



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

Your Name (List all student names if multiple authors.)

George M. Pritzker

Science Fair Use Only

J0129

Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9)

Mechanical Advantage of Levers in Mouse Trap Cars

Division

X Junior (6-8) _ Senior (9-12)

Preferred Category (See page 5 for descriptions.)

1 - Applied Mechanics/ Structures & Mechanisms/ Manufacturing

Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.)

Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.

The objective of this project was to test different lever lengths in Mouse Trap Cars, and to record the time of travel and distance of each run. The hypothesis was that the longer the lever, the farther the distance traveled, but the slower the time of travel. The shorter the lever, the shorter the distance traveled, but the faster the time of travel. Before the tests were run, background information was gathered on Mouse Trap Cars, energy, force, and motion.

In order to test the Mouse Trap Car's time and distance traveled, a tape measure, stop watch, and clear runway was needed. Lever lengths of 30, 27.5, 25, 22.5, and 20 cm were tested. Each group was tested in series of ten, for a total of fifty runs. After the results were gathered, charts were produced, and then conclusions were drawn. The data supported the hypothesis that the shorter the lever, the greater the speed, yet the shorter distance traveled. Likewise, the longer the lever, the slower the speed, yet the farther the distance traveled.

Summary Statement (In one sentence, state what your project is about.)

This project is a study on the optimal lever length of a Mouse Trap Car, for speed and distance traveled.

Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4.

Tom Smith- Science Teacher