Bruce vs. Climate Change

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Sharks are a keystone species in ocean ecosystems and vital to keeping our oceans in balance. For this project, we conducted multiple experiments to test the effect of increasing acidity levels on dogfish shark denticles. We created water samples that reflected the conditions of ocean water by replicating the density and salinity in all samples. Then, we created a control group with a pH of approximately 8.1, which is the pH of the natural ocean at this time. For the other four samples, we created pH levels of approximately 8.65, 7.91, 7.40, and 6.79. Next, shark skin from sharks used in class dissection were collected and placed in the various water samples. After an average of 7 days, we counted the number of damaged denticles for each sample under a microscope. The results showed evidence that supports the relationship of lower water pH, the higher the number of damaged denticles per total number of denticles.

Awards Won: