

## Linkage and Collaboration with Local & Global Expertise for Progressing ESD

(Omoso Elementary School, Kesennuma-city, Miyagi Prefecture)



### Outline

Omoso Elementary School researched and developed an international collaborative environmental education program jointly with elementary schools in the U.S. in order to foster perceptual awareness and intelligence for developing sustainable future, linking with local and global institutions such as Miyagi University of Education and United Nation University to draw on expertise from environmental, cultural and educational specialists

### Background

A reform in school education is on-going in Japan. In keeping up with a changing society, the government has recognized the need to train students to be rich in heart and become able to contribute to sustainable society, acquire the basic skills for educating themselves, and cultivate their "zest for living". "The New Course of Study", in effect April 2011, still requires schools to set aside time for integrated studies and promote ESD through subjects and integrated studies at each school level.

On the other hand, under the Master Teacher Program of the Japan Fulbright Memorial Fund (JFMF), Japan-U.S. Educational Commission, and Omoso and American schools engaged in joint environmental projects. In another words, the MTP enabled the collaboration program on Japan (Kesennuma)-U.S. water environments to start.

### Objectives and Goals

This hands-on, experience-based inquiry learning is an eye-opening experience for students who hunger for knowledge and discovery. Through web-based interactions, students develop a mutual understanding about each other's environments.

This in turn develops their understanding of the earth's systems and opens up their eyes to the global world.

### Implementation

This activity was implemented as a school curriculum of Omoso elementary school by linking with local and global institutions such as Miyagi Education University.



# Activities & Feature

## (1) Outline and Support of Grade Level Projects

Our pair project is an all school effort, incorporated at all grade levels. In developing our projects for each level, we carefully consider students' developmental stages and circumstances and targeted abilities and perspectives. We select level-appropriate topics for each grade and develop and implement projects with the help of professional institutions.

Pair Project Omore & Lincoln Elementary School	
Omore elementary School	Lincoln Elementary School
Nature and Festival (1st Grade)	Halloween & Moon Festival of Native American
Vegetables Cultivation (2nd Grade )	School Lunches and Local Food Systems
BUGS Map (3rd Grade )	Muir Woods Soil and Insect Study-BUGS Project
Omore Sanctuary (4th Grade )	Water Study (Cleek Project)
Sea Museum (5th Grade )	Pothole Study & Fast Plants Seed Challenge
Water Front Future City (6th Grade )	Built Environment-Terracetown 2004 (Box City)

## (2) Summary of Our Main Project Design

### 1. BUGS Map Project, 3rd Grade

Students observe and study insects around Omore River such as dragonfly, butterfly and so on. And they are going to share and compare information via the Internet by creating cyber maps based on their research.



### 2. Omore Sanctuary Center Project, 4th Grade

Through gathering, observing, and cultivating Omore River aquatic life, students learned the connections between living things and understood the conditions necessary to preserve an abundant environment. Students created "Miniature Aquarium" and "Sanctuary Center".

### 3. Sea and Lake Museum Project, 5th Grade

Through observing and experiencing shoreline marine life, students learned the connections between living things and the ecosystem. From then on, they compared their observations with Lincoln Elementary School students' observations of a pothole, freshwater life. Also, they considered the connections between human life and the ocean environment and planned to make "Sea Museum".



### 4. Waterfront Future City Project, 6th Grade

Students thought about how Kesennuma's city, forest, river, and ocean can best co-exist with nature and planned a future Kesennuma City. The sixth grade students applied what they learned in previous years and contributed their individual ideas to planning a waterfront city of the future. The students made a diorama of their waterfront future city.

## (3) Children Global Environmental Forum Internet Video Conferencing beyond Boarder and Time

Omore and Lincoln connected via an online video conferencing system. U.S. and Japanese elementary students held an online forum on the global environment to exchange their activities and results of their learning and they are expected to broad their perspectives and share environmental & cultural awareness. Through this communication, students of both sides could not only recognize the differences and similarities between their region and country abroad, but also progress mutual understanding beyond national boundaries.

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# English Activities Centered on International Understanding Education (Shishiori Elementary School)



## Summary of Activities

We are pursuing International Understanding education which strengthens communications skills and intercultural understanding by focusing on implementation of English activities centered on international exchange activities with Miyagi University of Education exchange students, and JFME/MTP international exchange activities with Callisburg Elementary School (Texas, USA) students via ICT.

The English activities strive to develop "children who willingly try to communicate." In order to grow a sense of purpose to "use their skills" by providing "something to talk about" and "someone to talk to", International Understanding education is expanded using various related topics such as English activities, field studies, and environmental education. Discussion topics are linked to Life Environment Studies and Comprehensive Studies.



Mr. Haruo Kumagai  
Principal, Shishiori Elementary School

## Background

Development of intercultural understanding skills and intercultural communication skills are a requirement for ESD. The Central Council for Education has reported that because societal and economic globalization are rapidly growing, the enhancement of foreign language studies in schools, including elementary schools is considered to be one of the largest issues facing us today. As a result, foreign language activities have been newly created in response to updated curriculum guidelines.

In Kesennuma City, there are few opportunities for children to have contact with foreigners in a context of International Understanding. It is necessary to provide opportunities for children to experience direct intercultural contact and know more about their own Japanese culture by way of communicating with people of other countries.

## Objectives

Our educational objective is to "develop children who are deeply humanistic and are able to learn on their own, and can live strongly in an international society". To realize this, we put emphasis on developing familiarity of English as an international language and to develop interpersonal skills by actively building relationships, communicating one's thoughts, and understanding other's feelings with persons of different cultures and backgrounds. It is our goal to develop children who can "live strongly in an international society" by promoting International Understanding Education that is weighted towards experience-based activities.

## Implementation

Shishiori Elementary School implement the program as a school curriculum with receiving support from Miyagi University of Education Research Center for Education in International Understanding, JFME, the Chuden Foundation for Education, and the Language Education Foundation.

## Funding

The school receives funding, instructors and/or exchange students from the Miyagi Prefecture Board of Education, Kesennuma City Board of Education, JFME, Chuden Foundation for Education, Language Education Foundation, and Miyagi University of Education.

## Activities

### 1. English Activities, Human Rights Education and International Understanding

The sixth grade chose "welfare" as a topic, and used "Everyone's hopes, everyone's happiness now" as their study theme. They chose to use their "cap-handly" experiences as a discussion topic with exchange students, and used the phrases learned in English activities to describe their experiences and thoughts to exchange students.

Also, the students used TV conferencing to report their research results about welfare with Callisburg Elementary School children, and discussed their differences and similarities.



TV conference with  
Callisburg Elementary School.

### 2. English Activities, Field Studies and International Understanding Education

The third grade chose "Let's find treasures in the neighborhood" as their study theme for Comprehensive Studies.



The children experienced a traditional local dance called Namiitoramai with exchange students, and learned about festivals in Italy and Australia.



Experiencing Traditional Arts

Afterwards, the children created a large map with the information they discovered during the Comprehensive Study class, and reported their results in English using TV conferencing.

### 3. English Activities, Environmental Education and International Understanding

The fifth grade chose the environment as their study theme. They studied about the environment of the nearby Shishiori River during the first semester.

The children sampled the water quality together with Australian exchange students, and discussed differences and similarities in environmental actions between Australia and Japan. In the second semester, they expanded their studies to issues on a global scale. In their direct activities with exchange students, the children summarized their studies concerning Environmental Education by reporting on ecology efforts such as using eco-bags and furoshiki wrapping cloths. During the TV conference, they compared opinions about environmental efforts in China and Indonesia, and broadened their studies.

### 4. English Activities, Life Environment Studies and International Understanding

Life Environment studies mainly uses English Activities linked with cultivation activities. The children became familiar with English phrases while cultivating and cooking sweet potatoes.

In addition, they cultivated plants and flowers at the same time as Callisburg Elementary School, and compared the growth. A video letter containing questions (type, color, and numbers of flowers) from Callisburg Elementary School children was the impetus for English Activities and Cultivation Activities.

## Student Comments on Exchange Activities

Below, we introduce student comments about Miyagi University of Education exchange students and JFMF/MTP direct exchange activities and indirect exchange activities via TV conferencing. (The comments are translated from the original student comments. Underlines were added)

#### 1. Direct Exchange Activities with Exchange Students

I learned what kinds of foods are eaten by people from other countries when we learned about festivals. Some of the foods were fantastic, and not found in Japan. I would like to (try eating that food). I was surprised to learn that in Italy, offerings to god are sometimes candies or sweets. When we were making decorations for the fall festival, I gave a fallen leaf to a Chinese exchange student. I felt (happy to not be absent and come to school today). (2nd grader)

#### 2. Indirect Exchange Activities with Exchange Students Using TV Conferencing

In the TV conference, I learned about environmental efforts in foreign countries and in Japan. Concerning environmental efforts in foreign countries, I was surprised to learn that shopping bags in China are not free. In my local stores, shopping bags are usually provided free of charge. If shopping bags were made chargeable, more people would bring their own bags and the country would become more ecology-minded. On the other hand, I felt that furoshiki wrapping cloth usage is a good ecological effort in Japan. In presenting our results about furoshiki, I learned things about furoshiki that I did not know about, even though I am Japanese. I learned that furoshiki are very good to the environment because they can be reused many times. Many good environmental efforts are being made in foreign countries, but Japan has good things that foreign people can learn from too. In the TV conference, I was happy to be able to communicate Japan's environmental efforts to Fevi and everyone else. (5th grader)

#### 3. Indirect Exchange with Callisburg Elementary School Using MTP

I was surprised at the time difference between America and Japan when we had the TV conference with Callisburg Elementary School. (3rd grader)

I would like to meet with my friends at Callisburg. I would like to play with them. I would like to count numbers in English with them. (1st grader)

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## The World, as Viewed from Shopping

-Examples Linking Social Study, National Language Study, and the Integrated Study-  
(3<sup>rd</sup> Year of Shinonome Elementary School, Koto-ku, Tokyo)



### Outline

There is a unit in Social Studies for third graders at this elementary school called “People’s Work and Our Lives.”

In it the pupils learn that our lives depend on the work of people employed in the stores, shops and supermarkets.

At this school, we have been using ingenuity in the content of study to broaden our pupils’ outlook from familiar study to the world by linking “what are called classifications” and “how to do interviews” in Japanese classes and the Period of Integrated Study. We also organized a unit called “the World, as Viewed from Shopping.”

Requesting the cooperation of local supermarkets, Shinonome Elementary School has been carrying out learning activities inside the stores from four years ago. Moreover, from three years ago, with cooperation received from NGOs, it has been inviting as guest teachers, for example, farmers and people visiting Japan from the Solomon Islands. This school has been advancing abundant learning through experiential activities and human contacts.



Before having a study visit, students collect their questions and views.

### From the Consumers Standpoint to the Salesperson’s Standpoint

The youngsters make studies of their own household’s purchases. They do studies based on looking up the distribution of goods/the origin of products in stores where they shop and asking their family members what things they take care about when shopping. Learning is advanced by their listening to each other’s reports on what their respective family members are careful about when making purchases.

Next, they learn through observations and interviews about what ingenuity is devised by store employees and managers and their thoughts about work and the links with the thoughts of the people on the purchasing side. This form of learning gets the youngsters to understand the supermarkets where their purchases are concentrated, while having stores provide

an internal venue for learning.

The schoolchildren get very engrossed in what they are undertaking at the site of such experiential learning. This deepens their awareness of various things such as product assortment, ingenuity in displaying items in an easy-to-understand way, ingenuity in displays matching the seasons or events, as well as considerations about the environment so as to cut down on unsold items and not to throw away food.

Furthermore, we think that through these venues where the children actually come into contact and communicate with people, they will come to forge the human qualities necessary

for living in the future society of multi-cultural coexistence.

Before taking observational trips to supermarkets, the youngsters produce questions together and what they mutually want to investigate. By using cards to organize their queries, the perspective of the observational trip will become much clearer.

Having the children make observational trips with a clear awareness of issues is connected to fulfilling learning.



A farmer from Izuna-machi, Kamiminouchi-gun, Nagano Prefecture

## Providing Encounters with Producers

Seizing on the rice lined up in the store of diverse brands, prices and production regions, or else on the smiles of the producers printed on notes, the children expand their thoughts to the farmers who do the producing.

Our school has advanced learning involving direct contacts by inviting farmers from Nagano Prefecture to our campus.

From them, our pupils heard:

- “We work with living creatures, so it is hard to take a vacation.”
- “Producing something safe and delicious is time-consuming and very rough, but we are trying hard without using herbicides.”
- “We have wholeheartedly produced this food, so please eat all of it, with leaving nothing behind.”

After directly hearing the voices of the farmers, the youngsters’ dietary habits changed considerably. From the very next day, the amount of leftovers decreased. Moreover, the children, who tended to be fussy eaters, came to eat everything without producing leftovers.



Listening to how the forests and lifestyles of the Solomon Islands are getting destroyed by the wasteful use of trees and paper

## Turning Their Eyes to Producers Overseas

The children were able to come in contact with and hear about things from people from the Solomon Islands, whose forests, which form the very foundation of their lives, are coming to be lost through exports of lumber. This project, too, was realized with NGO cooperation.

Feeling some admiration and yearning for the islanders, who live surrounded by abundant nature, and saddened by the current situation in which nature is coming to be lost, the children discussed what can possibly be done to help. They, moreover, talked about wanting to know more about fair trade

## ESD Learning Is Born from Study That Goes Beyond Subjects/Spheres

To advance children’s learning superseding subjects and spheres while also linking the content of related studies is most important in promoting integrated studies.

This time the content of study from several subjects was linked and incorporated into the large unit known as the 42 hour-composition as a whole.

To third graders, it was also a difficult content. However, since it was promoted with great consideration for the consciousness of the schoolchildren themselves as well as for recognition of problems, each youngster was able to get fully absorbed in advancing such undertakings.

By promoting such learning, the Japanese, Social Studies and Period of Integrated Studies classes, which are normally carried out, have been connected with the standpoints of environmental and consumer education and have developed even into means of sustainable living (consumer lifestyles).

Henceforth, we hope to create ESD (Education for Sustainable Development) out of ingenuity devised for normal classes.

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# Introducing ESD Learning Through the Study of Water and Waste (Grade 4, Koto Shinonome Elementary School)



ESD activities for fourth-grade students in Shinonome Elementary School

## Outline of activities

In the first semester of fourth grade in Social Studies, we have units of “Life and waste disposal” and “Water and our daily life”, while “Writing skills: Clarify what I want to inform” in Japanese. We link them together as a catalyst for the “Kids ISO1400 Program” in Integrate study. In this context, we are planning to hold “Shinonome ESD Festival”, in which student present outcome of their study. The relation between each subject and field towards ESP activities is shown in the ESD calendar below. We focus on topic of “Waste disposal project” in this year. Students discuss and practice how we can reduce waste reconsidering our daily life. For example, we invited a JICA member to give a lecture on water and life in Niger under the theme of “Our Water, Earth’s Water” in Integrated study so that students took interest in environmental issues. We try to select topics and points to be stressed based on the conditions of students’ learning progress.



Keiko Shimada (teacher)  
Hitomi Matsushima (head of year)

## Question-solving approach

It is important for students to have questions when they take classes. Knowing facts, analyzing questions, close relationship with other people, experiential learning etc would help student to think by themselves and solve questions.



Principal  
TESIMA Toshio

## Structuring of Learning

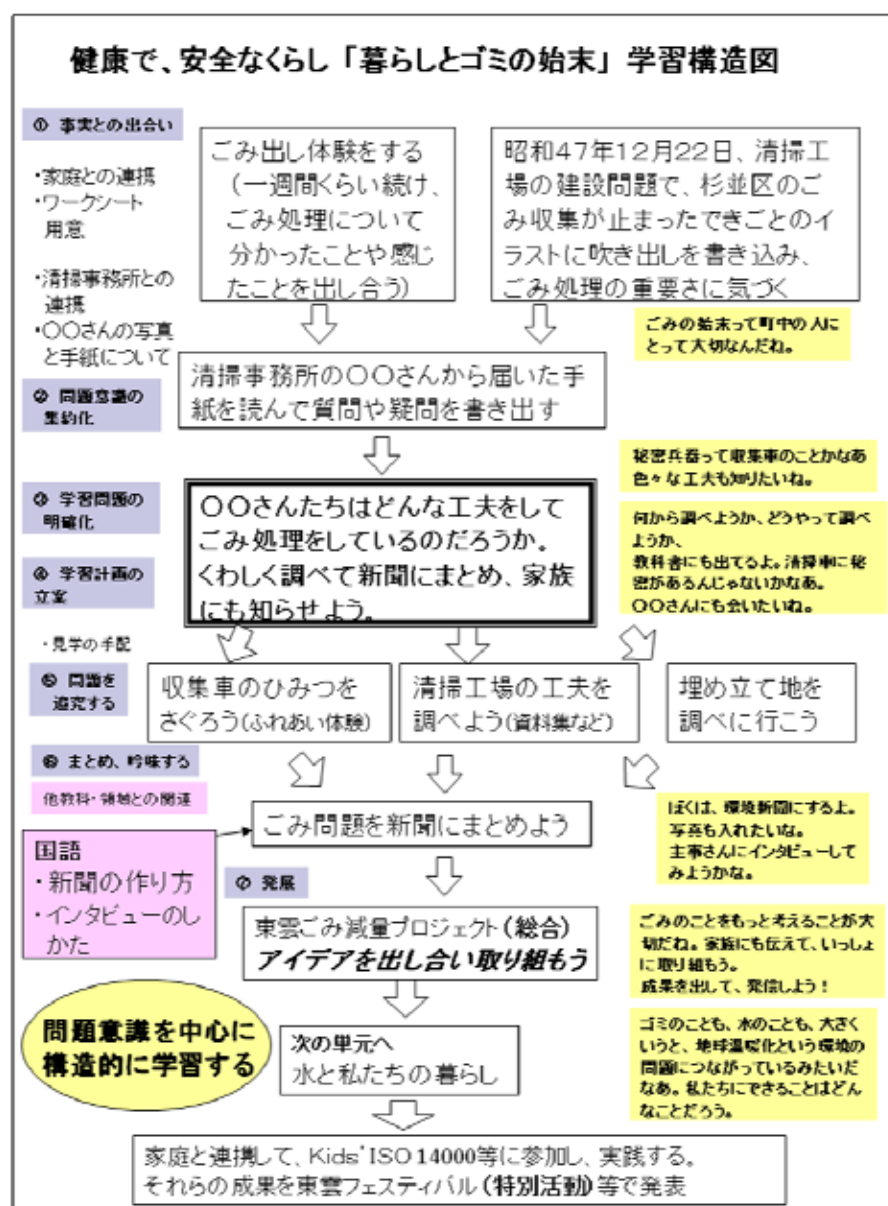
Shinonome elementary school structuralizes learning process as shown in the illustration so that students can do question-solving approach. It makes the meaning of each activity clear among the overall learning process. As further activities, we participated in the UNESCO School Symposium and visited the headquarters of Nippon Express. We learned its effort of reducing waste in relocation and understand corporations’ attention to environmental issues.

An ESD educational program													The SHINONOME Educational Plan												Fourth grader use											
A subject and a learning domain	April	May	June	July	August	September	October	November	December	January	February	March																								
National language	Power of expression Make it clear that you want to tell.			You should use with an up image, and the sloppy image well.			Convey what you examined well.																													
Arithmetic																																				
Society	A living and garbage			A living and water																																
Science	Creatures of the spring			Creatures of the summer			Autumn creatures			Creatures of the winter																										
Synthesis	Our water ... and the earth			Kids ISO 1400 A saving of the energy			Learning from a World heritage																													
Extracurricular activities	Local cleaning day			Local cleaning day			Shinonome Festival Whole school interchanging																													
Morality	Clean a park.			The foreign student who came from Cambodia			Do not call me a foreigner.			Right treatries for children (Human rights)																										
Music	Music with the oldness																																			
Arts and crafts							The exhibitions such as pictures			The picture of the foreign friend																										
Physical education										Your body which grows up																										



Discover the secrets of waste collection through personal interaction

Learn about corporate efforts for waste reduction through visits





# “ Nanohana(Rape flower) -Eco-Project ”

## ( Nishiyodogawa High School )

### Summary

We cultivate rape flowers and products BDF (Bio Diesel Fuel), in order to increase the understanding of the environment problems. Throughout this action, we have made good relationships with many people.

### Background and Problem of This area

Nishiyodogawa Ward in city of Osaka is one of the central districts of the “Hanshin Industrial Area”. There are many factories and many highways with heavy traffic such as National Highway Route 43 and Hanshin Expressway. With these factors, residents have suffered from serious air pollution.

We think that it is important to remember the history of the pollution problems, and to think our own town to become better.

### Purpose

- (1) By cultivating rape flowers, our school will connect with many people.
- (2) By learning the history of pollution problems and the present condition of the world, we let students to think any effective action to make the better world.
- (3) Through exchange with local residents and organizations, students will be able to learn from each other.

### Implementation

A main plan has been made by teachers and students of Nishiyodogawa Senior High School; "The Environmental Learning Project Team" by teachers, a club activity "Eco-Communication Club", and the teacher who is teaching subject "Environment"

### Fund

In the beginning the expense (such as the purchase of the BDF refiner and the purchase of the manure) was performed by the backed up by the school support plan of the Board of Education of the Osaka Prefecture. Administration fund is now served by the normal budget for school.

### Activity

#### (1) The cultivation of the rape

From August, 2007, teachers who is working for "The Environmental Learning Project Team" in Nishiyodogawa Senior High School, students of Osaka University of Economics, staffs of “Aozora Foundation”, and students of several Junior High Schools in Osaka performed the cultivation work of the field, the making of furrow, and seeding. We invited local inhabitants at the time of the full bloom and held flower viewing party. We harvested it by a class of "The environment" and the member of "Eco-Communication Club" in our school and worked.



#### (2) The refinement of BDF

When certain amount of waste oil was collected, we have worked on training to produce BDF with the member of "Eco-Communication Club".



【Cultivation】

#### (3) Interchange / Appeal

With members of "Eco-Communication Club" and teachers and students of Osaka University of Economics, the collaboration has been performed.

In August, 2008, Nishiyodogawa Senior High School students reported the action of our school in "The national rape society".

At the same time, we studied together about "Nanohana-Eco Project" and the other environmental problems, with several Osaka-city Junior High School students and the members of "Eco-Communication Club".

In August, 2008, we held lecture about environment to children by the member of "Eco Communication club" in Osaka-city environment learning center.

In September, we appealed to the introduction of "Nanohana-Eco Project" by the members of "Eco-Communication Club" at "Nishiyodogawa Ward Festival" in Osaka.

In October, we held lecture about environment for children by the members of "Eco-Communication Club" in Nishiyodogawa Library in Osaka.

#### (4) A subject "the environment"

We set up "The environment" as a required subject to seniors in our school. This subject is constituted by the class in the viewpoint that was tied to one self's life, from a local environmental problem to wide themes such as global environment problems, poverties, and food / water problems. In this content we let students to think about the lifestyle they prefer and kind of society they want to live.



【 Nishiyodogawa Ward Festival 】

### Features- On the People Involved and the Social Change

People who cooperate with us are as follows:

- ( 1 ) Osaka University of Economics "Eco-Machi-Network" student executive committee
- ( 2 ) NPO "Aozora Foundation"
- ( 3 ) Osaka City Environment Learning Center
- ( 4 ) Junior High Schools in Osaka
- ( 5 ) The local volunteer
- ( 6 ) Matsubara Senior High School (Osaka Prefecture)
- ( 7 ) Town of Aito (Shiga Prefecture)

Throughout this activity, we have been making good relationship with others, and connections between various types people and organizations were made with students of our school. In addition, there were many scenes which they learned from each other, and not only our school students but also each other was encouraged.



【 Nishiyodogawa-library, Osaka-city 】

Besides, activities by the student were understood by local residents little by little, and "Nanohana-Eco Project" is spreading out as one of solution for the local environmental problem. Building networks of the waste oil collection is also spreading out.

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# ESD by UNESCO club activity (Hiroshima University High School)



## Summary

Hiroshima University High School established UNESCO club in 1975, and has been carrying out activities in co-operation with Hiroshima UNESCO Association and National Federation of UNESCO Associations in Japan. We held the Conference three times as an organizer and also made presentations about our various activities. Recently we established a UNESCO committee as a part of the student council so that UNESCO activity can be expanded among students and teachers. Our school, designated a Super Science High school, has been working on Integrated Studies with the aim of teaching ESD collaborating with various subjects. We also organize an open day, workshop, and a symposium on ESD at school every November.



Takanori Fijiwara in charge of UNESCO club

## Background

Hiroshima University High School was nominated ASPnet (the present UNESCO SCHOOL) in 1953 and has been working on UNESCO activities for nearly half a century. From 1950 to '60, we practiced the teaching based on ASPnet plan, and we reported the result to the UNESCO Head Quarter in Paris. Since 1970, we have put the stress on special activity. After the incorporatization of the University, our school stipulated in the mid-term plan that we will practice ASPnet as a model and advance school based on a special curriculum. In 2005 the principle of "Decade of ESD" was launched. Since then, our school has been encouraging UNESCO club and putting ESD as the core activity of SSH(Super Science High School).



A campaign to raise funds with Hiroshima UNESCO

## Aims

The aims of UNESCO Club activities are as follows; by understanding the Charter of UNESCO, and by actively studying and researching about International understanding and International cooperation, we make an effort to elevate our own peaceful mind.

In 2007 our school became a SSH and we decided our target was to make a curriculum to train the scientists and researchers who can study and create sustainable developments. We practice ESD, combining ASPnet with SSH.

We set up the aims to practice ESD in everyday education.

- By cultivating a sense of human rights and encouraging International cooperation, we will educate people who will make an effort to solve several global problems such as those of the environment, the north-south, and world peace.
- We will educate people who live together with nature and create a new peaceful culture without inequalities of generation or among generations.



Selling crafts from Bangladesh at the school festival



# Activities

The recent activities are shown as below:

1. We collected student's running shoes which became disused the students didn't use and sent them to Africa.
2. We sold crafts from Bangladesh at the school festival and showed the present situation in the country.
3. We also sold fair-trade goods at the school festival and introduced the system of fair-trade.
4. We collected a lot of used stamps, cards, and postcards and had them changed into money to help the education and medicine of developing countries.
5. We had a campaign to raise funds to support the victims of the Chinese Earthquake and the Myanmar Cyclone.
6. We took part in the Ring the Peace Bell event on August 15 and made a speech.
7. We joined the seminar organized by ASIA CULTURAL CENTRE for UNESCO and exchanged ideas with the Indonesian students. Making a speech on August 15
8. We joined the seminar organized by National Federation of UNESCO Associations in Japan and learned about ESD.
9. We measured the amount of CO<sub>2</sub> which was emitted from our school in a year and made a proposal of what we can do to keep the Kyoto Protocol.



The collaborated lessons of ESD were held in the seminar of our school as follows:

1. In junior high school, social studies and home economics joined together: the title is "To Think the Sustainable Life Style".
2. In senior high school, chemistry and contemporary society collaborated: the title is "Chemistry to Think Sustainable Development".

At the seminar by Asia Cultural CENTRE

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