/ microphones
- Plan in advance
- Videotape events throughout the year
- Use theme from essay
- Write script
- Practice
- May want to work with KACC video productions classes
- Plan and tape well in advance
- Videotape, edit, burn to DVD or flash drive
- Complete prior to first competition

## Media & Awards Coach/ Business Manager

### Awards

#### Woodie Flowers Award

- Check deadline and current year's requirements
- Work with student team members to select a mentor
- Write essay about the person – be sure to include technical aspects
- Write and edit in advance
- A non-eligible mentor can help with fact collecting and editing, but award is written by students
- Students submit essay and relevant photos online
- May resubmit a previous Woodie Flowers Finalist for World Championships

#### Safety Animation

- Earliest submitted award (during fall semester)
- Check website for current year's deadline and requirements
- Write script
- Work with KACC to animate video
- Submit

#### Entrepreneurship Award

- Check website for current requirements and deadlines
- Work to develop documents required for the award
- May determine to complete this award in lieu of Chairman's Award

## Students & Parents Coach

### Buttons

- Work with interested students to design buttons and make on computer (6 per page)
- Make sure designs fit with team brand
- Color copy button designs
- Train students and mentors to use button machine
- Make 1000+ buttons per competition; 2000+ for Championships
- Students and parents can help make buttons
- Let Head Coach know when new button parts need to be ordered (this won't be for a while!)

### Saturday Meals

- Maintain list of team parents and contact information
- Make sign-up sheet for Saturday meals during build season
- Organize meals to be sure all parts of meal are covered: Main dish, side, fruit, dessert, drink
- TeachnoKats provide plates, cups, napkins, bowls, plastic ware, paper towel, all-purpose cleaner, plastic serving gloves
- At beginning of season, check inventory of paper goods in shop. Purchase needed supplies and turn in receipts to Head Coach
- Contact parents to remind them of food responsibilities
- Organize and serve Saturday meals; parents help with serving the meal
- Enough food for up to 50 people;
- Some parents prefer to give money to bringing in food. Usually use this to buy drinks for season

### Meeting Snacks

(optional – based on student interest/ sign-ups)

- Create a sign-up sheet for snacks during meetings
- Remind parents/ students of dates they signed up for
- Snacks should be simple
- Snacks should be served between 5:15 and 5:25 and cleaned up in time for the meeting to begin at 5:30

**Parent Committee**

## Students & Parents Coach

### Open House

- Work with head coach and design team to create invitations
- Work with head coach to plan sponsor recognition
- Plan snacks, beverages, paper products for Open House
- Prepare and clean up snack table
- Work with parent committee to coordinate serving
- Prepare and train students for Open House activities (tours of shop, robot driving, etc.)

### Scouting/ Pit Awards

- May be given at each FIRST competition
- In 2013 gave:
  - o Best pit award
  - o Furthest traveled
  - o Most spirited team
  - o Best theme
  - o Most creative robot
- Print award before competition and bring with. At competition, write in team name/ number with colored Sharpie
- Put awards in a frame
- Scouts pick teams on first day of tournament, give awards near end of qualifying matches, before alliance selection
- Pick some teams that might not get other awards

### Fundraising

- Work with students to raise money for trips
- Organize a variety of fundraising opportunities
- Work with head coach on sponsorship opportunities

Parent Committee

## Appendix B: Competition Role Descriptions

### Scouting Manager/ Strategist (year-round role)

- Work with Scouting Manager
- Determine scouting needs for each game
- Facilitate new game scouting meetings
- Develop system for Pit Scouting using iPads or other device
- Develop system for Match Scouting using iPads or other device
- Develop scouting schedule
- Work with scouts to gather accurate scouting data
- Work with Coaches to disseminate scouting data to team
- Co-lead scouting meetings
- Work with team to develop list for selecting teams for play-off alliance partners
- Work with Scouting Mentor regularly to update scouting needs based on changes in game
- Work with Drive Coach/ Drive Team to share data, as needed/ requested
- Earn at least 90% on game test
- Other duties as required

### Assistant Scouting Manager/ Strategist

- Work with Scouting Manager to develop list for selecting teams for play-off alliance partners
- Work to determine strengths, weaknesses, and strategies of teams on opposing alliances – especially during play-off matches
- Work with Drive Coach/ Drive Team to share data, as needed/ requested
- Earn at least 90% on game test
- Other duties as required

### Scouting Team (12 people)

- Follow instructions of Scouting Manager and Assistant Manager
- Scout team pits and matches, as assigned
- Collect accurate data
- Support spirit team
- Earn at least 70% on game test
- Other duties as required

### Mo – Team Mascot (2 people)

- Wear shorts, t-shirt under suit
- Need a “handler” at events
- Take breaks & stay hydrated
- Be friendly; pose for photos
- Represent the team and demonstrate Gracious Professionalism
- Hand out buttons, etc.
- Help distribute pit awards
- Properly maintain Mo suit
- Pack suit and work with Pit Design & Inventory Lead to be sure suit is packed in trailer for events and has a place in the pit
- Earn at least 70% on game test

### **Spirit Lead (1-2 people)**

- Be friendly to other teams
- Stay “pumped”
- Help Mo, keep Mo hydrated
- Make sure Spirit Tote is packed and ready for competitions; work with Pit Design & Inventory Lead to by sure spirit tote is packed in trailer and has a place in the pit
- Lead team in spirit at competitions and team events
- Participate in or designate team member to participate in spirit activities at events (dance contests, etc.)
- Work with parent committee to design and make team buttons
- Update the Spirit Box and maintain items in the box
- Promote TechnoKats at KHS. This could include, display cases, posters, school announcements, videos for monitors in the foyer, KATV, etc.
- Work with Head Coach for approval of anything posted at school and for help with making purchases, copies, etc.
- Earn at least 70% on game test
- Other duties and required

### **Pit Design & Inventory Lead (1 person; may serve an additional role during competitions)**

- Work with all areas of the team to determine what their pit needs are
- Include area for backpacks and jackets, drive team, button distribution, judging materials, giveaways, spirit team, Mo suit, etc. as well as robot needs
- Design/ Cad pit design
- Revise as needed
- Determine what materials can be reused and what materials need to be built
- Build/ design pit that meets needs and fits in pit area
- Determine how to easily move pit
- Create and maintain packing list for events
- Organize and lead trailer loading and unloading
- Oversee electrical distribution system set-up and tear-down
- Earn at least 70% on game test
- Other duties as required

### **Pit Crew (2-5 people)**

- Know the robot materials, operation, and maintenance
- Develop and update pre-flight check-list
- Maintain and repair robot
- Maintain batteries
- Organize and clean-up pit area daily
- Talk with judges about robot and team
- Work with drive team to repair and improve robot
- Pit crew members should have a variety of specialty areas, including software, electrical, and mechanical
- Earn at least 70% on game test
- Other duties as required

### **Drive Team (3 people)**

- See Appendix D

### **Safety Captain (1 person; may be part of pit-crew)**

- Year-round role

- Work with Assistant Coach for Shop and Safety & Strategy Manager to update and maintain safety manual
- Maintain safe practices in the shop and pit
- Make sure all students and mentors have their own pair of safety glasses
- Work with Assistant Coach for Shop and Safety to maintain safety equipment: fire extinguishers, gloves, first aid kit, eye wash station, etc.
- Work on safety outreach activities and safety video
- Work with Shop & Safety Coach to train students on safety expectations
- Make sure all students know safety expectations, have read safety manual, and have passed safety test
- Share safety tips with team
- Encourage safety among team members
- Work with Assistant Coach for Shop and Safety to inventory First Aid Kit and keep it maintained
- Work with Assistant Coach for Shop and Safety to maintain MSDS and training list binders and pack binder for competitions
- Work with Assistant Coach for Shop and Safety to maintain eye wash station
- Maintain binder with safety manual, etc. and pack for events
- Share team safety activities with judges at competitions
- Earn at least 70% on game test
- Represent the team, and always demonstrate safe practices

# Appendix C: Application for Competition Roles

The purpose of this application is to help choose the best students for competition roles on the 2020 TechnoKats Robotics Team.

1. Complete and return application to the Head Coach by the **last Tuesday in January**. Late applications will not be considered.
2. The coaches will administrate the Game Test to students before the end of build season. All students must earn at least 70% on the Game Test to travel. Scouting Lead, Scouting Assistant Manager, and Strategist must earn at least 90%.

Name: \_\_\_\_\_

Year in school:       9     10     11     12

Years in TechnoKats:  1     2     3     4

Cumulative GPA: \_\_\_\_\_ Fall 2019 Semester GPA: \_\_\_\_\_

### Competition Positions:

List your top three choices in order of preference.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Other after-school activities (January-April 2019):

\_\_\_\_\_

Current number of travel credits earned \_\_\_\_ \_\_\_\_\_

Do you plan to attend World Championships? \_\_\_\_\_

Type your answers to the following questions and turn in with your application:

1. Why are you interested in representing the TechnoKats in this position? (150-350 words)
2. What skills and abilities do you have that would benefit the team? (200-400 words)
3. In your own words, describe "Gracious Professionalism". Use an example, if you wish. (100-200 words)

# Appendix D: Drive Team Role Descriptions

## Drive Coach

- Typically a KHS teacher
- Conduct Drive Team tryouts
- Develop Drive Team practice schedule
- Develop strategies for continuous improvement
- Schedule practice sessions with other teams
- Schedule field practices
- Work with Drive Team to continuously display gracious professionalism on and off the field
- Coordinate repairs with Drive Team and Pit
- Meet with Drive Team following all matches at competitions for debrief
- Work with Head Coach to schedule demos and local events & schools
- Work with Drive Team to develop strategies for working with alliance partners
- Mediate issues on Drive Team
- Maintain schedule and chaperone Drive Team at events
- Help Drive Team develop strategies for game play
- Maintain communication between Drive Team and alliance partners during matches
- Support Drive Team
- Other duties as required

## Drive Team

- Attend scheduled drive team practices
- Follow Drive Coach's instructions on the field
- Work with Drive Coach and Strategy Manager to develop strategy for each match
- Meet and work with alliance partners
- Develop working relationships with other FIRST teams
- Meet with Drive Coach and Head Coach following all matches for debrief
- Work towards continuous improvement
- Work with Scouting Lead and Strategist to develop and improve strategy
- Work with Pit Design and Inventory Lead
- Make minor repairs to robot
- Maintain safe working environment and demonstrate safe practices
- Work with Pit Crew to make them aware of robot issues
- Attend scheduled demos and events
- Represent TechnoKats at school, in the community, and at events
- Attend all competitions
- Maintain grades
- Earn at least 90% on game test
- Other duties as required

# Appendix E: Application for Drive Team

The purpose of this application is to help choose the best students for competition roles on the 2020 TechnoKats Robotics Team.

1. Complete and return application to the Head Coach by the **last Tuesday in January**. Late applications will not be considered.
2. The Coaches will administrate the Game Test to students. All students must earn at least 70% on the Game Test to travel. Drive team members must earn at least 90%.

Name: \_\_\_\_\_

Year in school:         9     10     11     12

Years in TechnoKats:  1     2     3     4

Cumulative GPA: \_\_\_\_\_ Fall 2019 Semester GPA: \_\_\_\_\_

Competition Positions:

Number your choices in order of preference.

\_\_\_\_\_ Driver

\_\_\_\_\_ Operator

\_\_\_\_\_ Human Player

Other after-school activities (January-April 2019):

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Type your answers to the following questions and turn in with your application:

1. Why are you interested in representing the TechnoKats in this position? (150-350 words)
2. What skills and abilities do you have that would benefit the team? (200-400 words)
3. In your own words, describe "Gracious Professionalism". Use an example, if you wish. (100-200 words)

## Drive Team Application – Page 2

1. The drive team practices in the afternoons and evenings, and many Saturdays from late February – early May. Please list any conflicts you know you may have during this time period. (practices, music lessons, etc.)
- 
- 

2. Drive Team members are often expected to do basic maintenance on the robot. Rate your current comfort level in assessing problems with the robot.

\_\_\_\_\_ Very Strong                      \_\_\_\_\_ Strong                      \_\_\_\_\_ Some Ability to Do This  
\_\_\_\_\_ Little Ability to Do This      \_\_\_\_\_ Willing to Learn      \_\_\_ Not Interested in This

Rate your current comfort level in fixing problems with the robot.

\_\_\_\_\_ Very Strong                      \_\_\_\_\_ Strong                      \_\_\_\_\_ Some Ability to Do This  
\_\_\_\_\_ Little Ability to Do This      \_\_\_\_\_ Willing to Learn      \_\_\_ Not Interested in This

3. To what extent are you comfortable with and willing to talk to students from other teams and work out strategy with them?

\_\_\_\_\_ Very Comfortable/ Willing                      \_\_\_\_\_ Somewhat Comfortable/ Willing  
\_\_\_\_\_ Not Comfortable                      \_\_\_\_\_ Willing to Learn                      \_\_\_\_\_ Not Interested in This

Drive Team members represent the team in a very visible way at competitions, at school, in the shop, and in the community. Describe what this means, and how you see this role (100-200 words). Type your answers following your 3 questions from the previous page.

4. Based on this year's game, describe your idea for a drive team game strategy in 100-200 words.
5. Based on this year's game, describe your idea for a drive team practice session in 100-200 words.
6. Based on this year's game and robot design, describe your goal(s) for the Drive Team this year. Be Specific (100-200 words)
7. Drive Team Members sometimes do more travel than other team members. Are you willing to raise up to \$75 more than other team members for additional travel expenses?  
\_\_\_\_\_ Yes                      \_\_\_\_\_ No
8. Do you plan to attend all competitions this season?  
\_\_\_\_\_ Yes                      \_\_\_\_\_ No

# Appendix F: Application for TechnoKats Varsity Letter

(Student copy will be updated to reflect current season's competitions in March)

Name: \_\_\_\_\_

Year in school:       9     10     11     12

Years on TechnoKats:  1     2     3     4

Cumulative GPA: \_\_\_\_\_    Fall 2019 Semester GPA: \_\_\_\_\_

Which competitions have you attended:

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> CAGE, Oct. 2018            | <input type="checkbox"/> Tippecanoe District, March, 2019 | <input type="checkbox"/> Penn H.S. District, March 2019        |
|   | <input type="checkbox"/> World Championships, 2019        | <input type="checkbox"/> IRI, July 2018 (volunteered at event) |
| -----   |   |  |
| <input type="checkbox"/> <del>CAGE, Oct. 2019</del> | <input type="checkbox"/> Columbus District, March, 2020   | <input type="checkbox"/> Penn H.S. District, March 2020        |
|   | <input type="checkbox"/> World Championships, 2020        | <input type="checkbox"/> IRI, July 2019 (volunteered at event) |
| -----   |   |  |

List other TechnoKats activities you've attended/ participated in during the last 2 school years

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List any TechnoKats projects on which you have taken the lead position in the last 2 school years

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**Turn completed application in to Head Coach by the Tuesday following World Championships**

# Appendix G: Student Contract

By signing below, I acknowledge that I understand and agree to these rules and conditions:

1. I know that the TechnoKats Team Handbook is posted on the team’s website, and that I am responsible for reading it and adhering to all team expectations.
2. I understand that my photo may be used on the team website and for team promotionals.
3. I understand that I am responsible for arranging my transportation to and from TechnoKats meetings & shop sessions in Kokomo.
4. I understand that I am responsible for my schoolwork. If any of my grades are below a 70% during the grade checking period prior to an official *FIRST* competition trip, or I am missing any assignments, then I will not travel with the team to the event. If I don’t meet the grade requirements, then I can only attend the event as a spectator and may not participate in any team activities during the event. AP and IB classes are not an exception to this expectation
5. I understand that I am responsible for all make-up work while absent from school for team travel.
6. I understand that I can seek tutoring and should attend and make use of any offered study table sessions if my grades are low enough to keep me from traveling with the team.
7. I understand that I must pass the 2020 Game Test with at least 70% in order to travel with the team. I understand that I may retake the test up to once per day until one week prior to travel.
8. I understand that in order to be on the Drive Team or to be a team lead, I must pass the test with at least 90%.
9. I understand that I may not use any machines in the shop until I have passed the team approved training program and a mentor has signed off on this. I will not use machines unless at least 2 mentors are present in the shop.
10. I agree to safely use all tools and equipment while working in the TechnoKats shop. I respect the severity of a possible accident and understand that I may be sent home or dismissed from the team if I don’t work safely.
11. I understand that safety in the shop is important. I will not participate in “horseplay” or “messing around” in the shop, and will follow posted instructions. I will follow coaches’ & mentors’ instructions.
12. I understand that I must maintain an acceptable level of productivity while in the shop and at team activities.
13. I understand that all off-season projects must be approved by the head coach before any work on the project begins.
14. I understand that supplies in the shop were purchased through funding from our sponsors specifically for team activities. I will not use the team’s materials for personal projects without permission from the head coach.
15. I understand that I am expected to follow all TechnoKats rules, as stated in the team handbook, as well as the policies in the KHS LENS Student Handbook. I understand that if I am asked to leave an event or the shop I am expected to do so. I understand that I may be dismissed from the team immediately if I do not follow the rules.
16. I understand that if I break team rules while traveling, I will be sent home immediately at my family’s expense.
17. I will respect team and school property and will follow TechnoKats Shop rules.

A TechnoKats teacher may give my student over-the-counter medicines (aspirin, Advil, etc.) at the shop or while traveling with the team.      YES                      NO

\_\_\_\_\_  
Student’s Signature

\_\_\_\_\_  
Parent’s Signature

\_\_\_\_\_  
Date

## Appendix H: Travel Credit Form

Complete this form through GoogleDocs at <http://tinyurl.com/technokats2020> within 24 hours.

Name \_\_\_\_\_

Date \_\_\_\_\_

Start Time \_\_\_\_\_ Stop Time \_\_\_\_\_

Select Activity from Drop Down Menu:

**Activity**

Awards Work\*+

Contacting Sponsors\*+

Interviews, Media Work+

Kick-off Meeting (per full day)

Leadership Training Sessions\*+

Robot Design & Build

Robot Programming & Testing

Scouting Work (outside competition)

Shop Organization/ Inventory/ Cleaning

Study Table+ (in teacher classrooms)

Team Meeting (per full meeting attendance)

Tutoring+ (arranged with teacher-mentor)

Video and photography

website+

Other activities assigned by lead mentors+

Team Coach in charge during activity

Select from Drop Down Menu:

# Appendix I: Team Lead Position Expectations and Application

## Team Captain

The Team Captain is one of four main student lead positions, and oversees all areas of the team. This student works closely with both team coaches and mentors and students, and works to ensure positive relationships within the team, and to maintain the team's positive image at school, in the community, and within FIRST. The Technical Lead must apply for the position, and is voted for by team members. The Team Captain may not hold another leadership position within the team. He or she oversees other three team managers and works to ensure that all projects are completed. He or she runs team meetings and regularly sends out meeting minutes and updates.

- oversees and runs team meetings
- Work with Technical Manager, Business Manager, and Strategy Manager to plan agenda for weekly team meetings, and send to mentors for approval, additions, and updates by Monday morning each week
- works with coaches to set meeting agenda and email to team before the meeting
- oversees projects and team managers
- supports team managers
- sends team minutes and updates regularly
- Begin weekly team meetings on time
- Work with Business Lead to run weekly team meetings
- Organize leadership meetings, as needed
- Communicate with the team regularly via email
- Participate in mentor-led leadership training
- Attend shop sessions regularly
- Plan to attend all events during the season, and most off-season events
- Work with all managers to coordinate loading trailer, pit, and competitions
- Support team at all competitions – both on and off-season – by being available in the pit or with the scouting team.
- Hold brief robot build coordination meetings with all technical area leads during the season
- Earn at least 90% on game test
- Other duties and required/ needed

## Technical Manager

The Technical Manager is one of four main student lead positions, and oversees the technical side of the team. This student works closely with both team coaches and mentors and students, and works to ensure positive relationships within the team, and to maintain the team's positive image at school, in the community, and within FIRST. The Technical Lead must apply for the position, and is voted for by team members. The Technical Lead may not hold another leadership position within the team. He or she oversees other technical leads, and all technical areas of the team.

- Lead by example
- Participate in mentor-led leadership training
- Attend shop sessions regularly
- Plan to attend all events during the season, and most off-season events
- Work with Team Captain for loading trailer, pit, and competitions
- Support team at all competitions – both on and off-season – by being available in the pit or with the scouting team.
- Hold brief robot build coordination meetings with all technical area leads during the season
- Work with Shop and Safety Coach and mentors to develop/monitor progress of robot build schedule; make necessary recovery plans if needed

- Ensure clean shop before leaving each night, and sign off on sheet
- Work with electrical team to ensure New Year's Eve Ball is in working order in time for the ball drop
- Work with Strategy Manager to coordinate mechanical, electrical, and software projects throughout the year
- Work with Strategy Manager to coordinate inventory in mechanical, electrical, and software in the shop
- Work with Mentors to coordinate off season shop equipment training for student
- Earn at least 90% on game test
- Other team tasks, as required

### Strategy Manager

The Strategy Manager is one of four main student lead positions, and oversees the strategy and safety side of the team. This student works closely with both team coaches and mentors and students, and works to ensure positive relationships within the team, and to maintain the team's positive image at school, in the community, and within FIRST. The Strategy Manager must apply for the position, and is voted for by team members. The Strategy Manager may not hold another leadership position within the team. He or she oversees other strategy leads, and strategy and software areas of the team.

- Lead by example
- Participate in mentor-led leadership training
- Attend shop sessions regularly
- Plan to attend all events during the season, and most off-season events
- Work with Team Captain for loading trailer, pit, and competitions
- Support team at all competitions – both on and off-season – by being coordinating the scouting team in the stands at events.
- Hold brief robot coordination meetings with all strategy area leads during the season
- Work with Shop and Safety Coach and mentors to develop/monitor progress of robot build and software programming schedule; make necessary recovery plans if needed
- Ensure clean shop before leaving each night, and sign off on sheet
- Work with electrical team to ensure New Year's Eve Ball is in working order in time for the ball drop
- Work with Technical Manager to coordinate CAD of parts designed and created to be available for fabrication, references, and problem detection/resolution
- Work with Technical Manager to coordinate mechanical, electrical, and software projects throughout the year
- Work with Technical Manager to coordinate inventory in mechanical, electrical, and software in the shop
- Work with Mentors to coordinate off season shop equipment training for student
- oversees team strategy/ planning for robot game
- Develops strategy program and pit and match scouting program
- Oversees team safety training
- Oversees team safety implementation
- Oversees robot software
- Works with Business Manager to plan safety video, awards, and planning for judges
- Works with spirit team
- Earn at least 90% on game test
- Other duties as required/ needed

### Business Manager

The Business Manager is one of four main student lead positions, and oversees the business area of the team. This student works closely with both team mentors and students, and works to ensure positive relationships within the team, and to maintain the team's positive image at school, in the community, and within FIRST. The Business Manager must apply for the position, and is voted for by team members. The Business Manager may not hold another

leadership position within the team. He or she oversees other business leads, including the Outreach, Media, and Fundraising.

- Lead by example
- Participate in mentor-led leadership training
- Attend shop sessions regularly
- Plan to attend all events during the season, and most off-season events
- Coordinate team activities during the off-season
- Work with Media & Awards Coach and Head Coach to coordinate brochures, awards, and judge's display
- Work with parent committee to coordinate team giveaways and buttons
- Coordinate Chairman's award submission, booklet, video, and presentation
- Coordinate and delegate Woodie Flowers Award submission
- Work with Strategy Manager to coordinate and delegate Safety Animation Award
- Determine, coordinate and delegate other award submissions
- Meet with judges in the team pit during competitions
- Coordinate fundraising activities; development and motivation.
- Work with Business Mentors to coordinate recruitment including school activities, robot demos, Kick-off, school recruitment, and Open House
- Coordinate student involvement with the New Year's Eve Ball Drop
- Coordinate media contact
- Attend community Relay for Life meetings and coordinate TechnoKats' RFL team
- Coordinate IRI Backpacks
- Maintain Business Manager Student Handbook and pass on to future Business Manager at the end of the year.
- Work with Media & Awards coach to coordinate photos, videos, website, and sponsor outreach
- Work with coaches to develop sponsor relationships
- Work with coaches to increase sponsorships
- Oversees team marketing and publications, including website and social media
- Work with parent committee and coaches on button design
- Earn at least 90% on game test
- Other duties and required/ needed

## Lead Position Application

Name: \_\_\_\_\_

Year in school:       9     10     11     12

Years in TechnoKats:  1     2     3     4

Position you are applying for:

Team Captain       Technical Manager     Strategy Manager       Business Manager

If not selected as the lead, are you willing to serve in another position?  Yes     No

Please type your answers to the following five questions and turn in a printed and electronic copy. Answers should be 50-200 words each, and will be shared with mentors and team members.

1. Why do you want this position?
2. How would you describe a strong leader?
3. How will you benefit the TechnoKats in this role?
4. How will you benefit FIRST in this role?
5. What are some specific experiences you've had (on or off the team) that have prepared you to be a leader?
6. Describe what Gracious Professionalism means to you.

## Appendix J: Contact Information

### TECHNOKATS ROBOTICS TEAM

Web site <http://www.technokats.org/>

Mailing Address TechnoKats  
Kokomo High School  
2501 S. Berkley  
Kokomo, IN 46902

### TECHNOKATS COACHES (765-455-8040)

Dr. Dewing [joy.dewing@technokats.org](mailto:joy.dewing@technokats.org)  
Mrs. Edwards [christine.edwards@technokats.org](mailto:christine.edwards@technokats.org)  
Mrs. Reynolds [katie.reynolds@technokats.org](mailto:katie.reynolds@technokats.org)

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### *FIRST*

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