THE EH-TEAM

AN EXPERIENCE IN STUDENT LEARNING

YES Report
Utica Community Schools
Meet the EH-Team
EH-Team Infrastructure
Class objective
ROV & Go-Kart objectives
Student Baseline
Mid-year Progression
Mid-year to Today
Student Learning
Conclusion
The EH-Team consists of students from the four UCS High Schools, Ford II, Stevenson, Utica, and Eisenhower. We also have one student from Armada High School. The EH-Team members are pooled together at the UCS Instructional Resource Center. Here they take a Engineering Technology course.
THE EH-TEAM

Team Coach: Geoff Clark
CEO: Adam Smith

Electric Go-Kart
COO: Adam Smith

Team Members:
Michael Charelston
Rachelle De Benedetti
Nick Ditta
Jean-Francois Henry
Travis Graham
Bryan Lafata
Antonio Moraccini
David Orsini
Kyle Pachla
Jake Riegal
Adam Rose
Even Spencer

Remote Operated Vehicle (ROV)
COO: Brad Foley

Team Members:
Stuart Bailey
Gladys Caruso
Keith Hutchinson
Ben Weyland
David Smelley
Yogesh Taxak
Donavan Whitehead

Sponsors:
Michigan Fiberglass Supply
The objective of The 2010-2011 EH-Team was to document learning through individual and group experiences. We did this through in class activities, projects and discussions. To help document learning and individual development students were required to complete periodic work logs describing what they had accomplished. The EH-Team was divided into the ROV and Go-Kart teams with their own specific goals and expectations.
To create an efficient design to accomplish the tasks

Build a submarine that lives up to our expectations

This year’s tasks were modeled after the BP oil spill

Tasks

- Attach a line & cut oil line
- Remove oil cap & stop flow
- Direct oil flow & turn oil well back on
- Collect biological samples & water samples
- Record depth at the sample site
GO-KART OBJECTIVES

• Rearrange an existing structure
• Emphasize and redesign a more ergonomic go kart
• Create a body and make the go-kart overall more aesthetically pleasing
• Improve the suspension and braking systems
What we had coming into enterprise to build our knowledge upon & base our progression off of:

- Math: Algebra based with some pre-calc and calculus students
- Chemistry: Physical Science-Biochemistry
- Physics-Basic-Advanced
- Engineering: FIRST team members and former enterprise students as well as CTE students
SEPTEMBER THROUGH JANUARY:
- College research Projects
- Catapult
- Balsa wood structures
- Bridge building
- Project Management & infrastructure

- The engineering based backgrounds gave us the opportunity to buff up on creativity, problem solving, and innovation necessary to work on both ROV and Go-kart projects

JANUARY TO PRESENT
- Microcontrollers
- Soldering Exposure
- Digital and Analog Electronics

- These projects helped us to dive deeper into the inner workings of both the Go-Kart and ROV. The exposure to electronics helped to improve the efficiency and remove excess wire that got in the way of our desired improvements.
Some of the knowledge we took away from the experience:

- **Math**: calculating & predicting values or reverse engineering spring constants
- **Physics**: Calculating the effects of forces, gravity, and kinematics
- **Engineering**: Making strides in mechanical, structural, architectural, civil, and preparation for studying engineering in college
- **Electronics**: micro controller experience, circuitry and soldering skills
- **Presentation Skills**: learning to properly research and present content
“Our earlier projects with catapult and bridge building as well as solid works training gave us a mechanical and structural perspective”
Travis Graham

“We learned to hone our problem solving skills and identification of problems which gave us an engineering background & knowledge base to center our work on the go kart off of”
Adam Rose

“Our super cool teacher showed us the benefits of using research projects to supplement our knowledge and expand our understanding of the problem at hand”
Evan Spencer