



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Tyler K. Bremer	Project Number J1108
Project Title Which Material Blocks the Most Sound off a Simple Drum Roll?	
Abstract Objectives/Goals The objective of this experiment is to determine which material will muffle the most sound off a drum roll on the snare drum. Methods/Materials The materials used in this project were felt, foam, rubber, a sound meter, drum sticks, and a snare drum. Place the sound meter four feet and seven inches away from the snare drum. Put the decibel level on 110 decibels. Monitor the decibel reading of a drum roll with no material on the drum three times. Take the average decibel reading from the three decibel readings. Place the felt material over the face of the snare and monitor the decibel reading three times. Take the average decibel readings of the three decibel readings. Change the decibel reading to 100 on the sound meter then place the rubber material on the drum. Monitor the decibel readings three times with the rubber material then take the average of the three. Switch the decibel back to 110 on the sound meter when placing the foam material on the snare drum. Monitor the decibel readings of the foam material three times then take the average. Results Here are the results for the project. Trial one's results for the felt was 104 decibels, trial two's was 103 decibels, and trial three's was also 104 decibels. The average decibels for the felt were 103.5 decibels. Trial one's result for the rubber was 95 decibels, trial two's result was 96 decibels, and trial three's result was also 96 decibels. The average decibels for the rubber were 95.7 decibels. Trial one's result for the foam was 101 decibels, trial two's result was 101 decibels, and trial three's result was 99 decibels. The average decibels for the foam were 100.3 decibels. Conclusions/Discussion The rubber material muffled the most sound off the drum roll. It's average decibel reading was 95.7 decibels which muffled the most sound by about five decibels.	
Summary Statement My project was about finding out what material would block the most sound off a drum roll.	
Help Received My brother helped record the decibels.	