Water We Researching?

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THE GLOBE PROGRAM
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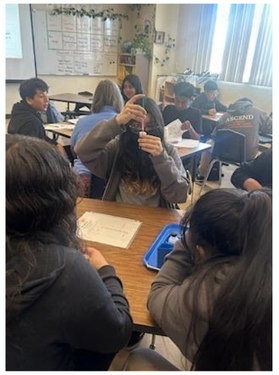
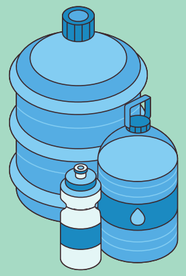
Abstract

Our research question is why should communities care about water? We wondered about this because we wanted our community to step up on helping our water quality, to make the water healthy for our ecosystem. We collected our water quality data from the San Francisco piers. This data showed water quality from different piers and different ways we tested the water quality. Which then helped us conclude if the water is healthy enough for our ecosystem, and if not what can we and our community do to help? The data showed nitrates, pH, temperature, turbidity level, and dissolved oxygen which concluded with safe and clean water.

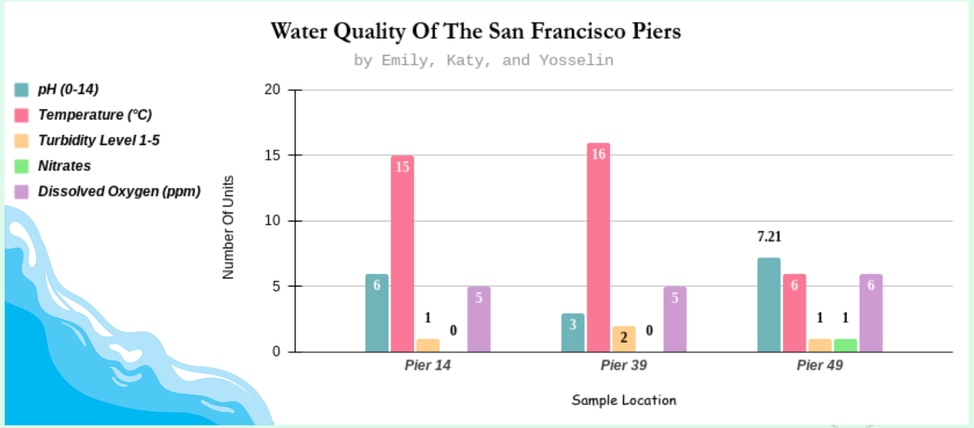
Investigation Plan

Our plan for the investigation was to collect water quality data from different locations in the bay area. We decided to show you what results we got in one of the parts of San Francisco which are the piers. Our investigation included how plant growth, macroinvertebrates, PH levels, temperature, turbidity, nitrates and dissolved oxygen all connect into figuring out water quality in a body of water.





Graph of Our Results



We went to the Piers in San Francisco and collected water samples. With those water samples, we took them to the classroom and tested for different types of water quality indicators. We tested for pH. We want the pH levels of the piers to be between 6 - 8. Based on our results ⅔ places got good pH levels, only Pier 39 has a low pH level. We tested for temperature and DO and we learned that the colder the temperature the more DO there is in the water. We also tested for Turbidity and Nitrates and for both of them, we want the lowest numbers possible which is proven by the graph.

Background Information

We decided to do this research because we wondered how the water of the Bay Area was safe or not. We did our research about the water quality in the Bay Area. It's something we as members of the community noticed the city is not doing such a great job of keeping the water clean and healthy for all. We wanted to investigate the places to figure out if water is safe in that area and if not, how we need to step up on helping the water be safe and healthy for everyone.

Research Question

The research question : Why should communities care about water quality?
Our claim : Communities should care about water quality because if we don't, the water could eventually become unhealthy for any organisms that use the water. That relates to community issues by including different communities from the bay area to care about the water quality.

Conclusion

At the beginning of this unit, we didn't really care much about that topic since we believed that if we tried to help that still wouldn't make a big difference. However, our opinions changed about water quality. We now value water because it's an important source to our organisms and environment, and we're now asking you, why should our community care about its water quality. Another way to interpret our data is to consider that families in the community who need water in their everyday life. The water needs to maintain healthy for both organisms that live in the water and families that need water. Improvements to our investigation could be figuring out what we could to help our community get healthier water, and possibly figuring out why the water in our community has gotten worse? Future research could include the date and we could possibly go back to that place to see if the water quality has gotten better since the last time. We enjoyed this project because we were able to go outside and test the water quality in multiple locations, which also helps our community because of the data we have and could possibly help the water in our community.

References/Bibliography

- Hydrosphere Protocols (water quality testing) are from the GLOBE Program at globe.gov
- Project Based Inquiry Science learning book