CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY

Name(s)

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Project Number

34591

Project Title

The Revinoff

Abstract

Objectives/Goals

The objective of our project is to build an engine to power cars that runs on alternative energy sources. Through this eco-friendly engine we want to revolutionize the world of transportation. The engine runs on water and solar energy.

Methods/Materials

We used four car tires, a water pump, some PVC pipes, wires, a 12 volt led-acid battery, 52x55 solar panel, a drill, a valve, an axle, 3D printer, a water wheel and a plastic box. Many steps were required in order to build this engine. We needed to gather the materials and prep them for work. We then drilled all the holes into the plastic box. The wheels were attached to the bottom of the body, we used the 3D printer to print a water wheel and attach it to the axle. We attached the PVC pipes to the valve and the pump. The axle was attached to the box and so was the pump. We attached the gears and the chain to it. We then did all the wiring and attached the solar panel.

Results

We tested our pump's power on each of our energy sources using a flow rate sensor and logger pro. The test results show that that the solar panel produces more water, in a measurement of meters per second, than the battery produces.

Conclusions/Discussion

In conclusion, we partially accept our hypothesis. We were wrong about the charging time of the battery and the number of solar panels necessary. The battery takes about twelve hours to charge, and we only needed one solar panel. We accept our hypothesis in that our engine is a success and works perfectly.

Summary Statement

Using water and solar energy we have engineered an eco-friendly car engine, and it is designed to revolutionize the ever growing world of transportation.

Help Received

Director of operations at The Mirman School, Mr. Craig Fine helped with drilling, sawing and welding.