



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Bradley J. Cruce	Project Number J0609
Project Title What Is the Best Way to Minimize Erosion?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of the project was to learn about erosion. I designed a project that would simulate erosion in the real world. By doing this I have learned that the more energy built up by wind or water increases the ability of erosion. If I use three different methods on minimizing erosion, then I think that using a series of small upside-down V shapes will do the best job.</p> <p>Methods/Materials Three separate methods were used in this erosion experiment. Method #1 used no barriers to prevent erosion. Method #2 used long logs in a zigzag pattern so the water will wash back and forth to the bottom. Method #3 used small logs in a series of upside-down V shapes so the water will funnel its way to the bottom. The following materials were used in this project: 132.5 cm. long plywood sheet, 2ea. 120 cm. long plywood sheets, 4ea. sprinklers heads, 1ea. 90 cm. PVC pipe, 2ea. 90 degree PVC elbow connections, 4ea. PVC tee connections, Copper wire, Window screen, 3ea. bags potting soil, 50ea. Screws, 20ea. Staples, Garden hose, PVC hose thread connection and 1ea. PVC end cap.</p> <p>Results In order to get more accurate results we tested the experiment twice in case of any problems there were with the water system or with any leaking. As the data on the bar graph shows, the small barriers did minimize the erosion most. It also shows that no matter what size the barrier was the barriers always minimized erosion more than with no barriers.</p> <p>Conclusions/Discussion My hypothesis was right. The small barriers did minimize erosion the most. I thought that if you had rushing water going down a hill, it needs to be funneled fast. Otherwise it will just rush right over anything else. I would probably recommend this information to the government during rainy season. This way they would know that a hill with no plants or barriers in it would be washed away.</p>	
Summary Statement This project is about determining the best way to minimize erosion on bare hillsides using manmade barriers.	
Help Received My Dad helped with construction and my Mom helped with portions of the typing and formatting.	