



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Kate C. Murray	Project Number J1197
Project Title Which Earthworm Best Affects the Soil?	
Abstract Objectives/Goals Objectives: My objective was to find out which earthworm best affected the soil (produced the best pH, N, P, and K levels). Methods/Materials Methods/Materials: I counted and weighed the worms and tested the pH, N, P, and K levels of the soil at the beginning and end of two months to see which worms produced better soil in that time. I also showed when I fed and gave the worms water and which species grew more in both numbers and weight. Results Results: I found that the Red Worms produced slightly better soil than European Nightcrawlers, though they were very comparable. Conclusions/Discussion Conclusions/Discussion: My conclusion is that Red Worms produced better soil because they reproduce faster, so there are more of them to help improve the soil. They also are smaller which means they eat softer foods that they can get their small mouths on like coffee grounds and the soft insides of banana peels that have a lot of nutrients for the soil. The European Nightcrawlers are bigger, so they have bigger mouths and can eat the tough egg shells that have less nutrients for the soil.	
Summary Statement I wanted to find which earthworm (Red Worm or European Nightcrawler) could create better soil.	
Help Received My science teacher, Ms. Ligeti, had a workshop at the Middle School where students from her class could come and work on their project.	