



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Beth A. Matter	Project Number J1917
Project Title Does Worm Type or Medium Affect Regeneration?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment was to find out if different types of earthworms can regenerate more efficiently than other types, and if the medium an earthworm lives in has an effect on its regeneration.</p> <p>Methods/Materials To test this, I took nine redworms, nine nightcrawlers, and nine earthworms, and cut them all in half. The worms were split into three groups according to worm type. In each group, three worms were put into separate containers of compost, three were put in separate containers of potting soil, and three were put into separate containers of sand. Only the front ends were used. The worms were measured and observed every three days.</p> <p>Results The nightcrawlers regenerated an average of 21.2% of their initial body length, the redworms regenerated an average of 1.27%, and the earthworms regenerated an average of 2.9%. Seven out of nine of the nightcrawlers died within a few days. The worms in the potting soil regenerated an average of 19.1% of their initial body length, and the worms in the sand regenerated an average of -2.2%. All worms in the compost died within a few days.</p> <p>Conclusions/Discussion The results of this experiment disproved my hypothesis that the redworms would regenerate the most. The nightcrawlers regrew the most of their initial body length, followed by earthworms, then by redworms. Seven of the nightcrawlers died. All redworms and earthworms, except for one sick earthworm and the worms in the compost, were healthy and active.</p> <p>My hypothesis that the potting soil would be the best medium was proven correct. All worms in compost died. The worms in the potting soil and the sand lived, but the ones in the potting soil regenerated more of their initial body length. Worms in the potting soil regenerated an average of 19.1%, while the ones in the sand regenerated an average of -2.2%.</p>	
Summary Statement The purpose of my project was to find out if different types of earthworms are able to regenerate more efficiently than others, and if the medium an earthworm lives in has an effect on its regeneration.	
Help Received Father helped cut and measure worms, and also helped connect the two boards together	