



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Natasha M. Lethaby	Project Number J1217
Project Title The Suffocating Snorkel	
Abstract Objectives/Goals The objective of my project was to determine how a snorkeler's depth affected their inspiratory reserve volume. Methods/Materials I used my extended snorkel and homemade spirometer to measure my test subject's inspiratory reserve volume at different depths. Once the participant got to the required depth they would inhale as much as possible through the snorkel and do a normal expiration through a tube connected to the spirometer. While they exhaled I would watch the spirometer and record the reading I got from it. Results Overall there was an 80.5% decrease when I compared the averaged inspiratory reserve volumes at the surface to those at five feet underwater. Conclusions/Discussion According to my tests there's an obvious difference on your inspiratory reserve volume if you try and snorkel deeper than about two foot. My tests justify the need for pressurized air during snuba and scuba and also gives you the maximum, practical length of a snorkel.	
Summary Statement Basically I'm testing the effect of water pressure on a snorkeler's inspiratory reserve volume.	
Help Received My dad assisted in the actual experiment, he helped me measure peoples inspiratory reserve volume.	