



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Anderson R. Mills	Project Number J1528
Project Title Can Fiber Optic Wire Light a Home?	
Abstract Objectives/Goals My project was to determine if a home could be lit by single light source transmitted by fiber optics wire. I hypothesized that a small home, about 1225 square feet, could be lit by fiber optic wire, with a considerable savings on the electricity used. Methods/Materials I designed a model home lit using two different lighting systems, traditional and fiber optic to visually compare both. Calculations were used to compare energy consumption of the two lighting systems. Results Calculations proved that a fiber optic lighting system used significantly less energy than a traditional lighting system without sacrificing light output. Through research, calculations used, and observations of light output from model, the fiber optic lighting system was proven to be a viable lighting system for possible use in the future. Conclusions/Discussion I concluded that a small home, about 1225 square feet, could be lit by fibers carrying light to different rooms.	
Summary Statement My project is about lighting a home with a single light source using fiber optic wire.	
Help Received Mother and father helped in construction of model; Glass Illuminations supplied free fiber optic wire and gave helpful advice on how to prime the wire for transferring light	