



Our Responsibilities Toward Future Generations

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Major concept	Environment preservation should be considered an indelible part of development.
Duration	2-3 class periods
Time of year	Any
Place	Classroom
Materials	Posters, the Green Pack video cassette, CD-ROM
Subjects	Geography, biology, ecology, sustainable development
Aims	<ul style="list-style-type: none"> • To discuss specific cases of sustainable development • To raise student awareness of the basic principles of sustainable development • To reflect on the challenges confronting the environment and developments on Earth in the years to come
Methods	Lecture, discussion, video presentation

Introduction

The United Nations Conference on Environment and Development, held in Rio de Janeiro in June 1992, was a remarkable event. The heads of 179 states and representatives of numerous countries, international organisations and non-governmental organisations were in attendance. This conference demonstrated that humanity could no longer treat the environment separately from economic development. The conference led to the acceptance of a world action plan called Agenda 21, an action programme spanning the next 100 years.

Agenda 21 seeks to achieve two goals on a global scale: a high quality environment, and a stable economy for all nations of the world. This historical document is an exhaustive look at sustainable development. The Rio Declaration contains the basic principles that must underline future state decisions and policies. These principles can be found on page 196.

A decade later, the World Summit on Sustainable Development in Johannesburg gathered more than 50,000 participants, including heads of states, leaders and representatives of international NGOs and business groups. Attention was focused on the need to remove the barriers to sustainable development in modern societies, to alleviate poverty and disease, to manage natural resources rationally, to promote responsible consumption and production, and to use the benefits of globalisation to strike a balance between development and environment.

Activities

Easter Island

- 1 Explain that the Earth's natural processes regulate one another, and that nature itself regenerates as a result. Aggressive and irrational human activities can upset the balance of natural processes, causing irreversible changes to ecosystems.
- 2 Read and discuss the Easter Island case study in class.
- 3 Explain that it is an example of an ecosystem that is completely isolated from the rest of the world, and that the society collapsed because the population outgrew the resources available to it.
- 4 Discuss the parallels between Easter Island and the Earth's environment today.

Generations to come

- 1 Explain that sustainable development means using resources in a way that they are allowed to regenerate fully, giving future generations access to the same resources we enjoy today. In essence, it means passing on the world in the same state that we inherited it.
- 2 Ask the students to generate their own definition of the term sustainable development. Help their brainstorming by offering and discussing some of the following statements:
 - The total fish catch should not exceed the sustainable yield of fisheries.
 - The amount of water pumped from underground aquifers should not exceed aquifer recharge.
 - Soil erosion should not exceed the natural rate of new soil formation.
 - Tree cutting should not exceed tree planting.
 - Carbon emissions should not exceed the capacity of nature to process atmospheric carbon dioxide.
 - Plant and animal species must not be eliminated faster than new ones evolve.
- 3 Generate and discuss other statements similar to the ones provided.
- 4 As a follow-up, ask the students to make up their own definition of the "sustainable development" concept. Write some of them on the board and discuss them.



Principles of sustainable development

- 1 Give the students the worksheet on Basic Principles of the Sustainable Development and discuss them.
- 2 Study the information about the World Summit in Johannesburg mentioned in the example. Discuss the basic challenges facing the people in the 21st century and the most important measures, earmarked by the governments' representatives, the NGOs and the international organisations and the business world.
- 3 Discuss each of the challenges mentioned in the text and decide which are relevant in your country or will be in the years to come. Use the additional information on the CD-ROM.

Handle with care (for younger students)

- 1 Show the Handle with Care video clip and discuss it in the context of the previous activities.
- 2 Have the students write a composition, draw a picture, create short poems or rhymes using the themes of the video clip and the discussions of the environmental responsibility toward future generations.

The chain of life (for older students)

- 1 Show the video clip The Kingdom.
- 2 Discuss the well-known English story in the context of sustainable development:

"For want of a nail, the shoe was lost;
For want of the shoe, the horse was lost;
For want of the horse, the rider was lost;
For want of the rider, the battle was lost;
For want of the battle, the kingdom was lost;
And all for the want of a nail."
- 3 What does the old man mean when he says "... to break the chain?" How do human activities influence this?
- 4 Is the old man correct when he asks "Why are we given wisdom at such a high price?"
- 5 After the viewing, encourage the students to write an essay about their impressions, thoughts or feelings.



Follow-up

- Ask the students to find additional information on the future of the Earth and the challenges facing the environment and development. Make sure they have access to the CD-ROM and the Internet.





Easter Island

Easter Island is located in the Pacific Ocean, about 3,200 kilometres west of South America. The first settlers, who reached the Islands about 15 centuries ago, were the Polynesians.

The island has a semiarid climate, but it was ameliorated by a verdant forest that trapped and held water. Its 7,000 people raised crops and chickens, caught fish and lived in small villages. The Easter Islanders' legacy can be seen in massive, eight-metre high, obsidian statues that were hauled across the island using tree trunks as rollers.

By the time European settlers reached Easter Island in the 17th century, these stone statues, known as Moai, were the only remnants of a once impressive civilisation — one that collapsed in just a few decades.

The demise of this society was triggered by the decimation of its limited resource base.

As the Easter Island human population expanded, its inhabitants cut down forests and converted more and more land for agriculture. Trees were used for heating, the construction of houses and boats, and religious purposes (transport of the Moai statues).

The time came when the last tree disappeared from the island. No more fishing boats could be constructed, and consequently the food supply became insufficient. The destruction of forests led to erosion and further food shortage. People gradually moved to the caves. Armed conflicts followed, slavery was revived, and some people even became cannibals in order to survive.



Main Principles of Sustainable Development (Rio de Janeiro Declaration on the Environment and Development, 1992)

- Everyone has the right to a healthy and productive life in harmony with nature.
- Present and future generations are equally entitled to this right.
- Environmental protection must be seen as an integral part of any development process.
- Each country has the right to utilise its own resources, without affecting the environment beyond its borders.
- The polluter must compensate the damage caused to the environment — “Polluter Pays” principle.
- Economic activities are combined with the principle of acquiring preventive measures for environment protection.
- States must cooperate for environment protection.
- The alleviation of poverty and living standards inequity in the different parts of the world are an integral part of sustainable development.
- States must limit and extinguish the unsustainable models of production and consumption, and enhance the appropriate demographic policy.
- The most efficient way of solving environmental problems is the involvement of all interested parties.
- States must develop and encourage the informed participation of the population in decision-making processes.
- States must develop and implement effective legislation for environmental protection.
- Environmental protection must involve all social groups.
- Peace, development, and environmental protection are inter-dependent and indivisible.



Johannesburg Summit 2002

The World Summit on Sustainable Development brought together tens of thousands of participants, including heads of state and government, national delegates and leaders from NGOs, businesses and other major groups.

Attention was focused on the need to remove the barriers to sustainable development in modern societies, alleviate poverty and disease, manage natural resources rationally, promote responsible consumption and production, and to use the benefits of globalisation to strike a balance between development and environment.



The basic challenges and their consequences are:

- **Population:** In the beginning of the 21st century the population of the Earth reached 6 billion, and is expected to level out between 10 and 11 billion over the next 50 years. The basic challenges will be shortages of drinking water and arable land for food production.
- **Poverty and Inequality:** Almost 25 percent of the world's population lives on less than USD 1 per day. Because inequality continues to be a serious obstacle to sustainable development, the Summit pledged to bring this percentage down to between 12-13 percent, along with the number of people suffering from undernourishment.
- **Food and Agriculture:** The fall of food prices over the past 30 years may have contributed to increases in consumption, but in many regions of the world arable terrains are limited, and the creation of new ones has a destructive effect on the remaining ecosystems. In the future, the growth of food production should not come at the expense of nature. By 2010 the current pace of biodiversity loss should be significantly slowed.
- **Drinking Water:** The shortage of drinking water in many regions of the world is a major barrier to sustainable development. It is expected that, at the current rate of development, every second person will suffer from water shortage by the year 2025. The Summit pledged to halve the number of people lacking access to clean drinking water and basic hygienic needs by 2015.
- **Human Health:** In many cases, deaths in developing countries are avoidable. Humanity should direct more attention and money in the coming years to the struggle against diseases. The imminent task is to reduce the death rate among children under five years of age by two-thirds, and the death rate of young mothers by 75 percent by 2015.
- **Energy:** Consumption of all forms of energy is continually rising. The improvement of access to reliable, sustainable and environmentally friendly energy sources and services, as well as the creation of national programmes for energy effectiveness, is a particularly important task for the next 10-15 years.
- **Forests:** The world's forests diminish mainly due to expansion of agriculture. In the coming years, improving the recovery and management of the forests will be of utmost importance.
- **Climate Change:** Petrol consumption is constantly rising. The Summit emphasised the need to realise the decisions of the Kyoto Protocol for reaching an agreement on emissions norms for greenhouse gases in developed countries.

The Summit declared the following tasks for humanity as imperative:

- the need for better understanding of the "sustainable development" concept and stabilising the relevant institutions at international, regional and national levels; and
- further endorsement of civil society's role and the promotion of partner initiatives between the private and public sectors.

