



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Sofia A. Navarro	Project Number J1916
Project Title What Types of Nuts, According to their Calorific Values, Are Best to Store for Emergencies?	
Abstract Objectives/Goals The objective of the project is to measure the calorific value of different types of nuts, in order to determine which type is best for storage during emergencies. Methods/Materials Build the calorimeter from an aluminum sheet, grind and measure the nut samples, measure the amount and the initial temperature of the water, burn the nut samples, measure the ending temperature of the water. Results The difference between the initial and ending temperature of the water was used in a specific formula to determine the calorific value of each type of nut. Each type of nut presented a distinctly different calorific value. Conclusions/Discussion The pecans were found to have a greater calorific value than the other types of nuts, almost double of the nuts with the least calorific value, which proved that they can provide more energy to sustain a human during an emergency and storing them is a better option.	
Summary Statement I found that pecans have the greatest calorific value and offered the best benefits when being stored for emergencies.	
Help Received I designed the calorimeter myself, had help from my father to build it, and conducted the experiments on my own.	