



**CALIFORNIA STATE SCIENCE FAIR  
2004 PROJECT SUMMARY**

<b>Name(s)</b> <b>Shiraz Ghanimian</b>	<b>Project Number</b> <b>S1603</b>
<b>Project Title</b> <b>The Effect of Wind on Phototropism</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this project is to observe how much negative tropism, due to wind (Thigmotropism) is too great for the positive tropism, phototropism.</p> <p><b>Methods/Materials</b> Four Cardboard boxes, Four table top fans, Four Plant light bulbs in the light sockets, 7 plants (Nemesia fruticans), Ruler, String, 80 mL beaker, Anemometer, Protractor</p> <p><b>Results</b> The only type of wind that actually allowed for plants to grow and show phototropism was the low level plants. The medium level plants grew only a tiny bit and showed a tiny bit of phototropism. The high level plants did not survive and did not show a bit sign of phototropism.</p> <p><b>Conclusions/Discussion</b> Based on my results, 4.94 meters per second of wind (22.7 degrees Celsius), which was the medium level, leaves only enough room for minimal phototropism and minimal plant growth. 5.15 meters per second of wind (22.8 degrees Celsius), which was the high level, leaves virtually no room for plant growth and no room for phototropism. However, 4.20 meters per second of wind (22.5 Celsius), which was the low level, was not enough to stop plant growth and the plants grew a decent amount and did display phototropism. This conclusion does prove my hypothesis to be correct.</p>	
<b>Summary Statement</b> The point of this project is to observe how much wind (negative tropism) is too great for phototropism (positive tropism).	
<b>Help Received</b> Ribet Academy's Biology Lab	