CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
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Project Number
S1906

Project Title
Goldfish in the Spotlight

Abstract

Objectives/Goals
In this experiment, I would like to find out if there is an effect on the respiration rate of goldfish due to the color of light they are exposed to in their environment. I would like to experiment on this topic because, though I do not currently own a fish I have always wondered why there is always the same color of light in every fish tank I have seen. So, I have decided that I will see if a change in the color of light in a goldfish's environment will cause the respiration rate of the fish.

Methods/Materials
In my experiment, I plan to use four different colors of light to test for an effect on the respiration rate of the goldfish. These lights include; red light, green light, UVB light and sunlight. I will place each fish in its own individual bowl and expose them all to the same color of light for the same amount of time and then test each ones respiration rate. I will then compare the results and come to a final conclusion.

Results
Throughout research, I found information to lead me to the hypothesis that red light was going to affect the fish the most. The results I collected did not say that at all. I found that despite my prior hypothesis, the green light most affected the fish. The green light was followed by the UVB light which was followed by the sunlight, and bringing up the rear was the red light.

Conclusions/Discussion
In conclusion, despite what my research had led me to believe, I have come to the conclusion that green light has the greatest effect on the respiration rate of goldfish.

Summary Statement
testing the change in a goldfish's respiration rate depending on the color of light they are exposed to in their environment.

Help Received
Mother helped put together board; science teacher provided fish and work space; friend provided consultation for the expiriment.