

DEAR CMORE.

Thank you so much for providing the science club of Kaimuki Middle School a GEMS grant this year. We were very lucky to be able to go on this field trip as well as take in expertise knowledge that raised awareness among us about marine biology and how it affects all of our lives. Through the grant, we were able to expand the knowledge of marine biology to not only the science club but much of the school as well. We made presentations on our newly gained knowledge that really raised awareness of microbiology, marine biology, and oceanography.

On the behalf of the science club, we would like to thank you for allowing us to go on this field trip that has built our knowledge in the field. The whole science club got so much out of this trip, from the excellent knowledge gained to just a really fun experience that not many people get to experience when they are in high school or even college. Thank you so much for all you have done and we are very thankful for all the time and money you have put into allowing the future generations to thrive with their extensive, newly gained knowledge that will help the future of the world.

Thank you again for all that you have done,

The Science Club of Kaimuki Middle School

Note from GEMS Program Manager: Gearld Canaday was an eighth grade student and president of the Science club when he applied for this GEMS award. While his teacher, Ms. Thompson assisted with the administration of this award, Gearld did the majority of the work on the application as well as worked on the coordination with his C-MORE advisor. We applaud Gearld for his efforts. What follows are reflections from the Science Club about their experience on the GEMS funded field trip.

Coconut Island Reflection

Coconut Island is an island dedicated to teaching the future generations about the ocean and how it affects us. We are lucky enough to have this special research center close to our own island of Oahu. Coconut Island has been striving towards the efforts to educate future generations on the importance of the ocean and how it affects our lives since 1908. Especially with the fact that we are literally surrounded by the ocean, just proves its immense impact on us as a species. Even if you live nowhere near the ocean, we all is affected by it one way or another. Science has lead us to believe that furthering technology is the most important idea for the evolution of our species, but in actuality, we must not look to the future, if our present is being negatively affected. Coconut Island hones this idea of preserving the ocean and keeping it healthy. Who knows when people will no longer know what a fish tastes like because it has become extinct. What if our coral reefs become the new fossils in museums. Simply the fact of a lifeless ocean means a lifeless earth. With the ocean covering nearly 75% of the earth's surface, we can conclude that with the ocean lifeless, only 25% is living. The ocean is important, and the only way to preserve it is through researching and learning about it. With the ever polluting environments all around the world, the skies and the oceans are both at a loss. With places like Coconut Island teaching the next generations about the importance of the ocean and how to preserve it, is truly a vital factor of saving our oceans. From teaching the future generations about the importance of the ocean life, giving us hands on experience of saving wildlife, and ultimately showing how the ocean affects us, and how we affect it.

Coconut Island is a research center in Hawaii. We were lucky enough to go there and learn about all the things that make the ocean special. What is it about the ocean that connects multiple types of sciences, from chemistry, biology, to astrobiology. The idea of life is simply so powerful and relates to us through all sciences. Coconut Island shows us the importance of the ocean and the life that thrives within it. Plankton are one of these many important species that thrive in the ocean. With the help of a knowledgeable staff, we were able to acquire the skills of marine biologists. At our first station, we used advanced microscopes to look at a plankton tow that we were able to collect during the boat ride to the island. After studying an emended amount of plankton in the sample, we were able to identify and learn about their physical characteristics. With 50% of the oxygen we breathe being made from the very plankton we swim through at the beach just shows the importance of the versatile species.

We were also able to go through large samples of gorilla ogo finding various species and save them by separating them form the invasive ogo and setting them back into the water. Coconut Island also has uses for it's waste, by donating the ogo to farmers who use it for fertilizer. By separating the various mollusks, crustaceans, jellies, sailor's eyes and other organisms we were able to learn about the multiple species and how they contribute to the overall health of the ocean. We were also able to learn about how the ogo was deadly for coral and kept it from getting the essential sunlight. After clearing the organisms form the ogo, we

were able to observe sharks as well as other organisms that were in a touch tank. With the help of our knowledgeable educators, we were able to further our knowledge in the broad idea of ocean life.

The ocean, as stated before is a powerful factor in the overall aspect of life. The ocean is capable of allowing the whole earth to thrive, but it slowly is depleting its resources due to negative human advances on earth. One of our educators demonstrated the devastating effects on the ocean when artificial chemicals are introduced to the environment. Through this field trip, we all were able to notice the affects that we make on the earth. From positively (by studying the ocean and saving species) to negatively (by making chemicals that will eventually destroy our world) we do affect the world we live in. With the knowledge of what we really are doing, we are able to communicate our ideas to the world to make a change for the better.

Ultimately, the trip was able to educate us on all the importance of our choices, and the importance of the ocean. With the power of change in our hands, we are able to ultimately make the choice to save our earth, or be blinded by artificial evolution, to really see what is happening. With research centers like Coconut Island, we still have a chance, of educating future generations to make the right decisions that we didn't. Overall by teaching students through educational and fun activities, we are able to show how the world is affected by the ocean, how we affect the ocean, thus proving how we affect the world.

Mina Gusukuma

May 15th 2015

Mr. Majzun

Coconut Island Reflection

I think that this fieldtrip was probably the most educational and adventurous that I've ever been on. I have learned so many things about marine life that would have never occurred in my everyday life. I think that the bulk of my excitement for this field trip came from the knowledge that we would be working hands on, in a marine environment. I can say with confidence, that I don't think any of us were bored with the any part of this fieldtrip.

First off, we made our way down to the lab, where we sat down and discovered the first things about plankton. We learned that anything that can't go against the ocean currents is called planktonic. Some of these organisms consist of Copepods, Chaetognaths, and the Brachyuran Zoeae. I had gotten to see all of these awesome organisms up close and personal under the microscopes. I was probably too excited because by the time we were supposed to be taking observations, I was still staring into the microscope in awe. There were so many little organisms packed in our tiny sample, it was impossible to count them all. After we had made our observations we headed down to the second lab.

The second lab was already set up when we had arrived. They had two big bins full of water and limu, (Limu is the Hawaiian name for seaweed.) as far as we could see. But what we did not see was the hundreds of organisms that were living inside the limu. We all broke off pieces and started sifting through them, searching for life. When we found little animals, we put them in separate bins of water, according to their species. It was special just to watch them interact with one another, seeing if they would eat each other or just say hey. It was difficult trying to separate the really small animals from their homes, although we did return them to the ocean after we counted them. Our polls consisted of six main different organisms, my personal favorite being the Sailors Eyeball or the Ventricaria Ventritcosa. It was really cool seeing all of the animals that were living unseen.

Therefore, this was probably the most amazing fieldtrip that I have ever been on and I am so grateful that I got to and experience this.

Stephen Majzun

Social Studies Teacher

5/15/15

Coconut Island Reflection

Today was such an incredible and educational experience and I can't wait to return to Coconut Island. As a surfer, I've always felt a strong connection to the ocean and today that connection grew not only stronger, but more enlightened. What is large enough to see in the ocean with the naked eye only scratches the surface of what actually lay in the great expanse of the world's oceans. Through the use of a microscope, hundreds of tiny, yet complex living organisms are revealed in just a few milliliters of seawater. These phytoplankton and zooplankton are the base building blocks that fuel the food chain in the ocean from the tiniest organisms to the oceans top predators and grazers. These plants and creatures not only feed the ocean's permanent residents, but also produce 50% of the oxygen that sustains life above the surface. Shifting to a higher rung on the food chain, we sifted through invasive algae preserving the later life forms of zooplankton we witnessed in the lab. Hundreds of fire worms, shrimp, clams, crabs, and sponges occupy the reef both feeding off it as well as being fed upon. Seeing the diversity of life in a cluster of algae the size of a softball provides an incredible appreciation for the complexity of the ocean ecosystem. The final observation, while not as complex or revealing, was the highlight as it consisted of the ocean's most intriguing resident. In a small lagoon, we were able to observe two sandbar and four hammerhead sharks cruising gracefully about. They were fully aware of our presence and continued to swim by us likely as curious about us as we were about them. I'm not quite sure what it is about sharks, but I could have sat for hours watching them swim. Witnessing the three levels of the life cycle in the oceans gave me a much greater appreciation for what shares the ocean with me every time I surf. Reflecting on the whole experience, one must come the realization that preservation of our ocean ecosystem is necessary. For if we remove even one step in the ocean's food chain, we risk destroying not only the ocean ecosystem, but also likely dooming life on the entire planet.

Megan Colburn

K203 (Parsons)

May 15, 2015

Coconut Island Reflection

Coconut Island was probably one of *the* best science experiences I've ever had. No offense to any of the other field trips. I just liked this one... a lot. I learned about acidity in the ocean, plankton, and many marine animals I wouldn't have been able to dream about.

Did you know that any organism not able to swim against the current of the ocean is considered planktonic creature? Or that plankton are not only microscopic creatures that live on the surface of the water? Some types can be as long as two meters. The two main categories of plankton are phytoplankton and zooplankton. Think trees are the lungs of the Earth? Think again. Phytoplankton, the "plant" plankton, contributes fifty to eighty five percent of the Earth's oxygen. Some examples of this type of plankton are green algae, diatoms, and dinoflagellates. Sometimes, when there is an abundance of sunlight and nutrients in the water, and the phytoplankton population is dense, a plankton bloom will occur. A plankton bloom is a naturally occurring phenomena that changes the color and appearance of the water where the phytoplankton are. Zooplankton, otherwise known as "animal-like" plankton, eats the plant plankton, just like a land ecosystem. They include copepods, zoaea, shrimp, and chaetognath. One of these doesn't familiar now, the zoaea. It is actually a crab larvae. In fact, around eighty percent of all marine life start off as zooplankton. They are meroplankton. The ones that stay plankton forever are holoplankton. One tablespoon of ocean water can contain one million plankton.

I also learned about oceanic acidification. That is when the pH levels in the water go up. It is like some giant figure pouring vinegar into the ocean. This can lead to the breakdown of coral reefs and eventually, marine ecosystems. The level of acid has gone up over the years.

The Hawaiian Bobtail squid is a cute little creature. It is nocturnal and glows in the dark. We got to observe the sandbar and hammerhead sharks, too. They were fun for the whole group watch. Before that, I found a painted nudibranch in the gorilla ogo seaweed we were sifting through. There were also fireworms, an annelida. It is similar to a centipede, stinging whatever touches it. I got to look at multiple clams, sponges, crabs, and brittlestars.

Overall, this was an amazing field trip. I would really love if I could go there again. I learned so much more than I would have in the classroom today. It has really widened my view

on the ocean and the life it contains. If you were wondering, Coconut Island was named that because of the coconuts people placed around when the old queen of Hawaii came to the place.

Chaperone Reflection
May 15, 2015

Coconut Island Reflection

I was fortunate to be able to tag along on this wonderful opportunity to visit Coconut Island. I have circled the island by boat before but never had the experience of stepping foot on the island. The weather was perfect and the scenery from the boat ride was just gorgeous. Our students were thrilled to be out on the water. They were taking lots and lots of pictures and were so happy to be on this special outing.

As soon as we got to the island, the staff quickly gave us a safety briefing and then quickly broke us up into two groups. Our group of students first went to work with Vivian cleaning the seaweed and picking out the many tiny creatures that lives in the algae. We all were so amazed with all the creatures we learned about and found from brittle stars, sailor eyes, fire worms, tiny crabs, sponges and clams. There was so much to learn and see. What an awesome experience to be able to pick them out and look at them a little closer.

We then went to our second site which was in the classroom with Katie where we learned about the plankton, zooplankton, cocoepods and the 3 different types of shrimps. Katie was so knowledgeable and professional and handled the lab so smoothly. Looking through the microscope and watching all the cocoepods was the highlight of the lab. Many of our students were taking pictures or videos through the microscope where they got some great footage of the cocoepods movements. Our group had some extra time left in the lab so we were treated to a special viewing of the so cute nocturnal squid in the tanks in back of the class.

Before we boarded the boat to return, we also had a grand tour of the shark tank and got to touch the sea creatures. Our girls were thrilled to play with the feather dusters and sea cucumbers.

All of the staff and volunteers, Vicky, Cathy were so helpful and very knowledgeable and did a great job of taking care of us. Thank you so much for a wonderful experience and day.

Carmen Lam

5/15/15

Mr. Yo (J202)

Coconut Island Reflection

On the Coconut Island trip, we had learned a lot of things. We also had a lot of fun, studying animals within the algae, looking at little planktons under the microscope, looking at sharks in the shark pond, and exploring the touch pool.

We learned a lot about how sometimes algae isn't always the best thing for the corals, despite how it helps it sometimes. When the algae cover the coral completely, it blocks the sunlight from coming to the coral, which rids the coral of its energy source. That was one thing we learned from one of the volunteers. We also got to learn how to take out animals gently from the algae and that most of the organisms we got like to live in deep, moist places, which is why it's hard to find them most of the time. When we explored the animals within the algae, we found a lot of animals. The most we found were the fire worms. We found at least 128 of them, maybe even more! We also found the following; Porifera (sponges), Cnidaria (sea anemones, zooanthids, corals, etc.), Annelida (fire worms, feather duster worms, spaghetti worms, etc.), Mollusca (clams, oysters, snails, sea slugs, octopus, etc.), Arthropod (swimming crabs, pebble crabs, snapping shrimp, mantis shrimp, shrimp, etc.), and Echinodermata (brittle stars, sea stars, sea cucumbers, sea urchins). We had a lot of fun and of course we wore gloves so we wouldn't get hurt or anything. Another thing to add, we named ourselves after our most found species! (Team name: Fireworms)

The next thing we did was look at plankton samples under the microscopes. The microscopes were totally different from our schools'. Instead of one eye piece, we had two eye pieces! Also for this one the light was made as part of the microscope and we didn't have to flash a lamp to look at the microscopic planktons. There were two types of planktons. Phytoplanktons and Zooplanktons. We had a fun time taking pictures from the eyes pieces and recording what the plankton does. There was this one plankton that had awesome, wicked dance moves; it was doing something like a shoulder shrug or the worm. It was funny to watch! >u< After we finished working with the microscopes, we got to look at some squids and a shrimp! The squids were so cute!! It had big googly eyes and a small body. It was also trying to fly with wing-like tentacles! Then the squid started to try bury itself in the sand, creating a bunch of dust around it, it was totally cute!

Next we all went to the shark pond, where we saw 2 sand bar sharks and 4 hammerheads! It was so cool! The sandbar shark tried to attack Emily, but in the end it only splashed her. That was a relief. After we went to the shark pond we explored the touch pool. There were so many animals. There were the feather dusters, the sea slugs, some coral (mushroom, rice, and etc.), and a sea urchin which was hiding out in the corner. The feather dusters were so awesome and weird. When I tried to reach out for it, it just flinched back and closed itself. Then we found another one and since everyone wanted a time lapse video, I reached out to touch it again. The effects are so cool.

I had so much fun at Coconut Island! I wish we could go on a field trip to there again! Something extra that was not necessarily included on the trip, was that we found a chicken with chicks on the island. Then we decided to name the chicken, Coconut Chicken, since it was on Coconut Island. Then we started talking about what kind of eggs it could possibly be laying. We thought it probably laid coconut colored eggs!

Brianne Lee

May 15, 2015

R101 (K. Uyeda)

Coconut Island Reflection

Coconut Island is an island in Kaneohe where marine biologists go to study marine life. We had the pleasure of going to visit the Island. While boating our way out to the island, we have done a plankton catch where we caught zooplankton. We learned that plankton create 50% of Earth's oxygen. We also learned that anything that cannot move against ocean currents is considered planktonic. Once we were on the island, we split into two separate groups. One group went with Vivian and Vicky to the algae lab and our group went with Kathe and Katie to do a plankton lab. Using the plankton we caught, we have put the samples under microscopes to study the different types of plankton. We learned about holoplankton, phytoplankton, and zooplankton. Afterwards, we moved onto the algae lab that required us to be hands-on. During the algae lab, we learned that there are invasive algae that are blocking the sunlight from the coral reef. There are people who go out to the reef to help clean up the algae using a safe vacuum. Once they have put the algae into the vacuum, the algae are then sent up onto the boat onto a table where workers start to separate the algae and the little specimen. Therefore, our activity was to remove the many different species from the algae and we separated them into separate "homes". We extracted Sponges, Sea Anemones, Fireworms, Crabs, Shrimp, Seastars, and Sailor's Eye from some algae that Vivian and Vicky got from a small pond area on the island. We have estimated how much our bin of algae weighed and we counted how many Porifera, Cnidaria, Annelida, Mollusca, Arthropoda, Echinodermata, Tunicata, and Vertebrata there were. After we regrouped, we walked along the edge of the island and made our way to the shark tank where they kept Hammer Head Sharks and Sandbar Sharks. Vivian showed us a touching table where we identified some of the specimen that we have seen during our algae lab. Afterwards, we walked over to the shark tank and watched the sharks interact with each other. There were four Hammer Head Sharks and two Sandbar Sharks. After watching the sharks and interacting with the touching table. We made our way back to the boat where we went back to the harbor.

I think this was the best field trip Science Club ever had. It was exciting, informative, and you got to work hands-on with the specimen. The trip to Coconut Island was fun and adventurous and it definitely taught me more about marine biology.

Coconut Island Reflection

At Coconut Island, we learned about the importance of keeping our oceans and land clean. Our oceans are slowly dying and the cause is people. We keep introducing new invasive species to our islands so the native species die out. For example, in the ocean, there are invasive algae killing our coral. The algae grow on the coral and don't let the coral polyps receive sunlight. People are helping to fix this problem using the Super Sucker Barge. The barge is used specifically to get algae off coral. People go to reef sites overrun with invasive algae and use the gentle pull of the vacuum to suck up all the algae removed from the coral. Then, like we did in the algae lab, people sort the algae from the animals living in the algae. Doing the algae lab was very interesting. Some parts were kind of disgusting, like the annelids squirming around in the container. Other parts were very exciting, like when we found a brittle star and a sailor's eye for the first time. Also, the plankton lab was very educational. We got to use expensive high tech microscopes and look at zooplankton. I got to see a bunch of plankton eat plankton and the zooplankton swim around. I learned about many types of plankton. Zooplankton is animal-like plankton and phytoplankton is plant-like plankton. Organisms are called plankton if they do not possess the ability to swim. Instead, they drift along with the currents. There are microscopic, megascopic, and deep-sea plankton. Phytoplankton is the bottom of a food chain. They also produce 50% of the world's oxygen. Holoplanktons are plankton that stays as plankton their entire life, from birth to death. Meroplanktons are plankton that is plankton only for the first stage of their life. They evolve into more complex organisms as they age. At the shark tank, I saw many different kinds of sharks. I saw sandbar sharks as well as hammerhead sharks. One of the hammerhead sharks looked as if they had a bite in their tail. Finally, I learned that the ocean is getting more acidic and is disintegrating sand. It also is destroying coral and demolishing many ecosystems. We as the next generation need to take care of our dying world and turn it away from a path to destruction. This was a fun experience that I would love to repeat. Thanks to all of the helpers, I learned many things I didn't know before.

Amanda Colburn

Mrs. Lau-Beach 5-15-15

Coconut Island

In the time I had to experience Coconut Island, I enjoyed the many activities and adventures we went on. Once we got on the boat and were heading towards the island, I knew this was going to be an amazing experience that I will never forget. I looked out and saw the gorgeous blue-green colored water and coral reefs that made this excursion worthwhile. I learned about the two different types of plankton, phytoplankton and zooplankton, as well as what qualifies as plankton. All of this took place *just* on the boat ride! Not only that, but I learned that although plankton are at the bottom of the food chain, without them, we wouldn't be here because they produce half of the world's total oxygen. When we finally reached the island, it was one of the most scenic places I have ever been to. I looked back and saw the stunning Oahu and immediately felt the beauty of the Pacific Ocean. I stepped foot onto the gravel and started to follow my tour guide to our first station, the plankton lab. I learned that plankton are any marine creature that cannot resist the ocean currents and drift with the waves. I was also educated about how plankton can grow to be animals like fish and crabs, but some also remain plankton for the rest of their lives. I was so thrilled to be looking at plankton and other microscopic shrimp and larvae. I saw things like a shrimp that was alive and eating other plankton, a Chaetognath that was long, skinny and had a big head and big black eyes, and also a Zoeae that also had black eyes with a spike on its head.

When I went to the second activity where we looked through algae and found things like baby sea cucumbers, thirty-seven fireworms, and six round, green, unicellular, and ball-shaped organisms called a Sailor's Eye. Unlike the other groups, my table found a red shrimp that curled itself into a ball when someone touched it. Something that was also really interesting was a loli, a red sea cucumber that sticks to you when you touch it. We had four of them in our tank and they were hiding under the algae. My group found seven crabs, which fall into the phylum arthropoda. One of them was smaller than the size of my pinky finger nail!

Lastly, we went on a walk through a trail where we talked more about ocean acidification. Vicky showed us an example of what it looks like when coral erodes. She did this by pouring vinegar on a handful of sand and we watched as it bubbled and decreased in size. Overall, Coconut Island was such a memorable and incredible opportunity that I will remember forever.

Michael Cahill- Chaperone

5/15/15

Coconut Island Reflection

The educational fieldtrip to Coconut Island in Kaneohe Bay was a great experience for me and the middle students. We arrived by boat to the island and spent our time studying microscopic plankton, algae and algae dwelling marine organisms that live near the island. We also made a brief stop to observe their research shark tank. This trip was an excellent opportunity to deepen our knowledge about marine organisms in Hawaii and the opportunities available to study and protect them.

The activities we participated in were both hands-on and very engaging for the students as well as the adults. We began the day with a plankton tow off the side of the boat as we made our way to the island. We took our tow to the marine lab where we used microscopes and dichotomous keys to identify the microscopic organisms we captured on the boat ride over. Every student's Petri dish was teeming with microscopic life. We were able to identify zooplankton such as copepods which are tiny crustaceans, shrimp and arrow worms.

Our next activity was to investigate the larger marine organisms that live around Coconut Island. Students were given a bucket of algae and salt water and, while wearing protective gloves, gently separated out each the organisms that were burrowed in the algae. These organisms ranged from fire worms, sponges, nudibranchs, brittle stars, clams and crabs. Students used data sheets to record their observations and the exact number of different species they found. The data they collected was saved as evidence of the marine life found around the island today.

The educators that led each activity were extremely knowledgeable and supportive of the students' curiosity and explorations. They also shared significant information about the positive efforts being done to remove invasive algae, such as Gorilla Ogo, from Kaneohe Bay and around the island with super suckers; which are vacuum-like devices that gently suck up algae without harming or removing other marine life.

As we finished up the tour we stopped by the shark research pool and observed Sand sharks and Hammerhead sharks! The tour guides shared with us that Kaneohe Bay is a nursery for Hammerhead sharks; every spring ten thousand Hammerheads come into the Bay to give birth to their young. We were also introduced to a scientist in residence on the island who showed us his research tanks of Bobtail squid.

This fieldtrip was exciting and unforgettable and one that the students as well as myself will be talking about for a long time. It was the best fieldtrip I have ever had the opportunity to go on and one that I will be trying to go on again with my own students in the near future.

Laura Farris

Special Education Teacher

5/15/2015

Coconut Island Reflection

Coconut Island is a research facility that is provided for by the University of Hawaii Manoa. The trip we took there today was not only very informative, but beautiful as well. After the boat left the harbor, a plankton net was dropped and dragged to the island. Sample contents collected were then put on slides and examined under the microscope. The sheer amount and varieties of phytoplankton and zooplankton were amazing. It was fun to use the dichotomous keys we were given and try and identify exactly what we were looking at. The staff person was very knowledgeable about the behaviors of the different species.

Also, in the same lab, there was a young man conducting research on local squid from the bay. He remarked that in the wild, these animals only live for about three months, whereas in the lab setting, he has had them for about six months. It was fascinating that he could identify the sex of these tiny animals and keep them alive in a captive environment.

The second lab we went to was outside on the bay. The students were asked to separate gorilla ogo seaweed from other living creatures. The ogo seaweed is very invasive in the bay. As a sustainability project, the research facility has been scraping the seaweed out of the bay, separating the native animals out of the seaweed, returning them to the ocean environment, and using the seaweed as fertilizer on the land. This is good for both the ocean and the land environments.

Lastly, we were shown the shark tank in the bay. Both Hammerhead and Sandbar sharks were kept there for observation. They sharks were such fluid swimmers and showed great agility. I appreciated the opportunity to watch and observe their behaviors. It was an exciting culminating experience. I am planning to go back again soon and take the Historical Tour so that I may learn more about the land around me.

Emily Want

5/15/15

H101 (Mrs. Akau-Naki)

Coconut Island Reflection

Coconut Island was an island that was off the coast of Kāne'ohe Bay and is the marine research facility of the Hawai'i Institute of Marine Biology of the University of Hawai'i. We rode on a boat to get to the island and on the way there, we lowered a net into the ocean water to collect plankton that we would later look at under microscopes. When we got on the island, we split up into groups; one group would look at the plankton under the microscope and the other would look through gorilla ogo and find and identify the organisms living in them. At the activity where we looked for organisms, we had to go through a big bucket filled with gorilla ogo and identify the organisms and place them in different containers to categorize them. We found many different organisms in the animal kingdom like the porifer (sponges), annelida (fire worms and spaghetti worms), mollusk (clams and oysters), and arthropods (crabs and shrimp). We were given a worksheet where we needed to count up all the organisms we found and write down how many of each. This activity was beneficial because we expanded our knowledge on the creatures that live in this invasive algae and it made us more aware of the small creatures in the ocean. I liked this activity because we got to discover different and new creatures that I never knew about. I learned that the fire worm lives in the tightest and most clumped together place of the gorilla ogo. At the second activity, we watched a power point of the different types of planktons. Then, we took the water that we got from the ocean when we were on the boat and took two drops from the water and put it on a dish and looked at it under the microscope. We found many and identified different planktons like amphipods and ostracods. We were given a work sheet where we needed to draw what we saw in the microscope and identify each creature. This lab was beneficial because it helped us learn about the different microscopic creatures that live in the ocean. I enjoyed this lab because in the microscope it showed the plankton how they move and it showed the other organisms that the plankton ate and the inside of the plankton where you could see them being digested. I learned that 50% of our oxygen comes from the creatures in the ocean and what a lolli is. After the activities, we went to the shark pond and inside they had 4 hammer heads and 2 sand bar sharks. There was also a touch pool where we could see and touch the different kinds of creatures. Overall, this was a great field trip and I hope to go again.

Coconut Island Reflection

The Coconut Island is an island where scientists study marine life. When we were on the boat, we have done a plankton catch where we caught zooplankton. We learned that plankton produce 50% of Earth's oxygen and we use the microscope to study plankton. Next, we went somewhere to study different types of marine animals like starfishes, fire worms, sailor's eye, crabs, and others. Sailor's eye is a species of algae found in oceans throughout the world in tropical and subtropical regions. It is one of the largest single-cell organisms. The activity is that we move all the species that are in the box and then separate them into different "homes." After we done separating, we counted how many crabs, arthropods, sailor's eye, and others they were. Then, we study different types of algae. There are many invasive algae that are blocking the sunlight from the coral reef. After we done analyzing the marine animals, we study three different types of reefs: fringe reef, patch reef and barrier reef. We use vinegar and sand to explain how the coral erodes into sand. When we are at the shark tank, they kept hammerhead shark and sandbar sharks. Vivian showed us a touching table where we identified some of the specimen that we have seen before during the algae lab. We are done studying at the Coconut Island and went back to the harbor.

The Coconut Island is the best place Science Club had. It was fun studying marine animals and exciting information. It was adventurous place that we were able to work-hands on the specimen. It is the best day I ever had.

Coconut Island Reflection

Today at Coconut Island, I learned a lot about the ocean environment and the species living within it. This experience really taught me a lot of new things that I never would have known if I didn't go there in the first place. One of the first, as well as the most interesting, thing that I learned about was plankton. Plankton are classified as this because they don't have the ability to fight the current meaning that they pretty much can't swim. There are two types of plankton, zooplankton and phytoplankton. The difference between them is that zooplankton are more animal-like while phytoplankton are more like plants, especially since they both require sunlight and create oxygen. In fact, about 50% of the world's oxygen is produced by phytoplankton. Some plankton can't swim for their whole life but some grow out of it and form the ability to swim like fish larvae. When we got to look at live plankton under a microscope, it was a whole different experience. I was able to see plankton in action and what they looked like up close. Another activity I did that really taught me something was how there is an abundant amount of life living in the algae. Tons of different, unique species are thriving within the algae that people probably aren't aware about. For example, there are fire worms, baby sea urchins, sponges, and a one-celled organism called a sailor's eye that even I didn't know existed. But, although algae are filled with many organisms, it can be very harmful to coral. Coral requires sunlight to survive but, if algae are covering it up like a thick blanket, then it won't be able to absorb the sunlight and soon end up decaying. Only a limited amount of people are trying to remove the algae by using something called the super sucker. It won't really make much of a difference unless more citizens help out too. There is also another problem that is happening, ocean acidification. Ocean acidification can destroy lots our beaches like how they showed us in the demonstration. In the demonstration, they showed us using vinegar (acid) and poured it on sand which caused it to disintegrate. After going to Coconut Island, I'm more aware of what's happening in the ocean. It made me realize that there are problems going on that I can even help to prevent. This was an amazing visit that I will never forget and hopefully, I'll be able to go back.

Coconut Island Reflection

Coconut Island is an island in Kaneohe bay. It hosts the Hawaii Institute of Marine Biology that allowed us to come and visit. We got the privilege of participating in a tour and a couple of labs and activities. I gained much knowledge from our time on Coconut Island and enjoyed the experience.

On our trip to Coconut Island, we got to participate in many special experiences. On the boat ride to Coconut Island we got the chance to collect plankton in a plankton tow. Upon reaching Coconut Island we went to the lab to look at the plankton. I learned there that fifty percent of the world's oxygen is created by plankton as they take in the carbon dioxide in the world. Plankton are anything that drift with the ocean's currents. There are two types of plankton, phytoplankton and zooplankton. Phytoplankton are plants and zooplankton are animals. Zoo plankton is then split into two separate categories based off of if they spend their whole life, or just part of their life as plankton. In our plankton sample we found copepods, crab larvae, worms, and much more. Upon leaving the lab we were able to view Coconut Island's Hawaiian bobtail squid project. The squid nocturnal, but they came out for us because they were being fed shrimp.

The next half of our visit to Coconut Island was spent sorting through invasive seaweed that are taking over the reefs of Kaneohe bay. The seaweed prevents the coral from receiving sunlight needed for its survival. In an effort to save the coral, the workers at Coconut Island suck up the algae off the reefs so that the coral could thrive again. However, seaweed is not the only thing that gets sucked up by the workers. That is why we needed to sort through the seaweed. Sorting through the seaweed, we found mollusks, crustaceans, sponges, jellies, sailor's eye, and other creatures. Before leaving we released the creatures back into the bay. Lastly, we visited the islands shark pond and their touch tanks. The shark pond hosts hammerheads and sandbar sharks, and sea cucumbers, urchins, and other organisms thrive in the touch tank.

Our time on Coconut Island was very educational and appreciated. I learned a lot about the ecosystem and organisms in Kaneohe bay and Hawaii in general. The staff there was very caring and knowledgeable and I hope to one day return to the island.

Trevyn Dobashi

K203 Parsons 5/15/15

Coconut Island Reflection

During the time we had at Coconut Island, I learned many facts about marine wildlife, especially plankton. The boat ride was very interesting because on the ride there, not only did we go there, but we also did a plankton tow. During the plankton tow, we threw a net in the ocean that filtered out most of the ocean water and kept the plankton in. After about 4 minutes, we pulled the net back in and poured it out into a container where we could see the water was filled with plankton.

When we got to the first lab, we learned about the different types of planktons, zooplankton and phytoplankton, and learned what each type of plankton looked like. After the short lesson, we used the samples we got from the plankton tow and observed them using a microscope. After we observed them, we drew them and identified the type of plankton. This ranged from copepods to sea squirt larvae. After we were done observing our plankton, we observed a Hawaiian Bobtail squid which was feeding upon a small shrimp.

In our second lab, we had a big container of algae. The guide told us that there were animals living inside of the algae so we had to be very cautious when we tried to find them. They showed us what each specimen should look like. There were many types of animals. We found three porifera which were sponges that varied in color. We found no cnidarians but it consisted of sea anemones, zooanthids, and corals. We found 100+ fireworms which fit under the annelid column. In mollusca, we found 12 clams, oysters, snails, and sea slugs. In the arthropoda column we found 10 shrimp. In the last column we found 20 brittlestars, sea cucumbers, and sea stars which fit under the echinodermata class.

During our walk back to the boat we learned about ocean acidification. This lesson showed that that ph levels go up and make the ocean more acidic harming our coral reefs. We also got to take pictures of all of the animals that they study including sharks.

Overall this was a fun and good learning experience for me and I would love to do it again.

Coconut Island Reflection

Today's field trip to Coconut Island was time well spent! I have never had the opportunity to visit the island and am truly grateful for this one. The guides provided so much interesting information to the students as well as the adults. The two activities that were provided for the students to engage in were well suited to their age. I witnessed students engaged in their learning, making discoveries, developing appreciation for marine life and having fun.

The first activity our group attended was separating marine life from seaweed and taking data on what was found. All students were very engaged and were exposed to some interesting sea creatures that many of us have never seen. I really enjoyed hearing the "Ooohs" and "Ahhs" from the students as they uncovered a fire worm, then a crab, then a brittle star and so on. The activity also gave us insight on what they do to address this overgrowth and the importance of their work to conserve our beautiful reefs.

The second activity put us in a classroom lab where we looked at plankton that was gathered on our way to Coconut Island. The slideshow that was presented provided great information on creatures to be on the lookout for under the microscope. This activity also had the students engaged and excited about what they were seeing and what those creatures were doing. Some had very active samples and others not so active, but that didn't stop them from visiting their neighbor to look at their sample. There was a high degree of interest by all to see the variety of plankton. Again, it was so wonderful to see and hear the excitement in the student's.

As our tour was coming to a close our last stop was the shark enclosure and nearby touch and feel tank. The excitement continued as we saw the sharks swimming up close and the experience of touching sea creatures that one does not have regular exposure to. I can honestly say this was one of the best field trips that I have had the opportunity to be a chaperone on. The whole trip was so informative and engaging! I really believe field trip opportunities like these trigger a deeper appreciation and understanding of where we live. We are thankful for the opportunity to experience the abundance of information and engaging activities that Coconut Island had to offer.

Coconut Island Reflection

Today at Coconut Island, we learned a lot about the environment and what it is happening to our ocean. It opened my eyes to a lot of the real local problems happening right here in front of us. The things that we don't realize are dangerous and invasive, are slowly taking over and killing our land. Like the algae for example, it all seems harmless, but they are actually killing the coral which harms the ocean. The people there at Coconut Island have been trying to clean out the algae, but they can't do it alone. Now I know that they need all of us, to be able to make a change right now. When we did the algae lab, we actually got to touch and feel the animals, which allow you to understand and get in touch better with them. The hands on learning experience really prompted you to want to learn more about it and make a difference. Going through the small amount of algae that we did and finding at least 100 animals shows you that the life beneath us is thriving, but declining because of us. You realize that they can't do anything to change what we are doing, but they are the ones that have to directly deal with the affects. When we did the plankton lab, we used real live samples, not the prepared ones that we look at in school. Seeing them alive and moving gives you a whole different experience and you can learn so much more. We even got to use pretty high tech microscopes to look through and try out. We saw so many different types of plankton and since we had the microscopes, I could see them up close and personal. It was like they came to life for the very first time and I was there to see it. After we were finished, and we took the tour of the island, we got to see so many things that aren't very common on Oahu. It was filled with life and there was green scenery all around us. It was a very refreshing sight to see, since here on Oahu, we sadly don't see it that often anymore. I feel like now, I want to make a difference and change the fate of our lands and oceans. Overall, it was an eye-opening, amazing, jaw-dropping experience for me and my classmates. I want to say thanks to Ms. Vivian, Ms. Vicky, Ms. Kathy, and Ms. Katie for helping us and sprinkling all of their knowledge on to us. Now I can go home and continue to learn and contribute to the environment. I hope to go back soon!

Aileen Chang

5/15/15

Period 3

Coconut Island Reflection

Thank you for giving me the opportunity to travel to Coconut Island. Before this field trip, I had no idea where Coconut Island was. At the harbor I carefully observed the water conditions. The water was polluted with trash, although coral still thrived. Getting to Coconut Island was like traveling to a private resort. There were little artificial pollution, and the scenery was beautiful. Since I was in the second group, I did the algae separation activity first. I found many sea creatures such as the one called organism, named sailors eye. In the beginning, I was confused at the different phylum's because every sea creature was unique and different. The staff told me different tips and tricks to classify the organisms. For example, the most confusing one was sponges. Some were spiky and thin, while others were hard and rocklike. I learned that the texture of sponges were usually rough. I also learned that the algae were actually the plant used for making poke. Next stop was the lab activity for all different types of plankton. The microscopes were different from those from school, so I had a hard time adjusting. Once I got a hang of it, I found and classified at least 5 different species. The slide show introduced various species of plankton, such as the zoo plankton and phytoplankton. I got to witness the organisms under the microscopes, and observed a copepod consuming another small organism. It was interesting and I even got a portion on film! Lastly, we had a scenery walk and headed towards the touch table. The staff told us about pickle weed; an edible plant growing near the shoreline. I took a bite and it was very salty. The touch table carried many ocean creatures like the sea cucumber and sea urchins. I think the hands-on experience was a great idea. I was very sad to leave the island and I hope to come again soon. Thank you for everything!

Adam Sestak

5/15/15

B104

Coconut Island Reflection

The purpose of today's field trip was to teach us about life in the ocean. We expanded our knowledge of marine biology by conducting multiple experiments with various kinds of sea creatures. I most of all enjoyed observing plankton through the microscope. Shankara and I disrupted the plankton to see its reaction. We also saw a crab that was violently tearing apart and consuming the other animals. This particular experiment was a unique, fascinating opportunity to observe plankton in detail.

The other experiment, though less fascinating than the first one, was pretty fun, too. We had the chance to interact with fire worms. Shankara and I did a unique and creative experiment on our own. We inserted a fire worm inside a clam and hypothesized how the two creatures would interact. Contrary to our hypothesis, the clam did not consume the worm. In fact, it didn't do anything at all.

As for the people who taught us and supervised the many exciting experiments, they were very kind and knowledgeable. They patiently answered all of our questions relating to marine biology and explained everything clearly and in detail.

This field trip enhanced my understanding of the natural world. The lecture in the beginning was extremely useful and interesting. I learned about the different types of plankton and why they are essential to the existence of many other forms of life on Earth. For example, I didn't know before that plankton produces 50% of the oxygen we inhale every day.

This field trip made me think about plankton differently than I have thought of it before. I used to consider plankton a useless thing that does nothing, but float around and get eaten. Now, I am aware that plankton is a crucial part of the marine food chain and is even important to us, humans, by providing oxygen without which we would die. What I learned today convinced me to care about the environment more in general.

Sydney Saldania

HR: Mr. Jacobi

5-15-15

Coconut Island Reflection

The field trip to Coconut Island was very informative and exciting. The tour guides/ teachers taught me many things. Some things that I did or learned there, I can't get anywhere else. I learned that with too much algae, the coral can't grow or survive because they don't get enough sunlight to go through the process of photosynthesis. This affects the marine life because without the coral, they would all be dead. I also learned that there are two types of plankton, phytoplankton and zooplankton. Phytoplankton is the bottom of the ocean food chain. The phytoplankton makes 50% of the oxygen on Earth. Zooplankton is the second on the food chain. The zooplankton eats the phytoplankton, small fish eat the zooplankton, the big fish eat the small fish, and the large predators eat the big fish. With global warming occurring, more and more phytoplankton and other plants are needed around the world. Finally, I learned that there are many different creatures of the sea that I didn't know about. Some animals are the loli sea cucumber, sponges, fire worms, and many more. My favorite activity was removing the creatures from the algae. I liked it because it was very hands on and I could identify creatures I didn't know about. The most abundant animal I found was the fire worm. I found a lot because they like dense areas and the algae I had been very compact. I like to do work that is fun, yet requires a lot of thinking. This program was very knowledgeable and I hope to go back again one day.

Noah Hee

5-15-2015

J202

Coconut Island Reflection

We started off on a long drive to the harbor but it was all worth the wait. Coconut Island is a very valuable place filled with information. On Coconut Island, I was able to distinguish many different animals and marine life. In our first activity, we learned all about planktons. We learned all the different types of categories such as deep-sea, microscopic and megascopic. During that activity, we were able to interact with microscope and view all the different species of plankton. Planktons are also the lowest part in our food chain. In our second activity, we learned and handled the older phases of the plankton. Some types of marine life that we handled were Fire worms, Phytoplankton and Sea Cucumbers. We wrote data on them probably considering how rare they are. For example, we found almost 3 dozens of Fire worms. That probably means that they are very common in the sea life. During the final parts of our trip, we were able to spot two different types of sharks which were called Hammerheads and Sandbar Sharks. This trip was a very amazing and glorious trip that I will never in a thousand years forget about.

Trey Guinn

5/15/15

B104

Coconut Island Reflection

Coconut Island was an island off the shore of Kaneohe bay which is pretty far away, but once we got there I realized that it was actually worth it. While at Coconut Island we learned about different types of plankton. We went through a PowerPoint presentation learning different classifications of plankton such as microscopic, megascopic, and deep sea. We also learned that anything that cannot resist the water current. We learned what some plankton looks like so that we could identify them underneath the microscope. Later on we went to take apart some invasive algae and take out the critters that live inside of it so that we can let them live while helping the ocean. We did this because when a certain type of algae gets invasive it starts to cover up the coral and then the coral starts to die so we learned that it is important to take out the invasive seaweed so that it does not kill all of the coral. After that we looked at some different sharks and fish and we touched some different sea cucumbers and coral, then we came back to our school and the memorable fun was over.

Shankara Varma

5/15/15

Pd: 3 H-101

Coconut Island Trip

Today, for a field trip, we went to Coconut Island to do experiments and learn about marine biology. At Coconut Island, we learned about many different species of marine life including coral, plankton, and certain invertebrates of the sea. This trip was really fun and interesting for me. I used to be really interested in marine biology because of the creatures of the deep like the angler fish and the viper fish. This trip really taught me a lot about how important marine life is to the planet. First, we got to go to the island on a boat. It was really fun to be able to ride with my friends on a boat all the way to the cool looking island. After the boat ride, we went to look at plankton under the microscope. There were so many varieties to look at and each looked different from the last. One really cool thing was this arrow looking fish that picked up plankton and chewed them until they were all ground up. The creature was really intimidating to the other plankton as it was tearing their comrades to shreds. Adam and I were also looking at this cluster when we saw a crab in its early stages stabbing all of the other plankton. After the plankton lab, we went to a hands on lab where we sorted out animals into different containers. This trip really taught me a lot about the importance of marine life and caring for it. Without the plankton that produces oxygen, we would have 50% less of all the oxygen we have now in the world.

Noela Tuquero

5/15/15

Homerroom: Mrs. Akau-Naki

Coconut Island Reflection

Coconut Island was a fun experience that showcased a new side of the paradise we live on. It displayed the ocean in front of our faces and demanded that we pay attention to the actual threats that the oceans pose. The field trip was very informative and interesting. I learned about a new invasive species of algae that over took Kaneohe Bay; it was brought to by humans to use for industrial uses (makeup, food, lotions, etc.). The algae had grown in numbers never expected by the scientist that started to breed them. The algae, in this case, were very harmful and they grew over the coral reefs, thus stealing the sunlight. The native corals were severely damaged which sprung upon the restoration efforts. I also was informed about the different species that were actually at Kaneohe Bay and the type of living creatures that depended on the coral for survival. For example, the kingdom Animalia was showcased when we observed the island's water and separated the different species. We saw a bunch of sponges, baby sea urchins, shrimps, crabs, baby sea anemones and even a few sailors eye's. It was so cool and fascinating to see the actual species; some that I never even knew existed. Also, there was a lot of information passed around as we studied plankton underneath the microscopes. I learned about the different types of plankton, phytoplankton and zoo plankton. The phytoplankton, the plant like ones, makes up 50% of the oxygen in the world. Also, the zoo plankton, the animal like ones, makes up about 80% of the entire oceans. I had a lot of fun at Coconut Island and it was very cool to see the different areas of the island. I actually learned a lot about Hawaii's oceans from Katie, Vicky, Vivian, Kathy. I thought that the staff was super understanding and welcoming to our KMS (Kaimuki Middle School) ohana. I really appreciated the time the staff took out of their days to volunteer to teach us about the oceans. It was a hands on learning experience that I will never forget.

Paul Kim

Mr. Yonamine

5/15/15

Coconut Island Reflection

Going on Coconut Island was quite a blast. We got to do tons of fun activities that I've really enjoyed. One of the most interesting activities we did was sorting the algae. It was quite interesting because we got to interact with diverse creatures lingering around the coral. Algae are killing the corals because it is potentially blocking the sunlight that coral reefs need. Although it was odd, it was quite enjoyable and entertaining because we got to sort the little critters. Another thing we did that I really enjoyed was the plankton lab. I've never known that most of the ocean life starts off as innocent little plankton. I've also had the chance to see plankton on the microscope and it looks very unique. The staffs were very helpful and polite and I really enjoyed working with them. I am very grateful that I was chosen for this field trip because I got the chance to see very interesting things, especially sharks. Today was a very exciting and thrilling experience, and I hope I can go back one day.

Jarred Oshiro

5/15/15

Ms. Thompson

Coconut Island Reflection

The Coconut Island field trip was one of the most hands-on and exploratory activities I've ever done. I learned a lot of things from the staff on Coconut Island. One of the things we did was study algae. Algae are destroying our corals. The corals are not getting enough sunlight to grow, which in return, they die and do not absorb the CO₂ in the water. Divers in wet suits go down to the reef and carefully pick off the algae from the coral. The algae are sucked into a gentle vacuum that goes onto a boat. Other people on the boat sort out the algae and throw the living creatures back into the water. The algae is sorted and put in burlap sacks and tied up and sent to the stations that will keep the algae from getting back into the ocean. Some algae are on the reef after the divers clear the areas. That is why UH are raising sea urchins to eat the remaining algae so the coral can get sunlight and grow.

Above the scientific knowledge of what people learn at Coconut Island, the staff was very knowledgeable, supportive, wonderful, and helpful. They taught us a lot of things that will make an impact on the environment. A cool thing that I learned was that Coconut Island has sandbar sharks and hammerhead sharks. These sharks are really cool and awesome. I think that Coconut Island is a good learning experience because the wonderful UH staff explains multiple impacts on coral and microscopic organisms.

Rochelle Jokura

5/15/15

HR: J202

Coconut Island Reflection

The Coconut Island field trip was very fun and exciting and I learned a lot of things! Some of the things I learned are about the invasive algae species that are taking over the coral reefs. With the invasive algae taking over, the corals can't receive sunlight and can harm the coral reefs' health. When people are trying to clean up these invasive algae, many ocean creatures is living inside the algae. That's why we were untangling the creatures from the algae and organizing them into different categories. In my group, we found a lot of Fire worms in our algae pack. We found Fire worms, crabs, sponges, and cnidarians. Another thing I learned at Coconut Island is that plankton is classified in many different categories and the broadest way to classify them is phytoplankton and zooplankton. I learned that planktons are anything in the ocean that can't resist to the ocean currents. I was surprised to hear that plankton makes up 50% of our oxygen. I also was surprised to hear that crabs are once planktons in the beginning of their life and then they slowly mature into an adult crab. When my partner and I looked through the microscope, we were surprised to see so many plankton in 2 small puddles. We found many different shapes, sizes, and bugs. I was especially surprised when I saw some of the plankton moving! I was really surprised when I saw a zooplankton eating a phytoplankton in another group's microscope. There I learned that the phytoplankton is at the bottom of the food chain. The zooplankton eats the phytoplankton, the small fishes eat the zooplankton, and the big fishes eat the small fish. I really enjoyed looking at the sharks because we can rarely see one up close. Especially the hammerheads and the sandbar sharks! I really thought this was a helpful field trip and I hope I can go there again!

Aidan Kennedy

Mr. Yonamine J202

5/15/15

Coconut Island Reflection

The Coconut Island field trip was very interesting. I never really considered that algae might be bad for coral reefs, now I know that too much algae can be unhealthy for the organisms that live in the reef. I really enjoyed sorting the different organisms and deciding which phylum they belonged to. Sometimes when I see a coral reef when I go snorkeling I see areas that have too much algae and the water is murky, but I hadn't considered that having too much algae would affect the coral's health. I also never knew the diversity of animals that live in the reefs. Another activity that I found interesting was looking at plankton in the microscopes. I knew there were phytoplankton and zooplankton, but I never knew that phytoplankton is plant-like plankton and zooplankton is animal-like plankton. Trying to tell which plankton is which proved to be hard, but I enjoyed the challenge. I had some problems with telling which was which at times. My group had to change one of the plankton we drew because we couldn't classify what it was. The thing I probably enjoyed the most was seeing the sharks, ocean animals have always fascinated me. I have never seen a shark close up before, it was very thrilling. The staff was very helpful and supportive to everyone. Whenever people were having trouble classifying an animal they always did their best to help us. Today was a very thrilling and interesting experience; I hope I can go back one day.

Coconut Island Reflection

The Coconut Island field trip was one of the most exploratory, engaging, and informative excursions I have ever been on. The high level of engagement that students showed while participating in the activities and the discussions they had with one another as we transitioned through activities indicated what students were soaking up from the activities.

During the algae clean up, I heard students asking questions about how to classify organisms they found in the algae, the strategies other students were using to find different organisms, and how to appropriately handle different marine animals. When students were exploring zooplankton in microscopes, researchers from Coconut Island came out and helped students identify what they were looking at, helped them refine their scope, and encouraged students to continue searching for new types of zooplankton. The students then moved on to view the shark tank on Coconut Island and were able to see the majestic and captivating nature of sharks beyond the television screen.

Beyond the scientific knowledge and experience, students gained a tangible sense of how a small change to an eco-system can dramatically impact a space. Students were also shown real people who work in sustainability occupations doing algae clean ups, research, and educational programs to keep Hawai'i thriving. I think *sustainability* can often times become something limited to recycling and growing a few vegetables in a home garden in the minds of many students at our school. This day provided students with an opportunity to see and experience a way some people are working to keep Hawai'i Hawai'i in a way students may never have seen before. I feel extremely grateful for being able to participate in this activity as a chaperone. It was awesome to witness students who struggle in their regular classroom environment excel during the activities they participated in on the field trip.

Coconut Island Reflection

Today brought back memories to my college years at UH Manoa because that was the first time I have ever been to Coconut Island. I feel that today's experience was actually better than the first time because of the activities we were able to do and all the things we were able to see.

First of all, riding the boat over to the island was so much fun and glad we had the opportunity to give some of our students a chance to ride a boat. It was such a nice day and the view was just beautiful. The staff and volunteers were also very helpful and knowledgeable about marine life.

The classroom activity was really interesting to see the plankton we gathered under the microscope. Students even enjoyed seeing the plankton in action because it looked as if they were eating each other. It was great for the students to see that before doing the next activity with the live marine animals and invasive seaweed. We were also able to view the shrimp in the tanks and it was just amazing to see one of the organisms ink in the tank.

We then got to work with the seaweed and get out the little animals. There were some really cool things that were discovered such as crabs, shrimp, sponges, fire worms, and some other critter that even the staff was amazed by and didn't know what it was called. The students were really excited to discover so many different organisms and to see it under the microscope first and then see how it grew.

Lastly, the shark tank was a site to see. The sharks even put on a show by climbing the side wall and came out of the water. It's great to see sharks, especially when I am not sitting on my surfboard. The students were given a chance to touch the sea cucumbers and were amazed by how slimy they were.

Overall, this was a wonderful opportunity for the students and me and we are so appreciative that we had a grant to enjoy a day away from school. Thank you again for a great learning experience!