



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Rachel N. Redd	Project Number J2422
Project Title Are Geckos Food Critics Too?	
Abstract Objectives/Goals The objective is to determine whether Eublepharis macularis (Leopard Geckos) have a taste preference for crickets that have been gut-loaded and flavored with either sweet or bitter substances. Methods/Materials Three phases of the experiment were performed-Phase 1 was completed in December 2008 and Phases 2 and 3 were completed in late January/Early February 2009. During each phase, two geckos were alternately fed "bitter" crickets gut-loaded and misted with asparagus or "sweet" crickets flavored with apples and sugar water. The third gecko in each phase was fed unflavored crickets that had only received water. The geckos were fed once a day and allowed to feed for one hour; the number of crickets eaten were counted and then removed until the next day's feeding. Results During Phase 1 of the experiment, Gecko 1 showed only a slight preference (2%) for sweet over bitter crickets. Gecko 2 had a much higher preference at 9% more sweet crickets eaten over bitter. During Phase 2 when I rotated the control gecko, Gecko 1 showed a greater preference for sweet with 9% more sweet eaten over bitter and Gecko 3 showed exactly the same 9% difference. Finally during Phase 3, Gecko 2 (who had showed a higher preference for sweet in Phase 1) showed only a 1% preference and it was for bitter crickets. Gecko 3 continued to show a significant preference for sweet crickets with a 12% difference. In summary, over all crickets eaten during the experiment, the geckos showed varying degrees of preference for sweet over bitter crickets. Conclusions/Discussion Although my hypothesis was proven correct,(all showed a preference for sweet)one of the geckos showed only a slight preference for sweet and during one phase actually showed a slight inclination for bitter. Overall, it appears that all the geckos like the flavored crickets (sweet or bitter) more than the unflavored crickets. I also found that each gecko has individual preferences so it would be difficult to apply this to improving nutrition unless one tested the gecko#s preference first. In future studies, I would like to find a way to give the gecko a choice in the same feeding cycle between sweet and bitter to see if they choose to eat one over the other.	
Summary Statement Can leopard geckos distinguish different tastes?	
Help Received Mother helped glue items on board and type state application on-line	