



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Lee R. Begin</b>	<b>Project Number</b> <b>J1003</b>
<b>Project Title</b> <b>Which Method of Composting Works Best? Home Vermiculture System or Commercial Compost Activator?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of my project was to determine if red wiggler worms ( <i>Eisenia foetida</i> ) would compost food and paper waste into humus faster than commercially available compost activators. <b>Methods/Materials</b> Three containers were prepared with a 5-inch bedding of food scraps, shredded cardboard, newspaper, soil, and sprayed with water. After letting the containers sit for a week, one bin received 1000 red worms, another was given the commercial compost maker, and the third bin received nothing. Each week, measurements were taken of internal temperature and height of bedding. The method used to determine the success or failure was the height of bedding with respect to the amount of humus produced. <b>Results</b> The bedding in the red worm bin decreased to 2 inches after four weeks compared to 2.5 inches and 3.25 inches after 5 weeks in the other bins. The temperature in the red worm bin stayed at 105 degrees, whereas the temperature in the other bins fluctuated between 100 and 105 degrees. <b>Conclusions/Discussion</b> My conclusion is that red wiggler worms are better at composting food and paper scraps better and faster than a commercial compost activator. The worm compost had the strongest negative correlation between height of bedding and time. The higher, more consistent temperature shows a larger amount of biological activity in the worm bin, than in the commercial compost maker.	
<b>Summary Statement</b> My project is about comparing two difference methods of composting household waste: a home vermiculture system (using red wiggler worms) or commercially available compost activators.	
<b>Help Received</b> I received help from my parents. They bought the plastic containers and worms. My mom offered suggestions on the design of the board. I received guidance from the owner of Gardener's Supply store; he helped chose the compost maker.	