

Our Life and River Environment, Relation Among Creatures ~ Things Emerged from Water Quality Survey ~

Leading Model Program: "Connection between and among visible nature and 'water' and 'creatures'"

Name of Organization: NPO Kusunoki Shizen-Kan

Regional Programming Members: Tokushima Environmental Counselor, Naruto University of Education,

Ehime Global Network

Outline of Program: We will investigate aquatic organisms to find the water quality level of the river close to our school. Then we will think of the effects of the dirty water from human activities to the creatures in the river. Investigations into the aquatic creatures will tell us the water quality level. We will compare the quality with other rivers and think if our river is good or not. Then we will make a watershed map and input the data that will show which river is better or worse. We will also discuss the causes and countermeasures. We will conduct water cleanup experiments and learn the connection between the purification effect and microorganism, and discuss the ways to utilize such a mechanism. We will be aware that a great variety of microbial community contributes to natural water purification system, and that will help consider about humans and their society in nature and will act to maintain or improve the current water environment.

Goal of the Program: While investigating the natural relationship focusing on the variety of natural environment, we will learn the life in the water in our vicinity, and the effects of the water to the life including ourselves. We will also be aware the natural water purification system is carried out through the biological function that requires water, and we will discuss the circulation of water and its purification mechanism. Also we will grasp the flow of water rather than the spot of water, and think to maintain the quality of water of the downstream. We will find the issues of nature in our region and investigate the causes and discover the countermeasures, and ultimately learn how to act.

Photo 1 Check the aquatic organism caught in vicinity.

Photo 2 Check the water quality.

Photo 3 Discuss what we can do.

Flow of Program:

1st period: What is ESD? Confirm the outcome of investigation of aquatic organism caught in vicinity.

2nd period: Watch the environment and check water quality of Nakagawa-River.

3rd period: Make a water quality map and find the source of dirty water. Conduct water cleanup experiment.

4th period: Think the connection between water quality and creatures.

5th period: Plan to do for preserving river environment.

Voices of attendees:

- I will be aware of my everyday life and try to protect river water.
- I will wash dishes after wiping over.
- Review my life and rectify the bad habits.

Regarding the curriculum guidance and other details, please refer to the ESD website.



<u>Let's Connect to the "Feelings of Trees"</u> ~Function of Trees to Enrich Towns and Local Seas"~

Leading Model Program: "Discover the Power of Trees! ~Use and Protect forests, homes, towns and nurture creative human resources~"

Name of Organization: Architectural Institute of Japan

Regional Programming Members: Zentsuji Kids Eco Club, Kagawa University, Ehime Global Network

<u>Outline of Program</u>: Zentuji Kids Eco Club, Kagawa University and NPO Ehime Global Network worked together at the Zentsuji-Gogaku-no-Sato Park and some streets in Zentsuji-City. Children diagnosed trees under the guidance of a professional tree surgeon, and envisaged the ideal parks and future townscapes of Zentsuji, and aimed to realize the role of trees. We made a program focusing on the importance of symbiosis of human and nature and seeing healthy trees and touching sick trees and give the children an opportunity to think about the feelings, or real existence of trees. With the critical and multifaceted views to the roles of trees in the towns, we also aimed to let them think community building.

<u>Goal of Program:</u> We are to raise the awareness of trees and be more familiar with them by learning the mechanism and functions of trees in our vicinity. We also will let them learn that a forest consists of many trees to recharge water, absorb CO2, emit oxygen and protect us from disaster and get us relaxed. They will soon find that the forest is indispensable for human society. Then they will think what kind of nature we need to make a sustainably developing society, and this will be a trigger to think community building through symbiosis of human and nature.

Photo 1: Go out to the park to find ideas.

Photo 2: Check trees.

Photo 3: Diagnose trees in town.

Flow of Program:

1st-2nd period: See how trees live.

3rd-4th period: Diagnose trees.

5th-6th period: See if we need trees along streets.

7th-8th period: Blessed spring water and finding streams

9th-10th period: How we can use our parks.

Voices of attendees :

- I acted by myself and had many experiences.
- I became brave to speak out my opinion.
- I participated with my own will and showed my interests to the people.

Regarding the curriculum guidance and other details, please refer to the ESD website.



Shinonome Pika-Pika ESD ~Our Own Community Farm~

Leading Model Program: Parks, Expeditions, Discoveries, ...neglected! by who?

Name of Organization: Makuhari Bay Town Eco Park

Regional Programming Members: NPO Ehime 311, Ehime University, Ehime Global Network

Outline of Program: We made a community farm on an unused plot of land in Shinonome Park with people in the vicinity. The second graders of Shinonome Primary School planted sweet potatoes. Through such agricultural activities, they learned how to communicate with local people and the community farm became a learning ground. We planned the program to let them be aware of the importance of the bonds with people through weeding and watering, and importance of natural farming and recyclable society through harvesting, and ultimately the importance of biodiversity through touching plants and flowers and even creatures in the earth. We also aimed to improve the local disaster prevention capacity by using the potatoes during the fire drills.

Goal of Program: We used an unused plot of land in the park as "Park ESD" and make the program aiming to take the activities rooted among the local people. Compared with the other programs for junior high school students, we will discuss the opportunities to study/consider ESD again in the different timeline, and we analyze to introduce a way of ESD evaluation. We encouraged everyone to use Shinonome Park as a "place to experience environmental education" and meet people of different age groups, which will be helpful to make less vulnerable society against disasters. Experience an "agriculture" to produce "food" which is indispensable for us to live on by growing vegetables in the community farm, and this place will be a place to nurture and protect food (life), and community people will get closer.

Photo 1: Harvest potatoes with local people.

Photo 2: Make some cakes with potatoes.

Photo 3:

Flow of Program:

1st period: What can we do to thank people who took care of us in the past activities?

2nd period: Let's harvest sweet potatoes.

3rd period: Let's deliver cakes made from potatoes at the fire drills.

4th period: Let's have a potatoes party.

Voice of Attendee:

Draw pictures of community farm before and after the activities and compared them. Pictures drew after the activities had more people and insects, which may indicate the children were more aware of the bonds of people and nature. They also use more brown colors which may indicate down-to-earth mindsets.

Regarding the curriculum guidance and other details, please refer to the ESD website.



<u>Let's Make Ourselves Doctor Know-All of Mononobe-no Mori Forest!</u> <u>~Be aware of the forest preservation and biodiversity sustainability~</u>

Leading Model Program: "Let's Make a Sustainable Society with All Creatures" (Natural Harmony Social Learning Program)

Name of Organization: Shin Kayama Junior High School, Okazaki, Aichi Prefecture

Regional Programming Members: Mononobe-Gawa Mori-to-Mizu-no Kai for 21st Century, Kami-City Board of Education, Kochi University of Technology, Ehime Global Network

Outline of Program: The children of Kids Eco Club of Kami City got together to learn under the title of "Let's Make Ourselves 'Doctor Know-All' of *Mononobe-no Mori* Forest! ~Be aware of the forest preservation and biodiversity sustainability~. The children learned animal damages which may lead to extinction of forests and destruction of mountain villages, particularly focused on the effects of feeding damages by deer. According to the examples in other countries, we could use them as food materials rather than just capturing them and use such destructive animals to contribute to the local economic activities. At the same time, we learned that our economic activities and life are closely connected to the biodiversity, and learning all these animal connections will broaden our mindsets.

<u>Goal of Program</u>: We will encourage that the mountains and rivers had blessing of variety of all creatures including humans and that makes us understand the importance of preserving ecosystem. We will also nurture the mindset that human beings are also a part of such ecosystem. At the same time, we will be aware of the degrading of the mountains and rivers in our vicinity whose causes are our development and production activities. The more we promote such activities, the more serious the problems by "destructed animals" increase such as deer and boars. We will learn the measures we can take which can be one of the ways for all of us to live together.

Photo 1: What is an ecosystem?

Photo 2: We are mapping the current forest situation.

Photo 3: We are preparing for the presentation.

Flow of Program:

1st period: what is an ecosystem?

2nd-3rd period: Learn current situation of Mononobe Forest.

4th period: Destructive animals and their countermeasures in the world

5th period: Deer as a local resource

6th period: Feeding damages

7th-8th period: Let's make a wall poster from our learnings

9th period: Presentation on ecosystem and feeding damages

Voices of attendees:

• I learned the phrase "forest is a lover of sea, river is a match-maker". When I think the meaning of this, I realized that I have to do and act more seriously.

• I thought things happened beyond the border of Japan, and we have to broaden our mindset to the world. Regarding the curriculum guidance and other details, please refer to the ESD website.