



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

<b>Your Name</b> (List all student names if multiple authors.) <b>Molly A. McGrath</b>	<b>Science Fair Use Only</b>  <h1 style="margin: 0;">J0221</h1>
<b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>No Fear?</b>	<b>Division</b> <b>J Junior (6-8) J Senior (9-12)</b>
<b>Preferred Category</b> (See page 5 for descriptions.) <b>2 - Behavioral Sciences</b>	
<p><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> <p><b>OBJECTIVE:</b> To determine whether people answer questions about fears accurately.</p> <p><b>METHODS:</b> Informed consent was obtained from the parents of twelve female 6th grade classmates. A questionnaire was handed out to each subject containing five items in each of the following categories: foods, fears, and animals. They were asked to rank each item from 1-5(best-worst). This first part allowed numerical ranking of spiders as a fear contained within a larger questionnaire, disguising the purpose of the study. The second part of the test involved exposing the subjects individually to covered items from each category, the last being a preserved spider. An automated pulse monitor was used to record "baseline" pulse and after exposure to the spider the "fear response" pulse.</p> <p><b>RESULTS:</b> The measured heart rate change for each subject was plotted against their spider fear rank(1-5) using the Cricket Graph MAC program. A significant positive correlation between heart rate increase and increased spider fear rank was observed.</p> <p><b>DISCUSSION:</b> Last year I conducted a questionnaire about fears and found that half of my sixth grade classmates said they were afraid of spiders. My science fair experiment was an attempt to test whether this reported fear of spiders was actually true. Therefore, I conducted a new questionnaire that disguised the fact that I was trying to rank the subject's fear of spiders, by including other categories(food,animals). The results of my experiment showed a direct correlation between the fear od spider rank and heart rate response after exposure to a preserved spider.</p> <p><b>CONCLUSION:</b> My study confirmed that people answer questions about fear of spiders accurately.</p>	
<b>Summary Statement</b> (In one sentence, state what your project is about.) My project tested whether people answer questions about fear of spiders accurately	
<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. Mother and father supervised the experiment; Father helped type the report	