CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
22118

Project Title
Increased Gravity

Abstract

Objectives/Goals
Three different objects of the same weight: zinc, tin, and lead were tested to see if their size influenced weight at increased gravity.

Methods/Materials
A 12" Patton Fan was used with spring scales mounted on the blades. The zinc, tin, and lead masses were alternated on the calibrated sping scales The spring scales were alternated as well. Each position was tested 3 times. There were 27 positions tested.

Results
Results show that the smallest volume produced the greatest average weight at increased gravity and the largest volumed produced the leastaverage weight at increased gravity.

Conclusions/Discussion
It is inconclusive that larger objects exert more gravitational force at increased gravity than smaller objects of the same weight. It appears from the findings that perhaps smaller objects exert more force at increased gravity than larger objects of the same weight. But these results are questionable due to the margin of error with the spring scales used with this investigation.

Summary Statement
Do larger objects exert more gravitational force at increased gravity than smaller objects of the same weight?

Help Received
Dad typed the report, parents bought the backboard and paper supplies, parents donated the 12" Patton Fan and helped with the display. Science teacher loaned the spring scales and masses and gave advice on the apparatus and methods.