CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
Austin R. Reed

Project Number
J1221

Project Title
The Quiet Zone

Abstract

Objectives/Goals
The objective of this project is to determine which material will best soundproof a wall.

Methods/Materials
First I will construct four 18x18 inch wall units that replicate a section of wall from a standard home. I will leave the inside of one unit empty as a control, and the other three wll be filled with fiberglass insulation, packing peanuts and insulating foam. Then, I will tap each wall with a mallet, on a pendulum to insure consistent pressure, and use a sound meter to test the amount of sound that travels through the walls.

Results
The result of this project was that the wall filled with insulating foam allowed the least amount of sound to travel through it.

Summary Statement
Try to find which material will most efficiently soundproof a standard interior wall.

Help Received
My step-father showed me how to build the wall units, and my mom helped assemble the board.