



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Taylor S. Byler	Project Number J2402
Project Title What Is the Texture Preference of the Coccinellidae?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I am doing an experiment in which texture ladybugs are most attracted to. I am doing this project because I want to know which types of terrain have a texture that ladybugs are attracted to, so they can be attracted to crops as an alternate to using insecticide on plants plagued with aphids, such as alfalfa. The need for an alternative is due to the phytotoxicity of some insecticides, which can cause death, yellowing, or destruction in tissues, growth retardation, stunting, abnormal growth, or defoliation. The reason ladybugs are a good choice is because just one ladybug and eat up to one thousand aphids in its life time, and is not harmful to plants. Another reason for an alternative is for the danger insecticide poses to pollinators. I hypothesize that the ladybugs will be attracted to the smooth, white section because most leaves are smooth.</p> <p>Methods/Materials My control variable was the sandpaper, smooth foam core, and bumpy cardboard. My dependant variable is the ladybugs attraction to the textures. I set the ladybugs in the clear plastic bucket and left them in there for twenty minutes checking at five and ten minute intervals to see which texture had the majority of ladybugs on it. I learned that not many like to walk on sandpaper. The most utilized texture was the bumpy cardboard.</p> <p>Results On average, the ladybugs were attracted to the bumpy texture the most, then smooth texture, and lastly the rough texture.</p> <p>Conclusions/Discussion My hypothesis was wrong. I thought that they would be attracted to the smooth texture, because leaves are closer to smooth than rough, or bumpy. i believe that the beetles were attracted to the bumpy texture because it provided the protection that the other textures did not have.</p>	
Summary Statement my project is how ladybugs may possibly be attracted by some textures so they can be used as an alternative to some insecticides	
Help Received my mom helped me count out 30 ladybugs to put into the bin while doing my experiment and she also gave me very much needed constructive criticism	