



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> <b>Stephanie N. Cudney</b>	<b>Project Number</b> <b>J1007</b>
<b>Project Title</b> <b>Earthworms Affect Soil pH</b>	
<b>Objectives/Goals</b> I know from my previous science experiment in third grade that earthworms can mix soil and sand together. My purpose for my experiment this year is to find out if earthworms can affect soil pH by mixing soil and sand together.	
<b>Abstract</b>	
<b>Methods/Materials</b> I observed layered soil and sand, and earthworms in a jar labeled two. Also, measured jar two's soil pH by using a pH meter. Another jar labeled one consisted of layered soil and sand only. Jar one was the controlled variable and Jar two had the Dependent variables.	
<b>Results</b> My first trial, I analyzed my data on a graph which showed a change in the soil pH. The soil pH was a 7 on day one and by day 3 it was a 7.5. Day 5,8,10 the pH was a 7.9 and was constant. On the final day, day 12, the pH was an 8. The second trial, my data showed Days 1,3,5,7 a constant pH of 7.9. Days 9,11 was a pH of 8.	
<b>Conclusions/Discussion</b> My hypothesis was correct, earthworms can affect soil pH by mixing soil and sand together. By analyzing my data on a graph; I saw the changes in the soil pH. The only part of this experiment I would do different is use a different type of pH meter to measure the soil pH. By fathering this experiment I would ask myself "Can temperature affect pH in soil and sand that is mixed together by earthworms?" Knowing what I have observed from my experiment. We can use earthworms to mix soil and sand together to change the soil pH in our environment.	
<b>Summary Statement</b> I wanted to find out if earthworms could affect soil pH by mixing soil and sand together.	
<b>Help Received</b> My mentor teacher helped me by giving me a science packet that helped explain the scientific method. My mother kept me on task and answered questions that I had. Also, I attended my hands on science teachers workshop on pH that helped me understand the pH scale.	