CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
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Project Number
J1122

Project Title
Who Has the Greater Vital Capacity: Musicians Who Play a Wind or Brass Instrument, or Athletes?

Abstract

Objectives/Goals
The goal of my project was to determine whether musicians, who play a wind or brass instrument, or athletes, have the greater vital capacity, or the amount of air that can be taken into the lungs.

Methods/Materials
An incentive spirometer was used to test 100 students, 50 athletes, and 50 musicians in sixth, seventh, or eighth grade. Each student would sit up strait in their chair, and then exhale all of the air they can. Then the student would put their mouth on the mouth piece of the incentive spirometer, and inhale as much as possible. The gauge in the incentive spirometer would elevate measuring the student#s vital capacity in milliliters. Each student was tested three times with a small break in between. The best trial of the student was then taken and averaged along with the other musician, or athletes.

Results
The average vital capacity of an athlete in the sixth, seventh, or eighth grade is 2,938 milliliters. The average vital capacity for a musician in the sixth, seventh, or eighth grade is 2,362 milliliters. This shows that athletes have a greater vital capacity than musicians, who play a wind or brass instrument.

Conclusions/Discussion
Being involved in activities such as playing a wind or brass instrument, or playing a sport can affect your lungs vital capacity. Though athletes have a greater vital capacity than musicians, they both may affect vital capacity.

Summary Statement
The purpose of this project was to see who has the greater vital capacity, musicians, who play a wind or brass instrument, or athletes, and also to see how these activities affect the lungs.

Help Received
A friend donated the incentive spirometer.