



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Evan R. Szablowski	Project Number J1426
Project Title The Effect of Nicotine and Alcohol on the Movement of Lumbriculus variegatus	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my project was to determine if nicotine and alcohol affect the movement of Lumbriculus Variegatus (California Blackworms). My hypothesis was that these substances would have a negative effect on the movement of the worms.</p> <p>Methods/Materials</p> <ul style="list-style-type: none">A. Mix diluted solutions of both alcohol and nicotine.B. Use a Petri dish and a small plastic lid to make a "racetrack" for the worms.C. Make a "wiget" (to prod the worms to move) by taping a boar bristle to a toothpick.D. Place the first solution and a worm in a Petri "racetrack".E. Use a stopwatch to time 3 minutes while prodding the worm to move. Record the distance traveled.F. Repeat for each toxin and the control solution (spring water). <p>Results The average distance traveled by the worms in the nicotine solution was 6.5 cm. and 8.0 cm in the alcohol solution. The worms in the control solution (spring water) traveled 19.8 cm.</p> <p>Conclusions/Discussion The toxins nicotine and alcohol both reduce the movement of California Blackworms significantly. The distance traveled by the worms in the toxic solutions was less than half that traveled by the worms in the spring water. Nicotine had the greatest negative effect on the worms.</p>	
Summary Statement My project studied the effect of nicotine and alcohol on the movement of Lumbriculus Variegatus (California Blackworms).	
Help Received My mother helped me order the worms on the internet.	