



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Harrison G. Smith	Project Number J1532
Project Title Do Acoustic Tiles Really Block Sound?	
Abstract Objectives/Goals With this experiment I tried to ascertain whether or not acoustic tiles really blocked out sound waves as they advertised. Methods/Materials The materials I tested were: Pinewood Fiberglass Armstrong 755 Acoustic Tile Armstrong 933 Acoustic Tile Styrofoam I put on the constant beep song on 100% volume on my computer then I inserted the various insulations via the top slot of the box. I then inserted the decibel meter into the hole in the front and gradually turned down the computer volume until the decibel meter stopped picking up sound. Then I put the computer volume when the decibel meter stopped picking up sound in my journal and I repeated until I tested every acoustic material multiple times. Results The following list says when each acoustic material stopped picking up sound from the computer: Pinewood - 90% Fiberglass - 62% Armstrong 755 Acoustic Tile - 58% Armstrong 933 Acoustic Tile - 49% Styrofoam - 31% Control (nothing) - 15% Conclusions/Discussion In conclusion my hypothesis was incorrect because I thought that the Armstrong 933 acoustic tile would have blocked out the most sound but the pinewood blocked out the most sound by far.	
Summary Statement My project tested different acoustic materials to ascertain whether acoustic tiles blocked sound.	
Help Received My neighbor Rick helped me in the construction of the testing box, my mom helped develop my ideas further, Mrs. Armour helped me with my Review of Literature.	