



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) E. William Kintzele, IV	Project Number J0714
Project Title Lights On, Lights Off: Energy Conservation with the L.M.T.	
Abstract Objectives/Goals To find a way to consistently save energy in domestic applications, by using an invention that consists of a light sensor, motion detector, and timer. Methods/Materials A motion detector, light sensor, and timer, with both AC and DC components, were circuited together to form an energy saving invention. The final result of the invention, the L.M.T., was then wired to a light in five different rooms. The amount of time that the light was on with and without the invention was recorded by using a video camera, and then documented to find whether or not the invention saved energy. Results The L.M.T. invention saved from 40% to 10% of the amount of energy that was being used. In areas with heavier traffic, the result was less conservation, but, in areas with low traffic, the energy conservation was much higher. Conclusions/Discussion By using the L.M.T. in domestic lighting and possibly heating/cooling applications, one could save up to half of the energy being used. An example of a possible heating/cooling application that this invention could be used in, is the thermostat, which is always on, even when the owner is on vacation.	
Summary Statement This project is an attempt to conserve electricity by using a light sensor, motion detector, and timer.	
Help Received Dad helped teach how to solder and teach basics of circuiting.	