CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s)
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Project Number
J1903

Project Title
Life in the Spotlight

Abstract

Objectives/Goals
This experiment explores the question of how the amount of daylight affects the lifecycle of butterflies from the stages of larvae to chrysalis to butterfly. The goal for this experiment is to try to accelerate the lifecycle of butterflies.

Methods/Materials
Method: Put the larvae in individual cups of their own with 6 grams of food in each cup. Divide the caterpillars into three groups of ten and label using the labels. Put each group of ten into separate boxes and place them in a dark area (a closet) with the lights and timers set to various durations of daylight and darkness. Make observations daily until all of the caterpillars turn into butterflies.

Materials: 30 Painted Lady butterfly larvae, 3 file storage boxes, 3 florescent daylight bulbs, 30 cups, a cup of larvae food, a scale, a dark place, 6 towels, butcher paper, 3 Intermatic Security timers, Scotch tape, 10 yellow circle stickers, 10 blue circle stickers, and 10 red circle stickers.

Results
The larvae that were exposed to the most light (18 hours of light/6 hours of darkness) became chrysalises and then butterflies first in 18 days. The second group (12 hours of light/12 hours of darkness) were second to finish in 19 days. The last group to finish were in the dark the most, (6 hours of light/18 hours of darkness) and finished the process in 20 days.

Conclusions/Discussion
The data I obtained supported my hypothesis that by having more light each day, caterpillars will develop through the process of a larvae to chrysalis to butterfly the fastest. This information could help endangered species of butterflies by reducing the amount of time in their lifecycle so that more lifecycles could be completed and the population increased.

Summary Statement
This experiment explores how the amount of daylight affects the lifecycle of Painted lady butterflies.

Help Received
My mother helped order Painted Lady larvae and buy the supplies. My dad and my teacher helped proof read the written report.