



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

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| Name(s) Oliver Fredericksen; Jesse Ruediger | Project Number J0608 |
| Project Title Wanna Burn Some Calories? | |
| <p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective for this project is to find which food product out of a KFC bite, an almond, a crouton, a McDonalds patty, and a marshmallow can produce the greatest amount of energy, or calories. We also want to find how the different food products differentiate between each other, and why which ones had a higher production of energy than others. We want to find how processed food products and all natural food products have a difference of energy production as well.</p> <p>Methods/Materials For testing, we first poured 1/2 cup of water into the small can and put the food product we would test (cut down to the size of an almond), and put the thermometer into the water. We then stuck the lighter through the hole near the bottom of the jug, and began burning. We would burn for 3 minutes, and write down the start temperature and the end.</p> <p>Results The almond produced an average temperature increase of 41 deg C, producing the greatest amount of energy. The crouton produced an average temperature increase of 12.75 deg C, producing the smallest amount of energy. The marshmallow produced the 4th most amount of energy, with an increase of 18.5 deg C. The KFC chicken bite came in 3rd place, with an average increase of 19.5 deg C. The McDonalds patty created the 2nd most amount of energy, with an increase of 21.5 deg C.</p> <p>Conclusions/Discussion We found that our hypothesis was almost backwards, because the almond actually produced the highest amount of energy. We think this because when the food products are all cut down to the size of the smallest food product, in this case the almond, it cuts the energy that it would produce in its normal size.</p> | |
| Summary Statement This project is based off of calorimetry, and we want to find which food product out of 8 different food items can produce the greatest amount of energy. | |
| Help Received Father helped construct the calorimeter | |