

TECHNOLIONS

LEO ELEMENTARY ROBOTICS



Dear Parents and Students,

Students of the Leo Elementary Robotics Team will design, build, and program a robot using the VEX Robotics platform and document their process with an engineering notebook. They will then compete against other teams from the surrounding area in various challenges. If their group qualifies, there is a state and world-level competition to follow.

Students who want to join the team must be self-motivated, respectful, committed to the program, exhibit exemplary behavior, have a positive attitude, and be able to give and receive positive/constructive feedback. Most importantly, they must be able to work well with others and be a team player. I hold my robotics students to a high standard. All students must maintain a B or higher in all classes, complete all schoolwork on time, and display positive behavior in class. Additionally, they must be available to practice two days a week (more during competition weeks), attend two or more Saturday practices, three after-school Thursday competitions, and two all-day Saturday competitions. Parents are responsible for transporting their students to and from all competitions and must be willing to help at competitions if needed.

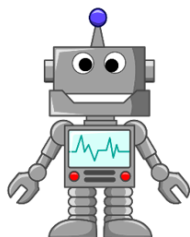
Being on the robotics team is a HUGE commitment for the ENTIRE family. Students AND parents will have vital roles on the team. I've attached a student and parent letter explaining this commitment. Please return a signed copy of the letter with your child's application. If accepted into this program, there will be a \$150 fee due on **September 18th**. This fee will cover the cost of our REGULAR season. Robotics is expensive, especially for competitive teams. The fee will cover new and replacement Vex parts, one robotics shirt, entry fees to 3 local competitions, two Vex element fields, and various other items. If a team qualifies for the State or World competitions, there will be an additional fee to cover entry and other expenses. This will be around \$60 for State and up to \$350 for Worlds per student unless parents secure sponsorships during the season or before the competition.

Space and resources for the robotics program are limited, and the selection process is highly competitive due to the large number of students interested in participating. I will form only two teams, each with space for 5-6 students (approximately 3-4 students per grade). I regret that I cannot accept all students who wish to participate in robotics.

If you are prepared to take on this challenge, please submit the student/parent application form and essay on or before **August 29th at 9:00 am** to Mrs. Crozier or the office. NO LATE applications will be accepted. The robotics leadership team will review applications, read essays, and consider input from the student's past and present teachers. If necessary, tryouts will be held on **September 4th**, with the possibility of additional tryouts on **September 9th**. During tryouts, students will perform additional building and coding tasks both individually and in small groups to determine final selections.

Mrs. Shelley Crozier

Leo Elementary Robotics Coach



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https://www.youtube.com/watch?v=RN-UyJbe_yg

HOW TO BUILD ROBOTS WITH VEX PARTS

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****Vex released Huey for the Hero Bot as a starting point with this year**

STUDENT APPLICATION

Tell us about yourself

Students,

Do you love to build and create new things? Enjoy tackling challenging problems? Are you positive, persistent, and have a creative mindset when faced with difficult problems? Do you have a keen interest in mathematics, engineering, science, technology, research, and writing? Are you willing and able to be part of a creative team focused on solving problems under tight constraints? Are you self-motivated, work well with others, and demonstrate exemplary behavior? If so, then this robotics program might be for you!

What is your full name? _____

Birthdate: _____

According to the REC foundation (the robotics governing authority) "any Student born after May 1, 2013 (i.e., who will be 12 or younger at VEX Worlds 2024)" may compete at the elementary level.

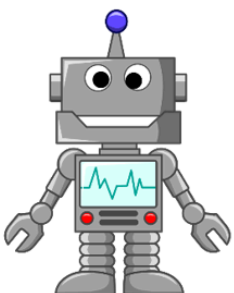
What grade are you in? _____

Current Teacher? _____ Teacher last year? _____

Do you have any robotics experience? _____ If yes, what kind? _____

Do you have any coding experience? _____ If yes, for how long and what type? _____

What traits do you possess that you believe will help the team? _____



Writing Assignment:

*ATTACH a **handwritten** 1-2 page essay about why you'd like to be on the robotics team and what you are hoping to learn or achieve. (This **MUST** be completed by the student.)

Our season is divided into two stages (Build Season and Competition Season). In order to accomplish the mission, each stage provides students with the opportunity to be on different sub-teams. (This will be used more in the Middle School Division)

STAGE 1: BUILD SEASON

Supply Manager – members of this sub-team are in charge of maintaining a clean build station and keeping the parts organized at all times. They also work directly with the Design and Build Team to assist in retrieving needed parts for the robot.

STEM and Awards Team – members of this sub-team will study and dissect all the possible local, State, and Worlds event awards. They will read rubrics, watch online example videos, create Q&A scripts, and present information to the rest of the team. They will also film and edit our STEM Research Project.

Documentation Team – members of this sub-team will create and maintain the team’s engineering notebook (composed of design notes, programming notes, strategies, game rules, schedule, and competition details). An organized and appealing engineering notebook is required to qualify for the Design Award and the Excellence Award (both Worlds-qualifying awards).

Design and Build Team – members of this sub-team will brainstorm game strategies and robot designs to put our team in the best position to succeed. Once designed, members of this sub-team will build the robot using parts from our VEX IQ kits. List, in order of preference, which sub-team (for the Build Season) you would want to be on.

- 1. _____
- 2. _____
- 3. _____
- 4. _____

Explain, why you would be a good fit for your top two choices:

STAGE 2: COMPETITION SEASON

Driver – members of this sub-team know the ins and outs of the robot. They drive the robot during practices and competitions. They must have good sportsmanship and driving skills, and must be willing to give up some recess time to practice. Strategizing with alliances is essential, as well. (We will only have between 2 and 4 drivers this year for each team.

Scout Team – members of this sub-team will research rankings of competing teams the week prior to a competition. At competitions, they will meet with alliances to discuss their robot capabilities.

Score Keeper – members of this sub-team will intently watch each of our matches, breaking down and tallying up the points we (and our alliance) score.

Pit Crew – members of this sub-team will check over (using a checklist) the robot after each match. They will fix any issues they find. One member of this sub-team will be appointed “**Pit Boss**,” which is a leader who administers the final check before sending the robot back out to competition.

Public Relations/Team Builder – members of this sub-team will create goodie bags the week of competitions. They will then walk around during competition meeting the other teams and handing passing out any candy/items during this time. After competition, they will write a short article about the competition.

Competition Manager – members of this sub-team will work closely with the coach during the competition. They will run errands and find the drivers for their next match. These members will pay close attention to the competition schedule and notify the drivers of when their next match begins.

List, in order of preference, which sub-team (for the Competition Season) you would want to be on.

1. _____

2. _____

3. _____
4. _____

5. _____

6. _____

Explain, why you would be a good fit for your top two choices:

PARENT INFORMATION & QUESTIONNAIRE



What you need to know before making the commitment

Parents,

Robotics is a unique experience, unlike any other club or sport. The kids will learn to hone their skills in designing, investigating, programming, and testing a fully functioning robot. Students in this program gain skills in engineering, logical reasoning, and most importantly teaming with classmates to solve problems. This meaningful activity does require a substantial commitment of time and consistent effort.

Robotics is fun, exciting, and one of the most rewarding things I have ever done, but it is VERY time-consuming. To make it work, I need parental help and involvement from every family. Without parent support, this program will not be successful. **Each family must make a commitment to help in some aspect.** If this sounds like a challenge you and your child are prepared to take on, please complete this application and return it to the school office, or myself in room 109 on or before August 29th at 9:00 am.

1st Guardian listed will be the parent that I contact during the season with group text if your child is chosen.

Guardian: _____ Guardian: _____

Phone: _____ Phone: _____

Email: _____ Email: _____

Parent(s)/Legal Guardian(s) is/are willing to assist the team by:

******Please note that the number of students on the team is driven, in part, by parent participation.**

Are you willing to:

Mandatory:

- Help for part of the day at Leo Middle School League or Tournament (one family member must help at at least one competition) _____
- Help with Fundraising: Participate in Panda Express, Culver's, etc fundraiser or ask companies for donations _____
If we make it to State or World's this will be expected unless you would like to pay an additional \$60 for State and \$350 or Worlds)

Willing to help in other ways?

- Help supervise/facilitate practices on a Saturday _____
- Parent Runner or volunteer at competitions _____
- Help with Food/Drinks/Snacks at competitions _____
- Oversee thank you letters for supporting our program _____
- Help students learn to code _____
- Will you be the lead parent for your child's team 'Engineering Notebook'? _____
- Write an article for the newspaper after the competitions? _____
- Decorate at State and Worlds? _____
- Help order and design: Season shirts _____ State/Worlds bracelets _____ Alliance Bags _____
- Do you have a specific skill or resource available to you that you think could benefit our club? _____

Parents, before making this commitment, I need to let you know that there will be times when your student is unsupervised. This may happen during practices if I have an after school duty, need to grab something, or for other reasons. In addition, if your student is a driver, they will be required to give up some recess or interactive time to practice—especially before competitions—which will also be unsupervised. If you are NOT comfortable with this, do not sign your child up for this program.

Commitment Signature: _____

Cover Page for Office 1st Day on next page



LEO ELEMENTARY ROBOTICS

Tomorrow's Engineers Today



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under the student tab.