

We Need Your Help

We are very excited to offer these programs. We cannot provide students access to these programs without the financial support of organizations like Square One Educational Network, the Oak Park School District, Oakland Intermediate School District and the Michaels Family Foundation. But we need more support. Please consider becoming a sponsor to one or all of our STEM programs. Please visit our website at www.technoknights.weebly.com or contact us directly by phone or email.



We would be happy to share how you can help our students become future Scientists, Engineers, and Innovators.



Key Sponsors and References

REC Foundation

Reid Family Foundation



<http://www.squareonenetwork.org>



MATE

Marine Advanced Technology Education
<http://www.marinetech.org/>

TECHNO - KNIGHTS OAK PARK SCHOOLS ROBOTICS - STEM

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TECHNO-KNIGHTS

Oak Park Schools *Robotics and Related STEM Programs*

Learning by doing



Tel: 248-336-7620 x2574

Underwater—ROV Program

Underwater remotely operated vehicles (ROV) challenge students to engineer for the marine environment. Participation in underwater robotics provides students real world applications. Students must design and build their underwater remotely operated vehicle to accomplish a variety of tasks. This can happen in a pool, lake, or even ocean environments.

In 2014, Student Teams will compete on Saturday, March 15th on campus of Oakland University in Rochester, MI.

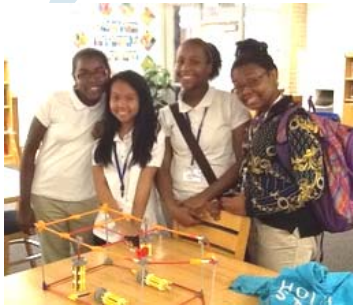
Teams will compete in vehicle performance, engineering and craftsmanship, design innovation, ambassadorship and presentation categories.

Select teams will move on to the MATE Regional Competition on Saturday,

April 16th in Alpena, MI.

High School and Middle School students will continue to compete in both competitions, while for the first time, two of our Elementary Schools will compete at Oakland University.

We believe these activities provide students with the opportunity to explore and engage students in the areas of Science, Technology, Engineering, and Math (STEM). Please support our efforts and become a program sponsor.



VEX Robotics

This year, two VEX Robot Kits were donated to Oak Park Preparatory Academy with a plan to begin engaging students. Thank you to The REC Foundation and the Reid Family Foundation for their donations. OPPA students will compete for the first time in the fall of 2014. We would like to double this program to involve additional students.

As students matriculate to High School, they can opt to become members of the STEM Academy and pursue more sophisticated VEX and other Science and Engineering projects/courses.

Autonomous Innovative Vehicle Design

Through Square One's Autonomous Innovative Vehicle Design Project students are challenged to re-engineer a "Barbie Jeep" into an autonomous vehicle. Utilizing Arduino technology, GPS and sensors, Autonomous IVD vehicles must traverse a challenge course and avoid obstacles without driver assistance!

Student teams compete at the Michigan International Speedway in performance, engineering and craftsmanship, design innovation, ambassadorship and presentation categories.

This years competition will be held on May 4, 2014, at the Michigan International Speedway. Go Knights!

Meet the Instructors and Club Advisors

William Grimm—Oak Park High

Mr. Grimm has been teaching in the Oak Park School District for more than 15 years. He has developed STEM initiatives including the High School curriculum of "Science of Engineering" and "Science of Cell Phone and Wireless Technology". Over 90 students each school year become involved in STEM initiatives through these courses. In addition, Mr. Grimm also hosts "Engineering Day" in which professionals come to the school and speak with over 300 students about careers in Engineering. Under the direction of Mr. Grimm, the STEM initiative has been extended to both the middle and elementary schools.

Tom Lurie—Oak Park Preparatory

Mr. Lurie has been teaching in the Oak Park School District for more than 17 years. He has taught both middle and high school courses in Career and Technical Education. Mr. Lurie has worked collaboratively to assist in the development of open source technology curriculums. In addition, he has training in sustainable 3D printing technology and is the Robotics advisor at the Middle School with over 40 after school students. He and his students are helping bring Robotics to the elementary school.

Michael Daniels- Einstein Elementary

Mr. Daniels is the district elementary technology educator. He works with students grades 3-6 district wide in developing basic computer skills. In addition, Mr. Daniels is making STEM come alive as the Robotics Advisor for Einstein Elementary School.

Stephanie Powell—Key Elementary

Ms. Powell teaches second grade at Key Elementary. In addition, Ms. Powell is making STEM come alive as the Robotics Advisor for Key Elementary School. In addition, **Ms. Tienda**, fourth and fifth grade teacher assists with the Robotics club.