CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY

Name(s)
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Project Number
J0828

Project Title
River Bank Erosion: Rip Rap Records

Abstract

Objectives/Goals
The purpose of this project is to find out which rip-rap material is best at preventing water erosion. The three barriers tested were wood rip-rap, rock rip-rap, and a plant rip-rap.

Methods/Materials
In the experiment, a trench represented the river cavity and sand was embedded into its banks with the help of coffee filters. The barriers were then placed around the mounds of sand and a hose provided the rushing water. In the three trials, measurements of the remaining sand were taken on a small weight scale and then recorded.

Results
The results indicated more than what was in question. It was discovered that barriers do, in fact, prevent water erosion but, more importantly, that the material used as a barrier is not as important as the way that that barrier is built.

Conclusions/Discussion
That is, an arch-shaped barrier of wood, rock, or plant will prevent erosion at the same rate.

Summary Statement
This project is about the best methods for preventing water erosion on the banks of our Earth.

Help Received
JoEy watched while I recorded all measurements to make sure they were accurate; Mamma helped type report ; Pappa showed me how to make the graph results on the computer.