

# SGH指定校番号 2753 中村学園女子高等学校

# 探究テーマ「食と環境」



#### Garbage Island

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**Belonging to Nakamura Gakuen Girls High** School

#### First

We chose the ocean from a number of natural environments.

And, while I was investigating, I learned about the existence of a unique island of garbage island, so this time I gathered about the garbage island.

#### Why marine garbage concentrates in specific waters

With the influence of ocean current and wind, as the eyes of a typhoon, plastic islands can be the center of a huge annular flow.

Garbage debris will be transported from the East coast of Asia to the center of the cycle within one year and debris from North America will be transported in about five years.

Among the garbage of Great Pacific Garbage Patch, trash from Asia such as made in China, made in Japan, made in Korea etc. is also seen very much.

It is thought that garbage such as beach sandals and plastic bags are gradually decomposed by sunlight to become microscopic fragments, that is, microplastic, and are gathered and accumulated in a spiral shape by movement of waves.

#### Example

The impact of the Great East Japan Earthquake is concerned.A variety of things,including oily waste and chemicals that are supposed to be about 1.5 million tons due to the tsunami are sent to the sea.

The drifting rubble will eventually accumulate in the Great Pacific Garbage Patch.

There is also concern about the impact of the Great Kanto Earthquake that everything leaked into the ocean.

#### What is Garbage Patch?

Great Pacific Garbage Patch is a sea area where ocean waste floating in the North Pacific Hawaiian Island and North America continues abnormally.

Fragments such as floating plastics are characterized by being closed by the ocean current of the North Pacific circulation.

#### Effect on organisms

Marine garbage afflicts many marine life, especially plastic is the biggest threat to marine life. It is because it is the result of mistaking the garbage as food and ingesting a large amount of polystyrene.

In treat Pacific Garbage Patch, high concentration plastic particles are drifting in the upper part of the seawater.Apart from visible garbage, plastics that have reached the molecular level by photodecomposition are present in high

concentrations in this area, and living organisms mistakenly swallow as food. Pelletized plastics are said to have the property of intensively attracting highly toxic substances such as DDT (insecticide) and PCB (polychlorinated

biphenyl) in seawater. Fine particles, bottle caps, and plastic bags are spread over food from sea birds and marine mammals, abandoned fishing gears are nooked to death by clinging to living things. There are such garbermates in the ocean all over the world. Actually, it exists also in the Sea of Japan. And these garbage collection areas are confirmed between Japan and Hawaii, off the coast of Chile in South America, the South North Atlantic Ocean,

## and so on.

#### Solution

To disseminate the current situation to many people.

Education on correct sanitary ideas

Example) Umi to Nippon Project (Seas and Japan Project

The Ocean Cleanup Array

Participating in activities like the above and to be interested in such activities.

### ENVIRONMENTAL INITIATIVES

learned about an environment in research class and we found a compost.we also met a man working on improving the environment of Itoshima.

We will introduce Mr.Koto and our approaches



Hori Miwa



Nakamura Gakuen

Girls high school

2—1 Oba Chinatsu

Date of compost Green Internal temperatures Orange input amount Blue temperatures



Consideration

We could learn present situation and deepen our knowledge by listening to Mr.Koto, an expert actually listening to the experts. We want many people to know these approaches and keep on doing them.

Our approach

... Put a compost on our school rooftop.

... Know the importance of nature resources.

...Tell others what we learn and what we do.

Mr. Kotoh's approach

... Improving the environmental situation in Itoshima.

ex) compost "Sutenannnakunn" Biomass power generation.

#### Modern environment and how the media should be

NAKAMURA GAKUEN GIRL'S

**Problems in modern society** 

HIGHSCHOOL

Yui Sasaki Sakurako Kobara

**Environmental problems of** 

**Examples** 

The recipient of an article that one media or government picked up swallows that information and you can not find the correct solution to the problem

·Environmental destruc

Adhere to the soil, move X

Radioactive cesium

#### Objective present situation ... Specific example The media, politics

Comparison, proof of

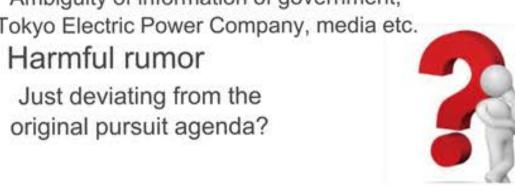
Have my own opinion

authenticity

nuclear power plants

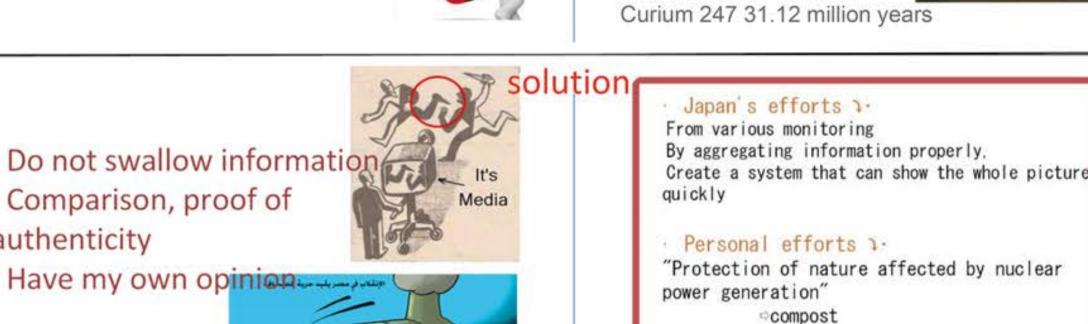
"Nuclear safety myth". Nuclear coverage Lack of explanation for Doubts about the understanding degree of the "dangerous standards" government. Is it initially Is it really safe?

Explanation and discussion Ambiguity of information of government, Tokyo Electric Power Company, media etc. Harmful rumor





→ vegetation degeneration, ecological destruction Nuclear waste, its processing ocation Uranium resource exhaustion problem About 100 years remaining Uranium element Americium 243 14, 740

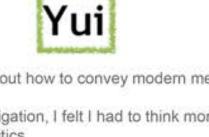


ecosystem

#### Sakurako

It is difficult to solve the problem of modern Japan unless we act with the correct knowledge So I thought about getting correct information and solving environmental problems this time. Looking at solutions that correctly judge the information of the media and politics, it seemed like I had heard it before, but I also found that it was so important. In order to know that nuclear power is also related to the environmental destruction problem and

it is the same as environmental problem I understood that we need to work on it I wanted to have the right knowledge by all means before I began working on problem



For destroyed of vegetation and

Make alternative environment

Personally I felt doubt about how to convey modern media and proposed this As I continued the investigation, I felt I had to think more about today's Of course, there are many places where news reports and politicians should improve, and it can not be denied that they are wrong, but we should also accept "facts" firmly considering information

#### Solution for Japanese food waste disposal

Introduction

Computer simulation of mass accumulation of dust

Food disposal is a major problem in Japan now. Reducing food waste will be a means to solve various problems on the earth.

- Application of food bank Product distribution system
- Use of drone



Save people suffering from hunger

Ayana Izumi. Riko Koyanagi.

Nakamura Gakuen Girls High School

Reduce waste of trash Itoshima's Approach

Prevention of global warming

Construction of a recycling-oriented society **Making Satoyama** 

Protect biodiversity



compost! How to make compost

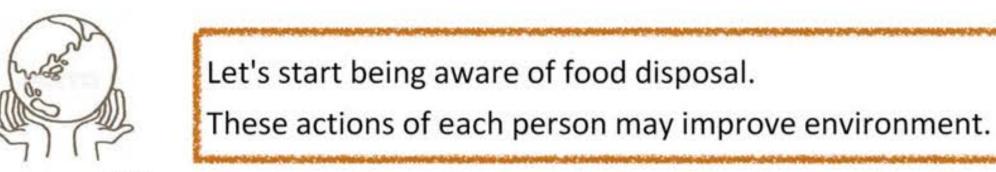
1. Put a black plastic bag in a breathable box

2. Place soil, rice flour, fallen leaves into the box 3. Put garbage in the box and stir.

4. Put the lid on it and place it on a sunny and well-drained place.

Safe and secure

Can make organic



#### SIGNIFICANCE OF " CHILDREN'S CAFETERIA "

#### Nakamura Girl's High School Hinako Urago & Akane Kato

#### Introduction

We studied the children's cafeteria in research class. For further understanding, we invited Mr. Taguchi to our school. He is a manager of"Kids Cafe Taberu Ba".

We listened to him and deepened our school understanding.

#### What is the Children's Cafeteria? Provide meals free of charge or low at cost.

The social background in which the childhood cafeteria was born · Children who get thinner after summer vacation

· Children who eat only one dish for each meal such as udon and bread · Children who often eat frozen food or instant food onlyee

Increase poor family

Increase children who do not know communication

· Women's social problems

#### Problems

Many people do not know about the children's dining hall

· It is difficult to secure the place

· There is no central person ·No uniformity of provided food and difficulty of cooking. Ex)Only potatoes 10 kg

#### Things to do in the future

Listening to that, felt that the welfare situation in Japan was not so good as we had expected. There are more children with more poverty. In order to solve the problem We need to get up and participate in volunteers and widely inform the current situation.