CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY

Name(s)
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Project Number
J1915

Project Title
The Pendulum Snake

Abstract

Objectives/Goals
Objective: If I construct a pendulum snake then my model will provide a visual demonstration of the time keeping properties of pendulums, and of wave movement.

Methods/Materials
Materials and Methods: I used hex nuts for my pendulums, because they were easy to find and have a fairly consistent weight and a convenient hole in the middle. I used construction layout line because it is strong and was at the hardware store. I originally used a foam core support that had cuts in it like a staircase, but I made a new one out of wood, for more strength.

Results
Results: My research shows that yes, there is a visual way to show the time keeping properties of pendulums in a visually pleasing manner using a pendulum snake. From my table, and further research, I verified that the frequency of the pendulums = the inverse of the square root of their length. The frequency of my experiment is the number of swings in thirty seconds.

Conclusions/Discussion
Conclusion: My hypothesis is correct because by watching the pendulum snake you can see the different speed of the pendulums. I learned from this experiment that it is possible to understand the speed of pendulums by making a pendulum snake. By making a pendulum snake you can show people waves, and gain a deeper understanding of pendulums.

Summary Statement
A visual demonstration of the time-keeping properties of pendulums, showing a mesmerizing snake pattern.

Help Received
Father constructed support frame