

LESSON PLAN

TYPE OF LESSON : Intercourse : History , Geography and Ecology

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NUMBER OF STUDENTS : 15

GENERAL AIMS : 1. To form knowledge and skills of investigation, of developing the spirit of observing things , of imagination and thinking

2. To emphasize the relationship between people and nature

REFERENCE AIMS : 1. To suggest solutions for protecting the environment

2. To build on the terms and symbols studied, in the students' own message

OPERATIONAL AIMS : 1. To define the notion of pollution

2. To recognize, to classify and describe the types of pollution

3. To identify solutions to protect the environment against pollution

DIDACTIC STRATEGIES AND METHODS : Actively participating and learning, conversation, observation

MATERIALS : Booklet on Earth environmental issues, textbooks, board, pictures, crosswords

Activity 1

Teacher asks students to talk about the three main types of pollution : biological, chemical and physical pollution. The most common forms of pollution are : water, land and air pollution.

Interaction teacher-students

Activity 2

Students are asked to give examples of measures for preventing and fighting against soil, water and air pollution. Thus, a) the soil may be protected by hygienically collecting the wastes, planting new trees and taking action against fires.

b) In order to have clear water , people need to build wastewater treatment plants and to control the solid waste storage.

c) The air can be preserved by using the electrofilters efficiently, by reducing the gases coming out from the chimneys of plants and factories, from the fireworks and firecrackers, and also the exhaust gases from the cars.

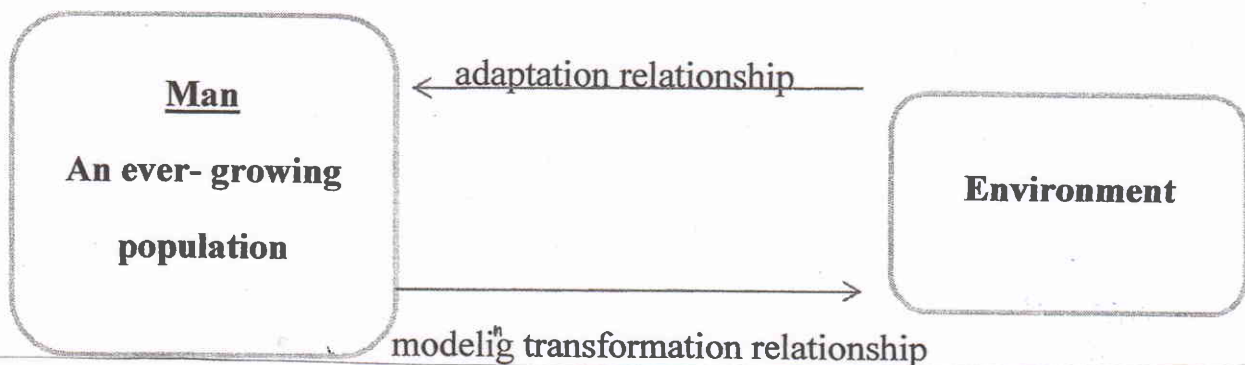
Interaction : teacher-students, student-student

Activity 3

Divided in 3 groups, students talk about the natural scenery where people live daily, emphasizing the fact that there is a strong relationship between man and nature.

The natural framework where human communities live has an important role in modeling people and their way of living. Acting like a real challenge, it imposes people's adaptation to the environment transforming it according to human's necessities which can sometimes involve some radical transformations. Thus, following the deforestation taking place everywhere in the Middle Ages, out of the large forests of Europe, only isolated clumps of trees have remained nowadays, and sometimes just the names, like in Romania (Codrii Vlasiei, Telorman forest and Deliormanin South Dobrogea). Man's intervention was felt along time tru also in the structure of vegetation, through the spread of new plants, and the extension of the cultivated areas contributed to the sedentarization of the people from the former steppes, like the Buceag and Baragan.

As for the fauna, the hunting and the vegetation changes lead to the extinction of some animals, like the aurochs, the horse and the wild donkey.



Activity 4

Students interact to solve the crossword about pollution.

Air Pollution

Introduction

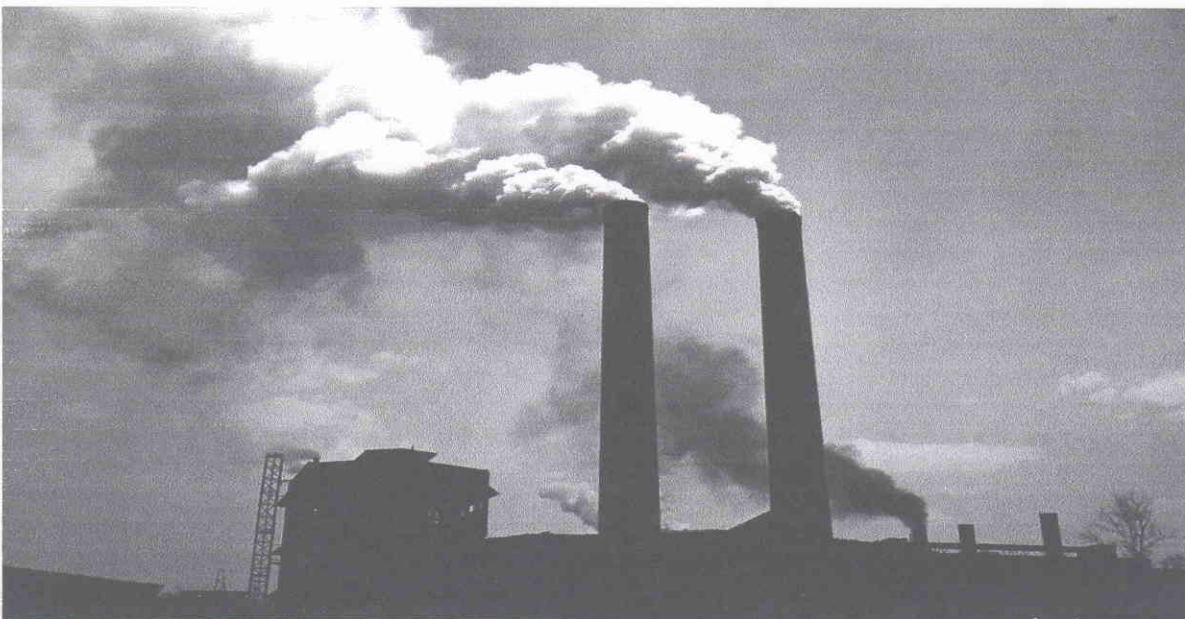
Air pollution is the presence of gases and solid particles that result in adverse health effects. They are either natural or human-made. The top polluting gases are sulfur dioxide, nitrogen oxides, ammonia, and volatile organic compounds. Other polluting gases include carbon monoxide and ground-level ozone.

Health Effects

The deadliest type of pollution is air pollution, according to the World Bank. It's the fourth leading risk factor for premature deaths worldwide. People exposed to unhealthy air are at a greater risk of lung cancer, asthma and respiratory problems. Research in 2018 found air pollution is also linked to Alzheimer's and dementia.

Solutions

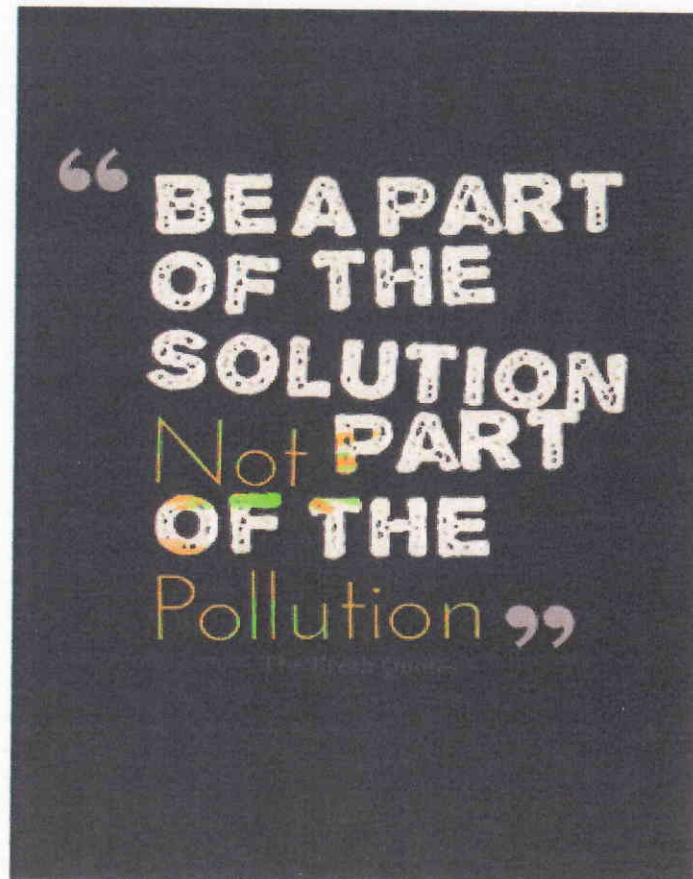
Half of all air pollution is caused by burning fossil fuels for transportation, especially automobiles. We can shift to electrical vehicles and promote public transport. Also, we can move away from fossil fuels, replacing them with alternative energies like solar, wind and geothermal.



Soil Pollution

Improper disposal of industrial waste, drainage from homes and improper disposal of trash further contaminate the soil. When the soil is contaminated, it negatively affects the ecological system as plants and microorganisms may struggle to adapt to the change in the chemical composition of the soil. Here are some ways for prevention and control of soil pollution:

1. Get a better understanding of the soil environment quality baseline
2. Proper management of agricultural land and the practice of organic farming
3. Use natural alternatives to toxic substances
4. Plant more trees
5. Purchase organic produce

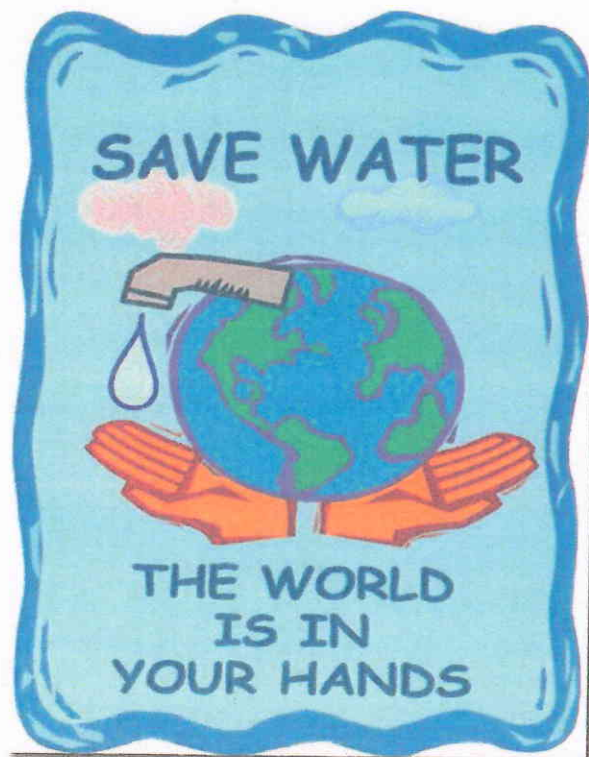


Water pollution

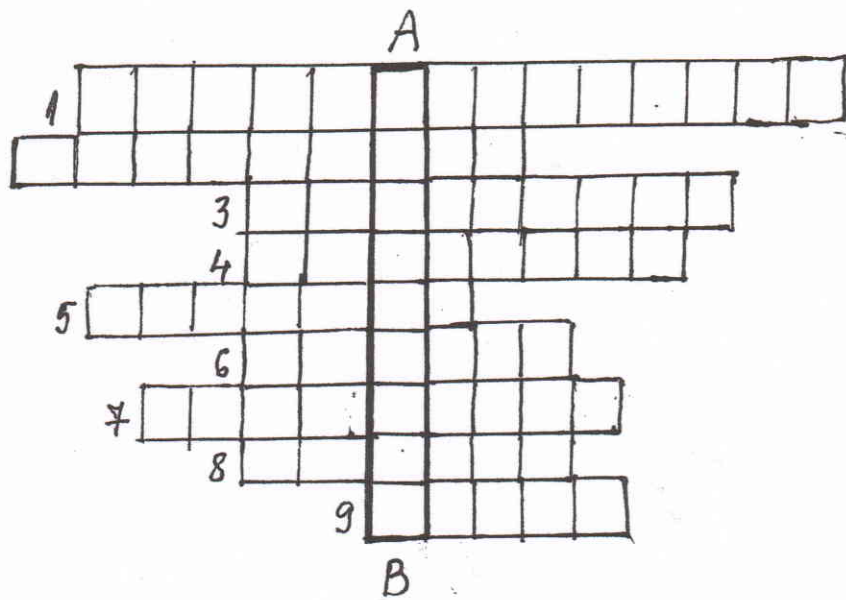
Water pollution is one the main environmental issues that we are facing, as more than 70% of the Earth's surface is water-covered. Unsurprisingly, human activity is primarily responsible for water pollution: urbanization and deforestation, agriculture, marine dumping, industries. Water pollution truly harms biodiversity and aquatic ecosystems.

Ways to save water:

1. Save 6 litres of water a minute by turning off your tap while you brush your teeth.
2. Set a timer on your phone to keep your showers short, sweet and water-saving.
3. Find ways to save and store rainwater for use in the garden.
4. Consider hand watering if you have a small garden area



CROSSWORD



1. It affects the environment daily
 2. The easiest way of combating air pollution is to reduce the
 3. They are damaging substances which contaminate the environment.
 4. Animals and plants living in natural conditions.
 5. Something that causes harm and destruction.
 6. The physical world and all the living things in it.
 7. Substances used in chemistry, usually toxic.
 8. Pollution can be local and
 9. Loud or unpleasant sound.
- A-B: Bad substances having a negative effect on air, water or land.

SWOT ANALYSIS

STRENGTHS

- > The students understand the close connection between the people's life and the environment
- > Students notice the continuous pressure that people put on nature and the harm they did on the environment along history
- > All students involved are stimulated to participate in the activity
- > Students cooperate and help each other to solve the tasks, they understand nature and the living world

WEAKNESSES

- > Students have sometimes difficulties in getting used to different roles
- > Some activities may be long and tiring
- > Students can't concentrate enough during the next activities or classes

OPPORTUNITIES

- > Chances to improve performance
- > Interest of local community, of the parents and students in the project

THREATS

- > Limited period of time for accomplishing some activities in the project
- > The busy programme of the students and teachers , involved in many other school and extracurricular activities

MONITORING

The coordinator and the teachers continuously monitor the activities, in order to interfere in case of difficulty, offering help or advice when necessary.

QUESTIONNAIRE

ENVIRONMENTAL PROTECTION

1. Do you know what selective recycling means ?
a) Yes b) I've heard about it c) No

2. Have you ever dropped litter ?
a) Yes, because I didn't find a garbage bin b) Yes c) No

3. Do you think you live in a polluted town ?
a) Yes b) No c) I don't know

4. Would you like to have more ecology lessons at school?
a) Yes b) No c) I don't know

5. What do you do in order to protect the environment ?

6. How could we protect the plants and animals from the forest ?

7. The biggest dangers for waters are :
a) Waste water b) fertilizers c) household activities d) all

8. In your opinion, why don't people protect the environment ?
a) Lack of education b) financial causes c) carelessness d) something else