

Summer 2020- Lessons from the Ocean

Heather Wetzel

6/24/20

Pedagogy Option 2: Campus Debris Survey

Due to campuses being closed because of Covid 19, I took my daughter (9<sup>th</sup> grade), and nextdoor neighbors (7<sup>th</sup> and 4<sup>th</sup> grades) to the Dry Creek Nature Trail, which is at the end of our street. This nature trail and creek extends across town and is accessible within 2 blocks of my school site. The creek flows into the Cosumnes Preserve, which flows into the Delta that connects to the Pacific Ocean in several locations. All three kids attend/ed the school that I teach at which is about 6 miles from our homes. All three kids loved the lesson since we are all beach goers and fans of science. The kids were blown away by how much plastic an Albatross chick consumes before it is 4 months old. We discussed what kind of liter might be more commonly found in the ocean, how that liter gets to the ocean, and what problems they cause. All three identified plastics like straws, bottles, bottle caps, and soda pack connectors as common liter items and dangerous to the animals if they eat the pieces or feed them to the chicks. I had them talk about what happens to plastics over time in the water or areas around the water and they all said the plastics would break down into smaller pieces. Rocco (4<sup>th</sup> grade) said that the smaller plastic is probably more dangerous because more animals might eat the pieces without knowing it. After that great connection, we talked about plastics in the food web and the kids came up with the hypothesis that ingesting plastics can harm a food web by either killing the links and/or causing birth defects.

On our walk to the nature trail, I had the kids discuss what type of debris we will find and make their prediction about what type of debris will be most common. Rocco thought that paper products would be more prevalent and the girls both thought plastic bags would be more prevalent. During the collection the kids talked about how items might have gotten to the areas intentionally and unintentionally. They seemed to agree that "lazy humans" were the intentional way that the liter gets to an area and that wind and rain run-off are ways that the liter gets to the area unintentionally. All three students had a lot of background knowledge about the creek and where it flows from lessons taught at our school, so they were able to make connections to what the debris could mean for wildlife and the watershed. Rocco's hypothesis was correct and paper was one of the most commonly collected debris (24 pieces), which was only beat by one with the wrappers. The girls were shocked that there were only 8 bags. Since the creek is only .5mile from our Flea Market grounds and on Tuesdays and Wednesdays plastic bags are found flying all over the area, the girls thought for sure bags would be the big find.

I can not wait to do this lesson with my students. I will modify it to 2 collections and have students collect from campus one day and on another day we will do a walking field trip to the creek and collect from there. I want to have the kids compare the debris from the 2 collections and see if there are correlations.

Just a giggle: Rocco's mom came by the next day to tell me he was still talking about the Albatross birds, plastics, needing to clean the nature trail more often, and all the people he has called to tell them about the "Cool Science Investigation" we did. 😊 Pictures included in the following pages.







No Dorgis were harmed in this investigation, but he was awarded the cutest debris award! 😊