

## CALIFORNIA STATE SCIENCE FAIR 2008 PROJECT SUMMARY

| Name(s)   | Project Number              |
|---|-----------------------------|
| Sera H. Aguirre   |                             |
|   | J0802                       |
|   |                             |
| Project Title   | 1                           |
| Is the Voltage Created by Lemon Batteries Usable Energy?  |                             |
| is the voltage created by Lemon Datteries Usable En   |                             |
|   |                             |
| Abstract  |                             |
| Objectives/Goals  |                             |
| Make a lemon operate a LED, a watch, and a small light bulb.  |                             |
| Methods/Materials<br>4 galvanized nails   |                             |
| 4 small copper wires about 2 inches   |                             |
| 4 lemons  |                             |
| 8 alligator clips   |                             |
| a multimeter  |                             |
| a watch   |                             |
| a small light bulb<br>a LED   |                             |
| Results   |                             |
| The lemons were able to operate the LED and watch, but not the small light bu   | lb.                         |
| Conclusions/Discussion  |                             |
| The lemon was able to operate the LED and the watch because they had little re  |                             |
| little voltage. The light bulb didn't operate because it had too much resistance a  | ind too little current.     |
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| Summary Statement   |                             |
| Making a lemon operate small electronics.   |                             |
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|   |                             |
| Help Received   |                             |
| •   | d the columnized rolls. May |
| My dad helped me get the materials such as the copper wires, alligator clips, ar<br>mom helped me get the lemons. My dad also helped me put the galvanized nail |                             |
| lemons.   | is and copper whos mus the  |