



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Gadielle Stein-Bodenheimer	Project Number J1435
Project Title The Effect of Carbon Dioxide on the Reflex Bleeding Rate of Hippodamia convergens	
Abstract Objectives/Goals My project is an investigation of how the reflex bleeding rate of Hippodamia convergens is effected by the increase of carbon dioxide in the ladybeetles' atmosphere. Methods/Materials The carbon dioxide used in this experiment was the captured product of the reaction between baking soda and vinegar. The CO ₂ was gradually increased in six containers of ladybeetles. Two additional containers were kept as controls and did not contain heightened levels of carbon dioxide. I conducted two trials to ensure accuracy. Results My results showed that low percentages of carbon dioxide in the environment of the ladybeetles did not cause them to change the amount of blood that they excreted. However, high percentages of carbon dioxide caused the ladybeetles to secrete less than normal amounts of blood. Conclusions/Discussion The addition of abnormal amounts of carbon dioxide in the atmosphere negatively effects the ladybeetles' ability to protect themselves from predators. I believe that the ladybeetles' were able to adapt to low amounts of carbon dioxide, because the gas is already in existence in our atmosphere. But when they were exposed to high amounts, they were unable to adapt, and therefore their means of protecting themselves were compromised.	
Summary Statement The effect of carbon dioxide on the reflex bleeding rate of Hippodamia convergens.	
Help Received NONE	