CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY

Name(s)

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Project Number

S0303

Project Title

Aquatic Voyager

Abstract

Objectives/Goals

Our project is to build a submersible Remotely Operated Vehicle (ROV)to provide assistance for Search and Rescue teams in their attempts to save lives.

Methods/Materials

To obtain the materials that would be subject to underwater pressure and temperature differences for navigation and viewing of subjects. The materials consist of ASB/PVC pipe, servo motors, radio control device, bilge pumps to act as motors to propel the unit. Cat5 cabling to provide power and video output. A recording device to record expeditions. Using the Engineering Design Process of defining the problem, brainstorming ideas, proposing solutions, and developing a prototype, we then proceeded to receive feedback from community partners and choose a working model. Testing and continues feedback from team members has further developed the project.

Results

ROV navigation made it possible to view subjects underwater and navigate calm waters. Motors will be changed to endure colder temperatures and dive deeper.

Conclusions/Discussion

Stronger motors are being installed to navigate rough waters, but the concept and results do match our hypothesis and goals. In recent marine catastrophes, building our knowledge of ROV technology is necessary in order to save lives. Have equipment ready to assist divers in a timely manner is necessary to make every attempt a successful one.

Summary Statement

Manufacturing a Submersible Remotely Operated Vehicle that is able to assist Search and Rescue Personnel in their water rescue attempts.

Help Received

Advisor guided instructions for project. Advise in how to install electrical components from High School Mechanic Instructor.