

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

Your Name (List all student names if multiple authors.)

Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) How's Your Mitosis?

Science Fair Use Only

J1606

Division X Junior (6-8) Senior (9-12)

Preferred Category (See page 5 for descriptions.) 12 - Microbiology

Abstract (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.

Objective: This project was designed to test onion root tips and how they react to different nutrient solutions. These results were then applied to the principles of mitosis.

Materials and Methods: Plants are submerged in 12ml of water, two plants for each of three nutrient solutions, and water. These are tested for fourteen days, making daily observations.

Results: The results of the experiment conclude that the control group grew the very best compared to carbonated water, Miracle Gro, and salt water.

Conclusion: This may be due to high concentration of additives.

Summary Statement (In one sentence, state what your project is about.)

Using three different nutrient solutions and water, one is testing how different solutes affect the rate of mitosis in onion root tips.

Help Received in Doing Project (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. none