



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Matthew B. Prata; Thomas J. Prata	Project Number 34603
Project Title It's So Hot It's Electric	
Objectives/Goals Can you charge a phone with geothermal electricity? Our hypothesis was that we can generate a decent amount of electricity from a portable heat cell. Abstract Methods/Materials We looked for a portable geothermal conducted and we found Peltier tiles. Next, I had to conjoin the peltier tiles to the heat sink. We did this by using geothermic glue which is safe to use with heat. Next, we tested our project by placing the heat sink over a flame to produce heat, while a fan was going on at the top to cool it down. These opposing energies produces a reaction through the magnets that is called the Thomson effect, which is an effect that produces electricity. We tested the volts it was conducting. For this project we used a candle, Peltier tiles, thermometer, phone, phone charger, and gloves. Results We got 2 volts from the Peltier tile. This still charged the phone but it wasn't enough to make the phone indicate that it was charging. Conclusions/Discussion Our hypothesis was correct; it is possible to charge a phone with a portable heat device.	
Summary Statement Our hypothesis was that we can generate an adequate amount of electricity from a portable heat cell, particularly Peltier tiles.	
Help Received Mom helped prepare heat sink.	