



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Catherine H. Williams	Project Number J2033
Project Title Factors Affecting Sweet Pea Tendril Growth	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The goal of my project was to determine how the growth pattern of sweet pea tendrils is affected by the presence of a magnetic field, blowing air, or having their tips cut off.</p> <p>Methods/Materials Twelve young sweet pea plants were divided into four groups with three plants each. The plants were placed in individual pots which included bamboo lattice support structures. All groups were subjected to identical growing conditions except for the manipulated variables. One group was the control, one group was subjected to a magnetic field, one group was subjected to faintly blowing air, and the last group had the tips of their tendrils cut off once they touched a lattice. Over a period of twenty days, observations were made and recorded regarding the number of sweet pea tendrils which touched and then wrapped around their lattices.</p> <p>Results The control group had the most number of tendrils touching and wrapping, and the magnetic field group had the fewest number of tendrils touching and wrapping. The fan and magnetic field groups had lower ratios of tendrils wrapping to tendrils touching than the control and snipped tip groups.</p> <p>Conclusions/Discussion The results indicate that the plants in the non-control groups may have been negatively affected by the forces that they were subjected to. Because the magnetic field group plants had the fewest tendrils touching lattices, and a slightly lower ratio of tendrils wrapping to touching lattices, the presence of the magnetic field may have decreased the growth and wrapping tendency of the tendrils more than the other factors. The data also indicates that snipping the tendril tips did not seem to affect the amount they curled around the lattice. Improvements can made to this experiment in the future in order to decrease error and produce more reliable results.</p>	
Summary Statement This experiment was conducted to determine if sweet pea tendril growth patterns could be affected by various external factors.	
Help Received My parents helped me purchase the materials; My parents helped me assemble the project, and with photography and with using Microsoft Excel on the computer.	