



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Natalie E. Boust	Project Number J2005
Project Title Do Various Consumable Energy Stimulants Have an Effect on an Organisms' Behavior?	
Objectives/Goals The purpose of my science fair project is to determine the effects of various energy stimulants on living organisms. The reason I am doing this investigation is to determine if energy drinks are detrimental to the environment and to identify which consumable energy stimulant would have the lesser negative impact on consumers.	
Abstract Methods/Materials # Natural Organic Gardner & Bloome Premium Topsoil; # Sure Ketch Mini Crawlers; # 9 oz Clear Solo Cups; # 4x4 Graphing Paper; # 4 pack Red Bull Energy Drink; # 4 pack Rockstar Energy Drink; # 4 pack Monster Energy Drink; # 1/2 cup measurer; # Graduated medicine spoon; # Duck Tape; # 4 pack Sharpie Fine Point; # 4 pack Ballpoint Pens; Testing Method: After letting the worms to saturate in the contaminated soil, I placed each worm on a sheet of grid paper and set the timer for 30 seconds. In that 30 seconds, I used a fine point Sharpie to mark ever square the worm came in contact with. Each dot on the paper represents one unit.	
Results Day1: grid test results # Most active group= Water-average 4.6 # Least active group= Monster-average 2 Day2: grid test results # Most active group= Water-average 8.07 # Least active group= Red Bull-average 2.14 Day3: grid test results # Most active group= Water-average 2.67 # Least active group= Rockstar-average .4 Day4: grid test results # Most active group= Monster-average 5.47 # Least active group= Red Bull-average .8	
Conclusions/Discussion The Monster Energy Group was the most active during testing, so this led me to believe that Monster Energy was the least detrimental. However, after analyzing the results for the Water Group, I discovered that only three out of the original fifteen worms were left (twelve worms escaped from their containers). The worms that escaped their containers had enough strength to crawl out of their designated cup, onto the	
Summary Statement The reason I am doing this investigation is to determine if energy drinks are detrimental to the environment and to identify which consumable energy stimulant would have the lesser negative impct on consumers.	
Help Received Father bought materials; Mother helped arrange title on board	