



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

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| Name(s) Tyler Jones; Samuel Recchio | Project Number J1514 |
| Project Title Weak vs. Strong | |
| Objectives/Goals To test the strength of wood by using a battering ram. | |
| Abstract | |
| Methods/Materials Materials: Battering ram materials 1) wood 2)nails 3) saws 4)sheet metal 5)rope 6)drill 7) file for sanding Wood: 1) Douglas Fir 2) Redwood 3) White Oak Method: 1) Battering ram was designed and created using the above matierals. 2) Adult was used to operate the saw 3) All other tools were used by student. 4. The three types of wood were purchased and kept in a room for two weeks prior to the experiment to guarantee as much as possible that they contained the same amount of moisture. 5) The pieces of wood were put into the battering ram one at a time. 6) The same person pulled the battering ram back and forward in an attempt to make sure the same amount of force was being used when the wood was tested. 7)The experiement was video taped and photographed. 8) The wood was used to break cinder block 9) Observations were made by several people who were asked to rate the amount of damage done to each piece of wood 10) Experiment was done three times to verify results. | |
| Results Redwood was the strongest. White Oak was the weakest. The Douglas Fir was weaker than the Redwood but stronger than the White Oak. | |
| Conclusions/Discussion All woods do not have the same strength. Strength of wood should be a factor when building or using wood. | |
| Summary Statement Our project is testing the strength of different woods | |
| Help Received My dad used the electric saw. He taught me how to use the screwdrivers, drills and handsaw. My mom helped get the photographs developed and took us shopping for the supplies for the board. | |