

To protect the marine environment

1. Motivation behind Research Paper

Let's reduce marine debris and protect marine life. This is the goal of our project. Many people think that if they want to protect the sea, they should pick up trash in the sea. However, even if you pick up trash in the sea, the beach where you pick up the trash will only be temporarily clean, and the people who throw trash away will continue to throw it away unconsciously. The people who pick up trash will continue to pick up the trash. We thought that this endless loop was far from enough to realize a sustainable society. Living in Nara Prefecture, which has no ocean, we had almost no connection to the sea. We were looking for something we could do to help. We came across a document from the Kanagawa Coastal Beautification Foundation, which is the only organization in Japan that conducts surveys throughout the year. Their survey results show that 30% of the trash on the beaches is trash left in the ocean, and about 70% comes from the rivers. After making the new discovery that marine debris is related to rivers, we turned our attention to rivers. And we thought that rivers are familiar to us, the residents of Nara Prefecture.

2. Introduction

The aim is to reduce trash which causes marine pollution. We focused on the river near our school.

Research

First, we made original signboards with pictures of our own eyes. The experiment was conducted by comparing the area where the signboard was placed and the area where they were not placed. Then, once every two weeks, we recorded the number of trash in those areas.

Sources and data collection

We referred to the study by the Kanagawa Coastal Beautification Foundation and collected data by our own experiment.

3. Results and Analysis

The results of the trash counts were used to investigate what effect the installation of the eye signs had on the littering situation. All experiments were conducted with a litter count of 0 as the baseline. As the days went by, we found it difficult to determine whether the signage was effective or not based only on the results of experiments conducted over a short period of two weeks. In order to have reliable experimental results, we continued our experiments. We thought that there was some cause for the unusual increase in litter in the area, and we derived the possibilities that we could cite.

4. Conclusion and Future Problems

In order to achieve this goal, we have conducted river cleanups and experiments. During the course of the experiment, there were times when observation was difficult due to weather conditions and grass growth, but we were able to engage with various community members, and with their help we were able

to change the mindsets of many people. Through this effort, it became clear that the amount of trash was reduced by 59.52% after the experiment. This shows that there is a possibility that people can change their consciousness if there is some external factor. However, this does not mean that our goal has been achieved. However, we did not achieve our goal because we were in a limited area upstream of the Akishino River. In order to achieve our goals of reducing marine debris and protecting marine life, we need to conduct this kind of experiment over a wider area. Next, our hypothesis was that the effectiveness of the signs would gradually diminish in the early stages of the project. However, as the days went by, the amount of trash decreased. What was not clear was that the results of the experiment might change depending on the amount of pedestrian traffic and other factors since we did not change the signage in the wooden plots with and without signage. Therefore, it is unclear whether the experiment is effective in all locations because the results are only for that site. In other words, although good results were obtained in this case, these results may not be due to the sign in the eye, but rather to the location.

5. Reflection

At first I didn't know exactly how to act, but gradually it became clear what I needed to do and I was able to tackle it. Although it was good that I focused on the river, it took me a long time to find the answer to what I should actually do to reduce marine debris. Even after the experiment began, problems arose, for example, when we wanted to mow the grass for a new experiment, someone else had already done it. Nevertheless, we were able to reach this result after rethinking the experimental method over and over again. At first, we thought it was impossible for a single signboard to reduce the amount of garbage, but after the experiment, we changed

our minds. I learned that even a signboard could change people's mind. I was very happy that the eye signs had an effect on littering. Through this experience, I learned that even things that are generally thought to be impossible, can be turned into a possibility.

6. Work Cited

Kanagawa Coastal Beautification Foundation, "About coastal trash," . 2020.

<https://www.bikazaidan.or.jp/kaigangomi/>