



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Melissa Moseman; Brianna Nelson	Project Number J1628
Project Title What Do Plants Need Most?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this project is to find out which factor is most important for plant growth: sunlight, water, or good quality soil. We made a hypothesis that water is the most important factor, then sunlight, then soil.</p> <p>Methods/Materials Method: We planted ten seeds in each pot, four in sand and four in good soil. We labeled each pot with a letter from A to H. Each letter has a different combination of the amount of water, the amount of sunlight, and the quality of the soil that they were in. We put the plants that had high amounts of light in a window, and the plants that had low amounts of light in a closet. We decided that, on the moisture meter, the plants with low amounts of water should be about a 2, and the plants with high amounts of water should be about a 9, and we watered accordingly. Once the plants started growing, we began to record what day they sprouted, how many stalks were in the pot, how many leaves were on each stalk, how tall each plant is, what color it is, and how healthy it looks. After one month, we judged the plants on their height, the number of stalks in the pot, the number of leaves on each stalk, their color, and their health, and then compared that to our hypothesis.</p> <p>Materials: 8 pots, 1 bag of sand, about 100 pebbles, 1 bag of potting soil, 2 packets of Columbine seeds, 1 bottle of Miracle Gro, 1 measuring cup, 1 ruler, and 1 moisture meter.</p> <p>Results The plants in the shade grew quickest, but weren't as strong. The plants in the sunlight took longer to grow, but were much healthier.</p> <p>Conclusions/Discussion We thought that water was the most important factor in plant growth, but based on our rankings, we decided that sunlight is the most important factor. We learned that plants can grow without much sunlight, but they are white, skinny, and weak. With sunlight, plants are greener and stronger than if they were not in light.</p>	
Summary Statement We tested which factor was most important to plant growth: sunlight, water, or good soil.	
Help Received Parents drove us to each other's houses, and payed for materials.	