



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Keerit K. Purewal</b>	<b>Project Number</b> <b>J0617</b>
<b>Project Title</b> <b>Hard Rock?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was a comparative study on four different types of rocks to determine which type of rock is the hardest based on how fast it erodes. <b>Methods/Materials</b> Four different types of rocks orthoquartzite, basalt, sandstone, and granite were selected. A rock tumbler was used to simulate erosion. Each rock was individually weighed on a triple beam balance scale. Several pieces of each individual rock were placed in the rock tumbler along with coarse grit and water for 24 hours each. This process was repeated for each various type of rock. Rocks were weighed before and after to determine how much erosion occurred. <b>Results</b> In the tests that I conducted sandstone lost the most amount of mass, followed by orthoquartzite. Unexpectedly granite lost more weight than the basalt, making basalt the hardest type of rock. <b>Conclusions/Discussion</b> The test runs confirmed that sandstone was the softest rock followed by orthoquartzite, but what my study did not confirm was the hypothesis that granite was the hardest rock	
<b>Summary Statement</b> My experiment was executed to observe which rock erodes the most.	
<b>Help Received</b> mother helped paste board together; father helped cut matting; rock tumbler borrowed from the school lab; science teacher helped with supplies, support, and advice when needed	