

WE'RE MAKING THE FUTURE

NEW CASTLE HIGH SCHOOL COMPETITIVE ROBOTICS TEAM



2016-17 ACCOMPLISHMENTS

TEAM 16101A
SEMI-FINALIST AWARD
SARAH HEINZ VEX QUALIFIER

TEAM 16101E
FINALIST AWARD
WESTERN PA STATE CHAMPIONSHIP

TEAM 16101D
SEMI-FINALIST AWARD
NORTH ALLEGHENY ROBOTICS COMPETITION

TEAM 16101A
SEMI-FINALIST AWARD
WESTERN PA STATE CHAMPIONSHIP

TEAM 16101C
FINALIST AWARD
NORTH ALLEGHENY ROBOTICS COMPETITION

TEAM 16101D
SEMI-FINALIST AWARD
WESTERN PA STATE CHAMPIONSHIP

TEAM 16101E
JUDGES' AWARD
NORTH ALLEGHENY ROBOTICS COMPETITION

CONTACT INFORMATION

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ABOUT NEW CASTLE ROBOTICS

The Robotics Lab is home to our VEX Robotics Competition (VRC) teams, which is rooted in an international program for middle and high school students that engage students to participate in the study of science, technology, engineering, and mathematics (STEM) through competition. Teams are presented with an engineering challenge and then apply STEM principles to build innovative robots designed to score the most points possible in qualification matches, elimination matches, and skills challenges, thus encouraging teamwork, leadership, and problem-solving among groups.

The New Castle Robotics Team was established in the fall of 2016, and as a result, the students were able to extend their knowledge of engineering principles, mechanics, electronics, programming, computer-assisted drawing, and above all, teamwork. Out of our twelve robotics teams, six teams of students competed at the Sarah Heinz VEX Robotics Starstruck Competition, 2nd Annual North Allegheny VEX Robotics Starstruck Competition, and the Western Pennsylvania State VEX Robotics Starstruck Competition. After a year under their belt, New Castle Robotics students are excited to apply knowledge they learned last year to launch their efforts further during VEX Robotics In the Zone Competitions!



BENEFITS OF VEX ROBOTICS FOR STUDENTS

FOSTERING STEM-FOCUSED SKILLS FOR SUCCESS



EFFECTIVE COLLABORATION, COMMUNICATION, CREATIVITY, CRITICAL THINKING ARE VALUABLE TO HELPING STUDENTS SUCCEED AT ADAPTING TO NEW JOBS IN THIS INCREASINGLY INTERCONNECTED, DIGITAL-AGED WORLD.

SIMULATION OF REAL WORLD

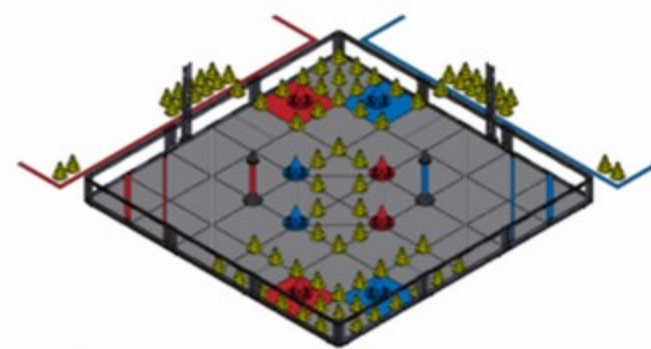


~ STUDENTS LEARN TO OPERATE SAME TOOLS, MACHINES, SOFTWARE PROGRAMS UTILIZED IN INDUSTRY.
 ~ STUDENTS MAKE REAL-WORLD ENGINEERING AND BUSINESS DECISIONS.
 ~ LEARNING TO COLLABORATE WITH CO-WORKERS, DEMONSTRATING GRIT AND PERSEVERANCE ARE KEY TO HANDLING AND OVERCOMING FUTURE CHALLENGES.

MOTIVATING TOOL FOR LEARNING



~ STUDENTS TAKE OWNERSHIP OF THEIR ROBOTS, BUILDING SENSE OF ACCOMPLISHMENT, PRIDE, AND CONFIDENCE.
 ~ STUDENTS' PASSION DRIVES LEARNING NEW SKILLS AND KNOWLEDGE, THUS MOTIVATING THEM TO SUCCEED AT ACADEMICS IN PURSUIT OF LONG-TERM GOALS.
 ~ COMPETITION ASPECT OF VEX ROBOTICS APPEALS TO DIVERSE DEMOGRAPHICS AND AGE GROUPS.



ABOUT VEX ROBOTICS

The VEX Robotics Competition is a global program with over 16,000 teams from 40 countries involved. To maintain the challenge in the sports-inspired competition, each year an entirely new game is released. Not only are teams required to design, build, and program new robots, but they are also required to master a new set of rules and strategies.

In the process of developing these robots, students gain experience in the following:

TECHNICAL SKILLS

- *Workshop Tools
- *CAD Software
- *Computer Programming
- *Mechanical Knowledge
- *Physics Principles
- *Writing Ability
- *Public Speaking

21ST CENTURY SKILLS

- *Teamwork
- *Leadership
- *Organization
- *Budgeting
- *Project Management
- *Quantitative Reasoning
- *Interpersonal Communication

2017-18 VEX IN THE ZONE

Matches are played on a field set up as illustrated in the figures throughout. Two Alliances — one “red” and one “blue” — composed of two Teams each, compete in each Match. The object of the game is to attain a higher score than the opposing Alliance by Stacking Cones on Goals, by Scoring Mobile Goals in Goal Zones, by having the Highest Stacks, and by Parking Robots.