



# The Micro Plastic Project

By Lizzy and Shawn



# Micro Plastic

- Did you know that half of the plastic produced ends up in the environment?
- This plastic doesn't dissolve in the ocean it just breaks down into smaller pieces of plastic.
- This process is called micro plastic.

# Micro Plastic project

- Our class did a project to quantify how much plastic is on Kailua beach.
- So our class has been going every other week to Kailua Beach.
- We made plots that were 10 by 10 feet
- And picked up as much plastic as we could find in our plot.

# The purpose of our study



The purpose of our project is to quantify the amount of plastic on Kailua Beach.

# The problem affecting our animals

- Turtles love to eat jellyfish and always mistake plastic bags for jellyfish. The turtles think that they're full and that they're bodies already ate so then they don't eat for a while then get sick and eventually die of malnutrition.
- The ratio says that there's six pounds of plastic for every ten pounds of plankton. The sad thing is there is no place in the ocean where there is no plastic.





# How will Micro Plastic affect the food chain and the environment?

You might be wondering what happens to all the plastic coatings on these products during the composting process. Well since petroleum-based plastic particles break down into smaller fragments but do not biodegrade.

- **Common plastic paper coated products-**





- The micro plastic fragments shed from plastic-coated paper .
- These micro plastics will eventually migrate into other land and aquatic ecosystems through wind and surface run-off, exacerbating the existing threats to wildlife and ultimately humans.
- Macro Plastic particles are a well-known threat to wildlife, causing suffocation, entanglement and starvation.

# The Chart of litters of plastic collected

- Teana \Lauryn 0.3
- Kaile/Devon 0.5
- Julia \Annie 0.5      The amount of plastic 3.1 litters in 700 Square Feet 15.44.24 gallons
- Isoefa \Kody 0.5
- Shawn\ Lizzy 0.5 ←---- How much we collected
- Reid \Brock 0.25
- Kamil \Dylan 0.75



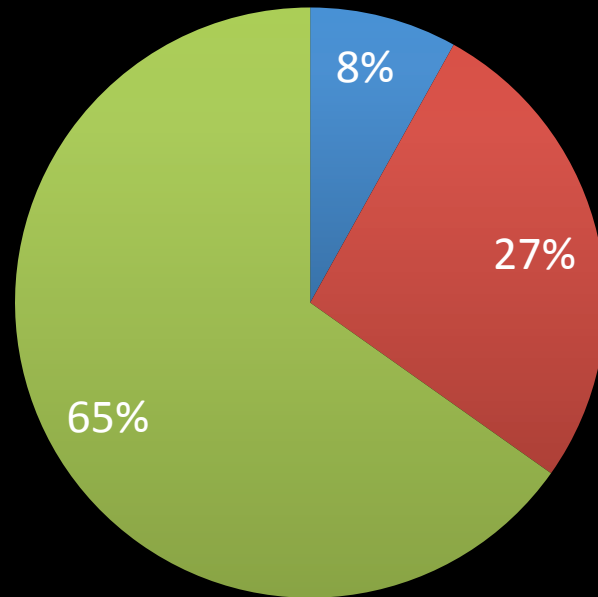
# The possible long term economic implications

- People would not want to buy a house in that location
- A lot of houses could lose their values .
- Tourists would not want to visit a dirty beach
- That would mean losing a lot of money
- People not wanting to buy fish because the fish are getting polluted.

# Amount Collected

Chart Title

30-Nov 14-Dec 18-Jan



# Additional Micro Plastic Survey

- **Method:** Ten test holes were dug in-between student survey.

**Results:** None of the test holes revealed any micro-plastic below the surface of the beach sand more than 3 inches deep, and insignificant amounts were noted at that depth. The vast majority of micro-plastic seems to remain in the top 1-2 inches of the sand.

**Possible Explanation:** The density of the micro-plastic prohibits its downward migration, there beach clean up will be less complicated and less expensive.



# Solutions to this problem

- No plastic-coated paper products in compost. Local governments, compost facilities and compost haulers should immediately exclude these products from their collection program
- Recycle milk and juice cartons for highest and best use. There are increasing opportunities to recycle gable-top and aseptic containers used for milk and juice packaging.