Learning about Natural Disasters - Games and projects for you and your friends

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Learning about Natural Disasters - Games and projects for you and your friends

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Message to teachers

This booklet encourages children to help protect their community from natural hazards. It features a range of community activities based on ideas used by children in many countries. This booklet has been launched for the 1995 International Day for Natural Disaster Reduction.

Earthquakes, floods, severe storms and other extreme natural events have always been a part of nature and history. Recently, however, more people have become vulnerable to disasters than before, for reasons of rapid population growth, increasing environmental degradation and poverty. As a result, disasters kill one million people and leave millions more homeless each decade. Economic losses from natural disasters have tripled in the last thirty years.

Sustained community action can help reverse these patterns, and children have two essential roles in this process. First, through school activities that involve their community, children can raise public awareness about risks and motivate others to take protective measures. Children are also the key to instilling a "culture of prevention'' in our societies, for a safer world in the 21st century. They can learn at an early age to respect our environment and understand development consequences, building habits that last a lifetime.

The booklet is designed to be used by schools around the world, to complement existing materials about natural disasters in each country. Targeted for ages 8-12, some parts can be tailored to both younger and older children. Learning about natural disasters can be included in studies about:

- your community;
- other communities or countries;
- the ways people view disasters - through religion, folk tales and art;
- the ways people interact with their environment.

You may also wish to invite professionals in your community to visit your class, such as the fire chief, the mayor, a meteorologist, a journalist...

We hope your class enjoys these activities. Please write to the IDNDR secretariat about how you have used them, so that your activities can be shared with other interested people around the world. Reproduction in part or in whole for non-commercial purposes is encouraged; please credit the International Decade for Natural Disaster Reduction secretariat; send information about publications, conferences or media where the booklet is a reference. If you are interested in producing a local language version or sponsoring reprints, please contact IDNDR.

Learning about disasters

Nature is a source of life

Nature around us is a source of life. The sun makes flowers and trees grow. Soil

along a river, or at the base of volcanoes, is fertile and good for crops. But too much sun or rain is bad for plants, and floods or volcano eruptions can destroy whole towns.

Earthquakes, floods, fires, volcanic eruptions, tropical storms, landslides, drought and pest attacks are part of nature, like sun and rain. These events affect almost every part of the earth. Long ago, people only had folk tales to explain these events. Today, science and history help us understand more about them. But we still have natural disasters.

What is a natural disaster?

A natural disaster occurs when three things happen at the came time

An extreme natural event occurs...
at a place where many people live...
and people are surprised by the event, because its effects are sudden or big.

Extreme natural events may cause disasters. But some events that seem "natural" are caused by people. Too much or too little rain may cause floods or drought. But floods and drought can also happen because we don't take proper care of the earth. If too many people take too much water, or cut trees faster than nature can replace them, the soil becomes poor and hard, and won't absorb water properly.

If we destroy parts of nature like coral reefs, forests or fragile mountain plants, we take away natural barriers that protect us from tsunamis, drought, landslides or other events.

Don't be scared, be prepared.

As you can see, nature affects people, and people affect nature. This means that safety is not just luck. You can reduce the effects of: disasters, if you are **aware**, you **share** and you **prepare**.

Be aware - Know your area's history. Ask your family and friends if they experienced disasters. Learn about weather patterns, movements within the earth, and how we affect the environment.

Share - Use drawings, school events, even newspapers, radio or tv to tell your community what you learn.

Prepare - Find out what warning announcements mean. Find safe places to go. Do drills. Make a survival kit...

Some major disasters of the 90s

Disasters can happen almost anywhere. Below are a few examples of very big disasters of the 1990s. By copying the disaster symbols on these pages, can you draw on the map where these disasters happened? Can you draw which big disasters happened in your country?

Map

What is a...

Flood Too much water in the wrong place
1995, 1993 Netherlands, France, Germany, Belgium
1994, 1991 China 1993 Cambodia, Viet Nam

1993 Central USA

Drought Much less water than people or crops need
1992-93 Southern Africa
1992 Peru

Landslide Rocks and soil sliding rapidly downhill
1993 Ecuador

Earthquake Sudden violent shaking of the earth
1995 Kobe, Japan
1994 Los Angeles, USA
1993 Cairo, Egypt
1992 Erinzcan, Turkey

Volcanic Eruption Burst of rock, ash, gases and/or flowing lava from deep inside the earth
1994 Rabaul, Papua New Guinea
1991 Mt. Pinatubo, Philippines

Tropical cyclone Heavy rain and strong winds over sea and coasts. They are also called hurricanes, cyclones and typhoons.
1994 Typhoon Fred: China, Taiwan
1993 Cyclone Kina: Fiji
1992 Hurricane Andrew: Caribbean States, USA
1991 Chittagong, Bangladesh

Tornado Strong, funnel-shaped windstorm, spinning over land in a narrow path
1994 Midwestern USA

Tsunami Series of big sea waves that crash onto coasts
1992 Flores Island, Indonesia
1992 Western Nicaragua

Wildfire A big fire which spreads over large areas and is out of control.
1994 New South Wales, Australia
1993 Mongolia

Pest Attacks Large numbers of insects or animals that destroy crops
1990-1994 Tanzania
1993 India, Pakistan, Afghanistan
1992 Ethiopia

Drawing a map of your community

Spotting Danger and Taking Action!

How can you keep yourself, your things, your family and friends safe in case of disaster? You can help your community **be aware and prepare** by making a "Community Risk and Resource Map".

The Community Map is not the same as an official printed map of your area. The Community Map is a big drawing that you and your friends make to show what ***risks*** exist in your community, and what ***resources*** you can use to protect yourselves. In other words, your Community Map helps you spot danger and take action before a disaster happens.

Spotting danger and taking early action is important. If a disaster strikes, you and your community need to know what to do. Help may not reach you for hours, or even days. Here's how you can make a Community Map.

Grandma, do you remember

First, gather information about disasters in your area. Ask your grandparents, parents, other relatives or older friends to tell you about the biggest disasters they or their parents remember. Here's what you can ask:

> Do you remember disasters that happened in this area? What happened? When?
>
> What did people do?
>
> What should be done if the same kind of disaster happened today? Who in the community can help?

Write down your answers, and discuss them in class. Your class should list common points so that everyone can see them. By the end of the discussion, you should have a list of dangers and what you can do about them.

Draw Risk and Resource Symbols

With your class, invent symbols for the dangers resources you listed. See the maps for examples.

By children of Giugliano Elementary School, Grade 4, Naples, Italy (Restyled by the European University Centre for Cultural Heritage, Ravello, Italy

Resource symbols and part of a local risk map, San Salvador, El Salvador (Ministry of Public Health, El Salvador; Prodere; DGCS Italy; WHO/PAHO)

By elementary school children of Ten Cent Creek Community, El Salvador (R. Martinis/S. Pintus, Prodere/Edinfodoc)

Collective risks

- Garbage
- Rats
- Dangerous crossroads cars speed too much
- Unsafe buildings

Individual risks

- These houses lack water
- She is pregnant
- Here is an old person to help
- Here is a handicapped person

Hunt for Hazards and Find Ways to Avoid Them

Remembering the stories you just heard, visit possible areas at risk. Talk to people who live or work there about hazards and what to do about them. Draw a detailed map of each area, using your symbols to show risks and resources.

Put all the maps together on one big community map.

Take Action!

Share with your classmates and teacher what people in the neighbourhood told you during your visit. What steps could your community take for people to be safe? Who in the community can help you?

Now, take action! Ask your teacher to invite people from the community the mayor, firemen, police, journalists, doctors, the weatherperson, social workers - and discuss the things you have seen and your ideas of what could be done.

Enter The Community Map Contest

Deadline: 31 March 1996

Send your community risk and resource map to the United Nations International Decade for Natural Disaster Reduction. Each student from the winning classes will receive a t-shirt from IDNDR or from UNICEF. Winning maps will be published in Stop Disasters magazine, which is printed in six languages and is sent all over the world.

Remember, a good map is easy to read, and its symbols are clear. It will clearly mark risk areas and community resources. Along with the map, you may also wish to send written stories or photos of how you or your community used it.

On the back of your map, please include:
Name and address of your school
Grade level and ages of students
Your teacher's name

The Community Map section is adapted from materials developed by the World Health Organization; the Pan American Health Organization; the Italian Ministry of Foreign Affairs; General Directorate for Development Cooperation; the WHO/DGCS Collaborating Centre for Emergencies.

Save Natalie! The preparedness game

The game on the next two pages is about how to protect yourself from natural disasters. If you look at the middle square on the game board, you will find a 10-year old girl called Natalie sitting under a table. What is she doing? Why is she under the table? Play the game and you will find the answer to this question!

RULES OF THE GAME

Number of players		2 or more
Things you need		the game board
		2 dice
		a different marker for each player
		1 stack of 10 supply cards. (You can make more cards if you have many players.)
		1 stack of 6 task cards (cut out from page 11)
How to play		Each player starts with a marker in square number 1. Follow the spiral in a clockwise direction by moving the number of squares shown on the dice. The youngest player starts. The first player to reach the center, and save Natalie, with the exact number shown on the dice is the winner. if the number on the dice does not put you directly in the winning square, move backwards the number your dice show.
Helpful		Squares with Natalie: You can take a supply card or roll again. If

Squares		there are no more supply cards left, roll again.
Trouble Squares		Squares with lightning: Go back to the beginning and start over.
Black Square		Square in black: Stay two turns or give the supply store a flashlight and batteries supply card.
Broken Window		Squares with a broken window: Stay two turns or give the supply store a shoe supply card.
Disaster Squares		Squares with multiple natural disasters: Take a task card. Follow the instructions, then put the card on the bottom of the deck.
		Squares with a single natural disaster: Wait one turn or give two supply cards.

Board

Supply Cards

Task Cards **What supplies do you need in case of a disaster?** *(Clean water, food, flashlight and fresh batteries, first aid kit, shoes, dry clothes, blanket.)* **If you guessed five of the items, roll again, otherwise wait one turn.** **You are outside in a storm and cannot find shelter. Sit on your heels, cover your head and stay still for 1 turn.** **Earthquake! You wake up in the morning and feel the room shaking. Go to square 11.** **The river is flooding the basement of your house is already filled with flood water! Go to square 19.** **You have heard an earthquake warning. Plan together with your family where to meet if you get separated during the earthquake. Wait 1 turn and go to square 34.** **You have a flashlight, but forgot to check the batteries. Use a flashlight supply card to get fresh batteries or go back to square 3.**

UNICEF United Nations Children's Fund

This section was prepared and sponsored by UNICEF as a contribution to IDNDR Day 1995.

Communicating through art

Through contests and public exhibits, children around the world use drawings to say what they think about disasters. Here are examples of how children are communicating through art, and some ideas for you and your friends.

1. Draw a Recent Disaster

These two drawings show how people in the Philippines acted in disasters in the 1990s. What do these pictures tell you?

For you and your classmates

Have you experienced a disaster recently? Draw what happened, and discuss with your classmates.

Katherine Mae H. Palles, Age 12, P. Burgos Elementary School, Metro Manila, Philippines

Richmond Nitro, Age 10, Mabini Elementary School, Manila, Philippines

Shown at the World Conference on Natural Disaster Reduction, a 1994 United Nations conference in Yokohama, Japan.

2. Draw a Disaster That Could Happen to Your Community

In April 1994, government officials of Petropavlosky (a city in eastern Russia) announced that Koryacksky Volcano, 25 km away, was about to erupt. Below are some paintings drawn by children from Petropavlosky, 10 days after the announcement.

For you and your classmates

Think of the maps you used earlier in this booklet. What kind of disaster may strike your area? Draw what might happen if you are not prepared.

Disobedient Volcano Koryackscky - Svetlana Chekutova, 13 years old

Beautifully and Unmercifully - Anna Kazantseva, 13 years old

Fiery River - Karina Pack, 10 years old

Angry Volcano - Katya Grechanyuck, 13 years old. Children's Art School Number 1, Petropavlosky, Russia.

Shown at the World Conference on Natural Disaster Reduction, Yokohama, Japan, 1994.

3. Draw How to Be Safe

In Australia in 1992, children drew pictures about how to keep themselves safe in case of fire. The pictures were part of a contest for the International Day for Natural Disaster Reduction, called for by the United Nations. Each year, on the second Wednesday of October, many schools hold art contests to raise public awareness about disasters.

For you and your classmates

Look at the drawing you made of a disaster that could happen in your area. Now draw a picture of what you could do to keep your house, yourself and your family safe from the disaster.

Other Ways You Can Talk About Disasters Through Art

1. Draw a legend showing a disaster. How did the disaster happen, and what did people do about it? What would you do? Tell your class.

2. Draw a mural - one big drawing done by you and your friends. Discuss beforehand what should be in it. Then make sure it is in a place where many people can see it!

3. Make a picture book with your classmates about a recent disaster. Show what people did before, during and after the disaster.

Ask your teacher to show your pictures in a library, market, shop window, town square - or any place where your parents, friends and neighbours can see and talk about them.

Above left to right: Candice Davidson, 12 years old; Ben Ewing, 9 years old.
Burnside Primary School, Adelaide, South Australia

Raising awareness in your community

Be a Reporter!

One way you can tell your community about natural disasters is by being a reporter for community events. You can do reports or interviews for radio, tv, newspapers, magazines, books or even report "live" at a community event.

Good reporting is about telling a story. For example, you can tell how your class made a community risk and resource map, places you visited, people you interviewed, what you learned, and if people then took action.

Contact journalists or event organizers as soon as you start to plan your reporting project, so they can include your results and give you ideas on how to get started.

Remember that the success of a reporting project depends very much on your *timing*. Plan with your teacher to do reporting for the anniversary of a major disaster, for the UN International Day for Natural Disaster Reduction (second Wednesday of October each year), or for a special day, week or month dedicated to protection against natural disasters in your country.

Use Books, Magazines or Newspapers

One way of reporting is to write about a local event. For example, the city of Yokohama, Japan invited 11 and 12 year olds in the city to attend part of a United Nations conference about reducing the effects of natural disasters. The mayor included their impressions in the official book that the city published about the conference. Here is an excerpt:

A United World

"I learned that damage from natural disasters is increasing, and I found it very strange - because I thought that through scientific progress, humans had actually reduced the damages from disasters... According to explanations I heard at the conference, people cut forests and the water cannot be kept in the ground Then we have more and more floods and landslides...

World Conference on Natural Disaster Reduction

But in order to live more happily, this conference discussed what can tee done end what we should do to make happier lives for people all over the world."

Yuki Hiraga, 12 years old
Yokohama, Japan, 1994

Using Radio

Radio is a good way to reach many people. Why not try...

... Songs. In Ecuador in 1993, children recently recorded a song about preparing for earthquakes and it was played on the radio. The song, based on salsa melodies and traditional Andean music, was also performed at community outdoor events.

...Talk Shows. For example, during the monthly children's programme on Radio Slovenia, "Dobro jutro" (Good Morning), children discussed questions such as:

> What would you do if you were alone at home and the floor started to shake?
>
> What would you do if someone dropped a burning match on the floors
>
> There has been a disaster and you have to go to a shelter. What kind of food do you take with you?

...Quiz Contests. In the British Virgin Islands, the radio station had a quiz contest each day for two weeks to celebrate IDNDR Day in October 1995. Children telephoned the radio station with their answers. Prizes included sleeping bags, radios, lanterns and first aid kits.

Cuando Terremotea

Adapted from materials provided by the Administration for Civil Protection and Disaster Relief, Republic of Slovenia; Office of Disaster Preparedness, British Virgin Islands; Children's Television Workshop (CTW), USA. The CTW activities were part of its first international earthquake safety program, conducted through the Ministries of Education and Civil Defense of Ecuador, and which included radio programmes, radio and tv spots, a soccer ball with safety messages, a cassette with stories, and a colouring book.

Reporting to your community

Putting It All Together

To celebrate the time dedicated to protection against natural disasters, communities hold many events at once. Children may participate in public art contests, drills and exercises, parades, make community risk and resource maps, hold performances, and report in local newspapers or on tv - all in the same week or month.

For example, in Iran children exhibited drawings, held performances and played in a Shaking House as part of an "Earthquakes and Preparedness" campaign in November 1994. The Shaking House was a wooden log cabin on strong springs that children played in so that they would learn to react quickly and properly in an earthquake.

The Shaking House

People there said that while they knew some safety measures, there were many more they didn't know. They also said they learned that earthquakes are part of nature like wind and rain. When it rains, people use umbrellas and coats to protect themselves. By learning safety measures and strengthening buildings, they can protect themselves during earthquakes too.

This is another example of how children can help their community **be aware and prepare**. Or, as they say in Australia, **"Don't be scared, be prepared!"**

Activities and photos by the International Institute of Earthquake Engineering

and Seismology, Iran, with UNICEF and UNESCO, as part of the International Decade for Natural Disaster Reduction.

Make new friends in far-away places

Does your class have projects, drawings or stories about natural disasters you would like to share with another class in a different country? Send your contribution to staff working for the United Nations International Decade for Natural Disaster Reduction. They will pass it to a class in another country. They will also send a contribution from another class to you.

Image

Special thanks to the city of Yokohama, Japan, which sponsored this booklet. from the proceeds of the charity concert of the World Conference on Natural Disaster Reduction, held in Yokohama in May 1994.

Sources

General information is found at the end of each section in the booklet. Additional materials included:

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Hazard-Wise: Classroom Resources for Teachers on Natural Hazards and Disasters, Emergency Management Australia, 1995.

For full list of sources and contacts, please write to the IDNDR secretariat.

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The governments of the United Kingdom and Italy also contributed to this project.

The United Nations launched the International Decade for Natural Disaster Reduction to inform people about what they can do and how they can prepare to make themselves safer from disasters.

How to prevent disasters or reduce their impact is one subject that even quite young students may find easy to understand and follow.

"Learning About Natural Disasters: Games and Projects for You and Your Friends" contains maps, games and projects for children between 8 and 12 years old. Many of the ideas in this booklet are taken from projects done by children around the world. The booklet is designed to help young students:

appreciate natural forces in the environment, and how to protect things important to them;

consider the contributions they can make in their community by participating in disaster prevention and preparedness activities;

exchange ideas with other children around the world, in order to enhance their own safety and that of their community.

If you would like more information about IDNDR and disaster reduction programmes in your area, or wish additional copies of this booklet, contact:

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