CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
22346

Project Title
Properties of the Pendulum

Abstract

Objectives/Goals
My objective was to find which variable - weight, length, or amplitude - would have the greatest effect on the period of a pendulum. I believed that weight, length, and amplitude would each have an equal effect on the period.

Methods/Materials
I constructed a pendulum to test different weights, lengths, and amplitudes to see which would have the greatest effect on the period of the pendulum. I then tested three different lengths, 30 cm, 60 cm, and 90 cm; three different amplitudes, 20?, 45?, and 70?; and three different weights, 1-1/4 oz, 2-1/2 oz, and 3-3/4 oz. I timed each of these variables 10 times for one period of motion.

Results
I found that length made the most significant difference in time. Weight and amplitude made little or no difference.

Conclusions/Discussion
My hypothesis was not supported. I found that length made the most significant difference in time.

Summary Statement
To determine what affects the period of a pendulum -- weight, length, or amplitude.

Help Received
Father used power tools to cut pendulum materials to size and helped with the assembly of pendulum.