



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Janel S. Self	Project Number J1525
Project Title Stop the Noise	
Abstract Objectives/Goals Which material dirt, foliage, wood, or cement will do the best job at blocking out traffic noise? Methods/Materials Four barriers were built (wood fence, cinder block, stack of leaves, and stack of dirt) each 120 cm by 120 cm and I recorded 10 minutes of traffic noise. I placed the tape recorder 120 cm from each barrier. For each type barrier, I recorded the decibel level from behind the barrier. Also, I recorded the decibel level without any barrier. I repeated the experiment twice. Results Dirt did the best job at blocking traffic noise. Without a barrier, the decibel level was 65.2. Dirt reduced the decibel level by 24.2, but it had the most variance between the two tests. Cinder blocks were neck and neck with dirt. Cinder blocks reduced the decibel level by 22.1. Wood did not do as well as dirt or cinder blocks, but it was not that bad. Wood reduced the decibel level by 18. Leaves were slightly better than no barrier and reduced the decibel level by 4. Conclusions/Discussion My hypothesis was wrong. Dirt was the best at blocking noise. However, I would recommend a cinder block wall because it was very close to dirt, but much easier to build.	
Summary Statement Which material dirt, foliage, wood, or cement will do the best job at blocking out traffic noise?	
Help Received My mother helped me build the wood fence and worked the stop watch during the experiment. She also showed me how to make charts and graphs. My dad helped me gather leaves.	