



**CALIFORNIA STATE SCIENCE FAIR  
2013 PROJECT SUMMARY**

<b>Name(s)</b> <b>Cynthia Rodriguez</b>	<b>Project Number</b> <b>S2212</b>
<b>Project Title</b> <b>Get Squirmy</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective was to test a mealworm's respiration rate in various temperatures and see at which temperatures their respiration rate is the highest. I used the temperature with the highest respiration rate to see if it affects the rate at which the mealworms mature and I compared to mealworms at room temperature.</p> <p><b>Methods/Materials</b> I used beakers, 3 large beakers, ice, the ISOTEMP 205 water bath, 100 mealworms, a ring stand, thermometers, Vernier LabQuest2, Vernier CO2 gas sensor. For the first part of my experiment, I tested mealworms in a Nalgene bottle. I plugged a CO2 gas sensor to my LabQuest2 and then attached my CO2 sensor to the Nalgene bottle that held the mealworms. Then I submerged the Nalgene bottle with the worms in ice or in a warm bath, depending on the trial. I read and recorded the data.</p> <p><b>Results</b> At 115F, the mealworm's respiration rate was higher than at 35F. The mealworm's growth rate is faster at 120F temperature than at room temperature.</p> <p><b>Conclusions/Discussion</b> My project can benefit people around the world. I have proven that keeping mealworms at hotter temperatures will increase their growth rate therefore providing food at a faster pace for the people that depend on these worms to survive.</p>	
<b>Summary Statement</b> Testing what temperatures will increase a mealworm's respiration the most then use that temperature to see if their growth rate is faster than at room temperature	
<b>Help Received</b>	