



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<b>Your Name</b> (List all student names if multiple authors.) <b>Devin M Steenwyk</b>	<b>Science Fair Use Only</b>  <h1 style="margin: 0;">J1327</h1>
<b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>Dopey Daphnia: How Drugs Affect the Heart Rate of a Daphnia</b>	<b>Division</b> <input checked="" type="checkbox"/> <b>Junior (6-8)</b> <input type="checkbox"/> <b>Senior (9-12)</b>
<b>Preferred Category</b> (See page 5 for descriptions.) <b>13 - Pharmacology / Toxicology</b>	
<b>Abstract</b> (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.	
<p><b>Objective:</b> My project was to see how a daphnia's heart rate is affected by solutions of tobacco, cola, cough syrup, and ethyl alcohol. I believe that the heart rate would beat faster when I introduced the cola and tobacco, and the heart rate would beat slower when the cough syrup and ethyl alcohol was introduced.</p> <p><b>Materials and Methods:</b> I used 4 different solutions of cola, tobacco tea, cough syrup containing dextromethorphen hydromide, and ethyl alcohol, each diluted with 50% aged tap water. I put a single daphnia on the slide and counted its heart rate for 3 consecutive times to determine it's normal heart rate. I then put a 50% solution on the slide with the daphnia, waited one minute and counted it's heart rate. I did this count 3 times for the daphnia in the solution. I repeated the experiment twice for each solution with a new daphnia on a clean slide each time.</p> <p><b>Results:</b> The daphnia's heart rate in the stimulant solutions always increased. The daphnia in the depressant solutions heart rate decreased.</p> <p><b>Conclusion:</b> My results supported my hypothesis. I believe that my results show that by using every day products, stimulants and depressants can change heart rate.</p>	
<b>Summary Statement</b> (In one sentence, state what your project is about.) My project is about how drugs affect the heart rate of a Daphnia.	
<b>Help Received in Doing Project</b> (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. My Mother helped type my report. Dr. Mils Matheson was my mentor. Ms Jackie Pelatere advised me.	