

PERSONAL HEALTH:

ECOLOGY



Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
1. Student will identify ways of preserving beauty of the school.	1. Take a walk around the inside and outside of the school. Have one group notice and record things which are pretty. Have the other group notice and record those which might be considered "a mess". 2. Compare the lists. How many examples relate? Which list is longer? Why? 3. Determine who is responsible for preventing the "mess" (i.e., administration, custodians, students). 4. Determine what each individual can do to contribute to the beauty of the school. 5. Divide the students into groups. Each group should be given several examples of "eye-sores". Have each group list means of prevention and maintenance of each example. 6. Compile all group work into a book entitled "Keep <u>(school name)</u> , clean." 7. Refer to attached activity.
----- RESOURCES/MATERIALS ----- "Community Awareness" <u>Macmillan Early Skills Program.</u>	



T.E.K.S. 115.7 (5.8)

The student knows how various factors influence individual, family, and community health throughout the life span.

Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
2. Student will identify ways people help keep the environment beautiful.	1. Locate pictures depicting beauty in the environment, (e.g., flower gardens, trees, snowy scene, lake, river, clouds, etc.). List natural sources of beauty in the environment as students look at the pictures. 2. Take a nature walk and note how many of the natural beauty sources are seen (e.g., clouds, rocks, sun, grass, etc.). 3. Create a mural to show ways people help to maintain beauty in the environment. 4. Outline a scene of a stream/river and a house. Ask students to think of ways that a family could beautify its land. Examples include: a. Plant flowers. b. Build a bird feeder. c. Plant trees. d. Pick up litter; have a place for garbage. e. Paint the house. f. Repair the fence. 5. Invite the school custodian to talk with students about ways the school is kept clean. Ask him to tell what happens to waste paper, garbage, broken chairs and old books or supplies. Also have the custodian explain the maintenance program that keeps the school clean and safe. 6. Develop a code of beauty that includes ways that all people help to keep the earth clean and beautiful. 7. Teach the students the slogan, "Give a hoot – Don't pollute. Keep America looking good." 8. Assist the students in identifying a beautification project for the school. Follow through with and maintain the project throughout the year..
RESOURCES/MATERIALS	

School custodian



T.E.K.S. 113.4 (2.11)

The student knows how various factors influence individual, family, and community health throughout the life span.

Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
3. Student will define and list the causes of pollution.	<ol style="list-style-type: none">1. Define pollution.2. Have the students list several examples of pollution and their causes.3. Using current magazines and newspapers, clip as many pictures as possible to illustrate the different types and causes of pollution. Create a bulletin board with the pictures.4. Examine each example separately. What can be done to prevent or lessen this form of pollution? Have any of these remedies been utilized to address pollution in the community?
RESOURCES/MATERIALS	



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OBJECTIVE	TEACHING ACTIVITIES
<p>1. Student will identify ways to conserve beauty in the environment.</p>	<p>1. Write “conservation of our environment” on the chalkboard. Discuss the meaning and ask the students for examples. Student suggestions may include “keeping air and water clean”, and “protecting the safety of plants, birds, and animals”.</p> <p>2. Prepare for this lesson by photographing signs, listing the rules and regulations posted in area parks. Have volunteers read and explain the meaning of each directive. This is also a good time to introduce the class to pictorial signs that are used in many parks.</p> <p>3. Visit a nearby park, arboretum, or nature center. After this experience, the students should be able to list ten forms of nature that they were able to observe. As a follow-up project, challenge the students to make a model of the park; they may choose to use three-dimensional materials, paint or chalk to create this display.</p>
<p>----- RESOURCES/MATERIALS ----- Photographs of park signs Art supplies Speaker from a recycling center Trash bags</p>	<p>4. Provide scrap paper so that the students can sketch a poster that will encourage people to avoid land, air, water, or noise pollution. The final designs should be transferred to poster board and displayed throughout the school. Local stores may also agree to hang the pictures in their front windows.</p> <p>5. Plan an afternoon clean-up of the school yard. Each student should be given a trash bag to fill. At the conclusion of this activity, have the students determine who gathered the most trash. Each person should be weighed alone, and then holding the bag of litter. They must subtract the smaller number from the larger one to find the weight of the trash.</p>



T.E.K.S. 112.6 (3.8)

The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live.

Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
2. Student will identify causes for pollution and its effect on the environment.	<ol style="list-style-type: none">1. Launch this study by inviting a speaker from the Environmental Protection Agency to discuss the major causes of pollution.2. Post a variety of pictures of different forms of pollution (from news magazines, photography magazines, brochures, political pamphlets, etc.). Include some or all of the following suggestions:<ol style="list-style-type: none">a. Factory emitting smoke.b. Waste being dumped into a river.c. Trash along the highway.d. Burning leaves.e. Exhaust from cars and buses.f. Litter thrown into waterways.3. Ask students to tell how polluted water affects their lives. They might include leisure time activities, food preparation, and drinking water. Discuss how such pollution occurs. Ask what possible remedies they can suggest. Compare the quality of drinking water by setting up a sipping party. Assemble samples of bottled mineral water, chlorinated water, well water, and naturally carbonated water. Ask which one is most preferred. Challenge the students to describe the differences between each sample.4. Simulate polluted water by filling a small aquarium with clear water. Then add a variety of substances and note the changes that occur. (Use soap, mud, garbage and oil to simulate current pollution sources.)5. Visit a water treatment plant. During the visit, stress methods to process waste.6. Ask students to think of ways that people pollute the air. (Their suggestions may include trash burning, factory smoke, car exhaust, and cigarettes.) A simple experiment shows graphically the car emission problem. Fasten a piece of cheese cloth to the end of a car exhaust pipe. After driving the car for several days, remove the cheese cloth and show it to the class. Discuss the implications.



OBJECTIVE	TEACHING ACTIVITIES
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7. Show pictures of a plant growing, people walking outside, animals grazing. Ask students if they remember the basic requirements in order for animals and plants to grow. Place a brown paper bag over a seedling. Let the cover remain overnight. Inspect the difference between a seedling left in fresh air and the one covered tightly. Explain to students that smoke-filled air or some insecticides can cause plants and animals to have difficulty breathing.
8. Find out how the community disposes of garbage. Visit the site and record the scene with photographs that can be scrutinized by the class. Students should consider how they dispose of trash in their own homes. (Do they use compost piles, garbage cans, garbage disposal units, trash burners or incinerators?)
9. Explain that noise pollution is another serious problem in the society. This can be demonstrated by conducting an experiment. Ask the students to remember a series of random numbers presented auditorially while the room is silent. How many can be recalled? Then try the same thing with soft music, loud music, and a sound effects recording of loud industrial noises. Decide if these sounds affect their ability to remember the numbers. Discuss the conclusions that can be drawn.
10. Invite an audiologist to visit the class, or utilize the school's speech therapist. This person can measure students' hearing and explain the effects of exposure to loud noises.



Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
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11. Obtain films detailing the causes and effects of pollution. As students view the films, ask them to pay special attention to the ways people, animals, and buildings are affected by pollution.
12. Ask the students to speculate how increased population will affect different kinds of pollution. Their suggestions may include more automobile emissions (especially from congested traffic), more factory smoke, cutting forests to create room for housing, more erosion in cleared areas, garbage accumulation and increased noise.

RESOURCES/MATERIALS

Environmental Protection Agency
Defenders of Wildlife,
National Wildlife Foundation
8925 Leesburg Pike
Vienna, VA 22184
Texas Parks and Wildlife
4200 Smith School Road
Austin, TX 78744
Audiologist
Water treatment plant
Landfill
Films related to pollution
Items as specified in activities



T.E.K.S. 112.6 (3.8)

The student knows that living organisms need food, water, light, air, a way to dispose of waste and an environment in which to live.

Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
3. Student will preserve the beauty of the environment by maintaining the appearance of home, school, and community.	1. Ask students to name things that they can do to make the classroom a cleaner and more beautiful environment in which to work. Ask each student to select one of the ideas and sign a contract requiring the performance of those duties for one week. 2. Talk with the school custodian. Explain that each student would like to spend half an hour with him to help improve the beauty of the school building and grounds. Stress to students that the custodian will be the boss and that he/she will assign jobs such as sweeping, raking, using a hoe or edge trimmer, painting, or planting. Make a work chart to show when each person is scheduled to work.

RESOURCES/MATERIALS

City sanitation engineer
School custodian



T.E.K.S. 122.4 (2.5)

The student knows that organisms, objects, and events have properties and patterns.

Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
4. Student will categorize different recyclable materials and prepare them for recycling.	1. Student will be presented with an assortment of recyclable materials to sort. 2. Student will make sculpture of recyclable materials. 3. Student will take sorted materials to the recycling center. 4. Student will read "Social Skills Stories" on recycling.

RESOURCES/MATERIALS

Social Skills Stories

RAPS: Reading Activities Projects for Older Students

Southeast Human Development, Inc.

Dr. Caroline Ramsey Musselwhite, Editor



PERSONAL HEALTH:

ECOLOGY



T.E.K.S. 113.4 (2.11)

The student understands that various factors influence personal health.

Area: Ecology

OBJECTIVE	TEACHING ACTIVITIES
1. Student will continue to refine skills in identifying types and causes of pollution and effective ways to eliminate or combat the resulting problems.	1. Explain importance of preserving the environment. 2. List things the class can do in the community. 3. Have a can recycling drive. 3. Have a paper recycling drive. 4. Explain the importance of properly disposing of motor oil, paints, chemicals, etc. 5. Start a compost pile.
RESOURCES/MATERIALS	



