CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)
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Project Number
J1820

Project Title
How Does the Temperature Affect the Speed of Nylon String Guitar Waves?

Abstract

Objectives/Goals
The objective of my science fair project was to determine if temperature affects the speed of nylon string guitar waves.

Methods/Materials
I placed my iPhone inside my nylon string guitar and used the camera to record the transverse waves as they traveled on the guitar strings. I tested the strings at 51-47 degrees Farenheit, 68 degrees Farenheit, and 86 degrees Farenheit.

Results
My results in the cold temperature, the transverse waves were shorted than in the warmer temperatures. Additionally, the wave on the string in the cold temperature stopped sooner than it did in the hot or normal temperatures.

Conclusions/Discussion
After I conducted my experiment I learned that my predictions were correct. The warmer the temperature, the longer the wavelength.

Summary Statement
I tested the affect of temperature on transverse waves on nylon guitar string and found the colder the temperature, the slower and shorter the wave.

Help Received
None