



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Taylor P. Lyberger	Project Number J0709
Project Title The Effects of Rain on Different Types of Land	
Abstract Objectives/Goals My goal was to determine which types of land including sand, potting soil, bark chips, and grass, would hold up the best against water erosion. I hoped that figuring this out would help prevent erosion on hills. Methods/Materials My experiment required a box with a length of 60 cm, width of 30 cm, and height of 20 cm, a hose, potting mix, sand, bark chips, grass, a timer, and a notebook to record your results. First fill the box with a type of land so that it is a hill with a length of 22 cm and height of 16 cm. Then shower it with a hose for 10 seconds, record the new length and height, and repeat it for 20 and 30 seconds more. Do this with all types of land twice. Once you have collected the information, create a graph showing the length and height of the hills. Results I discovered that the grass held up the best over a total of 1 minute. The sand and bark chips were not very successful against the water. Also, although the potting soil held up well after a total of 30 seconds, it washed away after 1 minute. Conclusions/Discussion From my results I concluded that the grass probably held up so well because of its roots used to soak up the water and the actual plant used to reflect the water. I think the sand did not hold up well because of its small particles. The bark chips did not hold up well because the pieces of bark were too light and loosely packed. Finally the potting mix eventually failed because it could only absorb a certain amount of water. Therefore adding grass and vegetation to hills would prevent erosion by water.	
Summary Statement I determined which types of land hold up the best against water erosion.	
Help Received Friend helped time experiment	