



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

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| Name(s) Samuel Z. Lang | Project Number J2206 |
| Project Title A Comparison of the Effects of Household Wastes vs. Commercial Bedding in Vermiculture on <i>E. fetida</i> and <i>L. rubellus</i> | |
| <p style="text-align: center;">Abstract</p> <p>Objectives/Goals When you start raising worms, which food / bedding should you choose? According to many online articles, worms can be fed on many things including paper, coffee and tea. By using pure food as bedding, I studied the effects of common household wastes vs. commercial bedding in vermiculture on <i>E. fetida</i> and <i>L. rubellus</i>, in order to find out which household wastes preserves as well as encourages the most worm growth. My hypothesis is: peat moss would be most effective in both preserving vitality and promoting growth, but inexpensive alternative(s) could be found in the Household Wastes category.</p> <p>Methods/Materials Putting worms into a variety of pure food jars (no other bedding) over a period of time, observing worms# health condition, and measuring their weight changes. Tested foods: pea moss, shredded paper, coffee grounds, used tea leaves, and etc. Tested worm species: <i>Eisenia fetida</i> and <i>Lumbricus rubellus</i>.</p> <p>Results Peat moss produced the best results, with paper finishing closely behind; then followed by coffee, teas were the worst.</p> <p>Conclusions/Discussion The pilot study supported my hypothesis that peat moss would be most effective in both preserving vitality and promoting growth, but inexpensive alternative(s) does exist in the Household Wastes category, such as shredded paper. In addition, I learned that moisture is a powerful variable, and teas may be potential worm poison.</p> | |
| Summary Statement By raising worms in variety of pure foods, I conducted this project to compare the effects of household wastes vs. commercial bedding in vermiculture on <i>E. fetida</i> and <i>L. rubellus</i> . | |
| Help Received Parents provided moral support , advice and purchase of all materials. | |