



CALIFORNIA STATE SCIENCE FAIR 2007 PROJECT SUMMARY

Name(s) Jesse Allhiser; Riley Schofield	Project Number S0801
Project Title Pedal Power	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our two goals for this project were to: (1) figure out a new idea for creating power and (2) to make power from just a battery, an alternator and a bicycle. We wanted to see if we could create power by just doing things that most people do every day, like exercising.</p> <p>To continue our investigation we are going to try to measure the maximum amount of power that we can generate, by expanding the number of items we power using our alternator. We are also going to rebuild our power generation apparatus, changing it from our mountain bike that we used to an exercise bike.</p> <p>Methods/Materials We used boards, nuts, bolts, screws, metal plates, plastic straps, bike, alternator, twelve-volt light, batteries and wires. We constructed a machine, which ran the back tire of a bike against an alternator, to create power. We used a battery to power the magnetic strips in the alternator so that we could create a spark when we pedaled.</p> <p>Results When we attached the car battery to the alternator the light lit up partially, even before we started pedaling. As we pedaled the light got brighter and even brighter as we pedaled harder. When we replaced the car battery with a AA battery, we had to pedal harder to get the light to light up at all. This was because the car battery had more voltage running through it than the AA battery did. In both trials, we could see that we were generating power by pedaling the bike.</p> <p>Conclusions/Discussion Power was created by hooking up a battery to an alternator in order to power the magnetic strips on the outside ring in the alternator. #Pedal Power# was used to turn the back tire of a stationary bike, which turned the rotor inside the alternator, in order to light up a 12-volt car light. We were successful in creating energy! As we continue our tests, we will try to light up objects that need more power so that we can measure how much power we can create. This could be a great saving in energy cost for gymnasiums everywhere! In addition, if we can find more ways to harness the energy people expend in their lives every day, we could have a whole new source of cheap, renewable energy!</p>	
Summary Statement Our project is about harnessing the energy from things that people do every day.	
Help Received Mr. Allhiser taught us a lot about the physics of power and he helped us put our project together. We hope to be able to use his power tools as we rebuild our project so that we can do all the building ourselves. Mrs. Allhiser and Mrs. Schofield helped us by proofreading our report, working journal and	