

ACTIVITY: SAVE OUR EARTH

To Pollute or Not To Pollute? That is the Question!

Overview

Waste, litter, and pollution negatively affect life on Earth. Responsible actions leading to pollution reduction could save money, protect resources, improve health, and lead to an overall higher quality of life. Strong values and good character traits are needed – now – for EVERYONE’S sake! Students can learn to help their environment by understanding the problems and solutions of pollution and exhibiting the character traits of respect, caring, trustworthiness, responsibility, and stewardship.

Objectives

Students will be able to

1. describe what pollution is, what causes it, and its effects upon the Earth;
2. name 3 ways that litter can harm wildlife, plants, and humans;
3. sort trash into man-made or natural materials;
4. propose ways to help eliminate and/or clean up pollution, litter, and waste;
5. develop and express an appreciation of and responsibility for stewardship of the Earth.

Background

A pollutant is a harmful chemical or waste material discharged into the land, water, or atmosphere leading to a state of dirtiness, impurity, or unhealthiness. Pollution affects everyone! It can be very dangerous for plants, animals, and humans. Much of the waste that is thrown away can be reduced, reused, recycled, or refused (example: simply don’t take a bag at the grocery store if not needed). There are many methods to help eliminate or reduce pollution and its potential danger to living things.

Everything that is living produces waste. Decomposers and microorganisms recycle nature’s waste to enrich the earth and to provide essential nutrients for the growth of plants.



SCIENCE: Life Processes – Resources, Pollution

CHARACTER: Respect, Caring, Trustworthiness, Responsibility, and Stewardship

GRADE LEVEL
1st Grade

VIRGINIA STANDARDS OF LEARNING

Mathematics: 1.12, 1.18
Science: 1.1, 1.8
English: 1.2, 1.12

LENGTH/DURATION

6 weeks or 1-2 hours per day during Earth Week

MATERIALS

paper, pencils, washed and clean white t-shirts, fabric paint, various sponges or stencils, cardboard pieces, single subject notebook or several blank pages bound together, bulletin board display area, natural and man-made trash, writing paper

VOCABULARY

reduce, reuse, recycle, refuse (see Background), litter, pollution, natural resource, stewardship

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Human waste, however, is threatening our environment! Hazardous chemicals, disposable diapers, plastics, aluminum cans, styrofoam packaging, and manufacturing pollutants are clogging our air, water supplies, and landfills and are destroying important plant communities and wildlife habitats. Collection and disposal of waste consumes tremendous energy and resources.

The first Earth Day was celebrated in 1970 to raise awareness about the environment and encourage people to take action against pollution. Today, many communities celebrate Earth Day and Earth Week in April with special programs, clean-up projects, and festivals focusing on how people can be environmental stewards.



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LESSON

Motivational Activity

Begin the celebration of Earth Week by reading and discussing *The Lorax* or *Lester and Clyde* (see Resources and References). What are the consequences of abuse and pollution on our natural resources? What is the value of keeping a clean and healthy Earth?

Have students draw and color their bedrooms, placing furniture and decorations as they visualize them. Each student might add a small stuffed animal from home to enhance the scene. After each student has displayed and shared this personal world, have him/her (or others) throw trash on it. How do the students feel about their “world” being “trashed”? Discuss their reactions as you list them on the board.

Compare this trashing of a personal environment to the littering and pollution seen happening to our Earth. How can this harm our future and what impact does it have on all the living creatures – present and future? Why should people care and what steps can we take to prevent this from happening?

Activities

1. Create a special “Gratitude Journal” to keep a record of all of the things students are grateful for. They can make entries throughout the year, focusing on “saving the Earth” and how to be a good steward to keep our Earth green, clean, healthy, and beautiful. Students can begin with labeled illustrations and by the end of the year advance to expressing their thoughts in complete sentences.
2. In the spring, discuss Earth Day and have students make special Earth Day T-shirts. Each student should bring in one clean, white T-shirt. Place cardboard pieces inside the shirts to keep the paint from soaking through to the other side. With clothes protected, dip each child’s hand and arm into brown fabric paint and press it onto the shirt for the “tree trunk.” Once the paint dries, have the students sponge-paint leaves on the tree with green paint. They may add more details to their shirt, e.g., birds, flowers, insects, sun, clouds. Finally, have an adult write “Save Our Earth,” the child’s name, and the date on the shirt in fabric paint. Have the students wear their shirts on Earth Day to demonstrate pride for the environment.



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3. Develop an experiment to demonstrate the effect of pollutants on plants. Using two labeled, reusable containers filled with dirt, have each child plant alfalfa or lima bean seeds (or any fast-growing plant). One container should be watered with pure, clean water and the other with polluted water (such as with vinegar, lemon juice, soap suds, oil). All other factors should remain constant. Have the students record daily observations and conclusions in their journals.
4. Help students learn about the negative effects of litter and pollutants on animals. Examples might include sea turtles mistakenly ingesting plastic bags instead of jellyfish, birds' eggs weakened by pesticides, small animals trapped helplessly in bottles or cans, starving sea birds caught in broken fishing line, and fish swimming through plastic packaging loops from 6-packs of drinks. A bulletin board representing the various scenarios could be created and displayed in an area visible to all. Add a creative title, such as "CLEAN UP TRASH - SAVE A FRIEND!"
5. Have a big Spring Cleanup at your school or on a trip to a local park. Remind students to wear plastic gloves to avoid germs. Discuss the difference between "man-made" and "natural" trash. Which items will eventually return to the soil if allowed to naturally decompose? How long will it take? Students can proudly wear their Earth Day shirts on the day of the "cleanup."

Set a perimeter and have students work in pairs to collect the trash. As it is gathered,

it can be sorted into piles of "human-made" or "natural trash." Each pile can be compared, in size, with a known object (e.g., a car, bush, child, basketball, marble) and then weighed. Discuss how many pounds of trash were collected and how the students have helped the Earth. Ask the students how collecting trash demonstrates good character (being a good citizen) and discuss how this action represents being good stewards for the Earth.

6. Create a "To Pollute or Not To Pollute" bulletin board. Divide a bulletin board into two defined sections. On one side, have a beautiful, green Earth (sun shining, etc.). On the other side, have an Earth that is polluted, dirty, and "gross" (sad sun, brown clouds). Have children collect trash from their home, both natural and man-made. Cover the polluted side with



lots of garbage. On the beautiful side, have students draw or cut out pictures of animals, streams, happy people, recycled items, etc. Use things that make the Earth and environment beautiful and enjoyable. Have students explain and discuss the difference we, as trustworthy good stewards, can make in our world.

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7. Make a “Trash Man.” Draw an outline of a life-size person on white poster-board. Have students bring human-made trash items to school and glue them onto the silhouette with a hot glue gun. Use some of the trash to resemble facial features, eyes, nose, hair, etc. Display the



“Trash Man” to remind students and visitors to “Reduce, Reuse, Recycle, & Refuse.” Add students’ comments or slogans to encourage litter prevention. On chart paper or in a journal, have students write about the variety of trash they collected and their feelings about recycling. How would it help if people simply refused to use an unnecessary item? Example: extra napkins, straws, and ketchup packets at a fast food restaurant.

8. Plan a field trip to a national park. In preparation, have students write in their gratitude journals: What natural and historic resources (plants, animals, views, artifacts) will the students see? Why are they thankful for these? How can they help protect the park and the resources? What does the national park do to protect and preserve these resources?

After the park visit, have students write about their experience. What did they see, feel, and enjoy? In what ways are they thankful for the park? Do they hope the park is there for their future and for future generations? How can they help and why should they care? Can they be trusted to care for our environment?

9. Have the students discuss what they can do to help “save our Earth.” In their journals, ask them to illustrate at least three good citizenship behaviors that would help to eliminate pollution and protect resources.

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Assessments

1. Observe and document behaviors, participation, and understandings exhibited in discussions, activities, and conversations in the classroom.
2. Use anecdotal records during the hands-on activities to verify students' understanding of the concept of pollution and its effect on the Earth.
3. Journal entries, writings, and drawings should show the students' understanding of the concept of pollution, its effect on the earth, and an appreciation for the role of national parks as environmental stewards. Students should be able to express several ways to reduce pollution. Drawings should illustrate at least 3 ways to help the earth and 3 things that hurt the earth.
4. Self-assessment should include an understanding of concepts and intended change in behavior as a result of these activities.

Going Further

1. Create Pollution Posters. Divide the class into 3 groups identified as "land pollution," "air pollution," or "water pollution." Have each group title their poster, then draw a scene that depicts that type of pollution.
2. Teach the students how to make an at-home compost container to dispose of and recycle organic matter. (Remind them not to compost meat or cheese, as these will attract animals.)
3. Set up a recycling center in the classroom for your grade level. With staff and parent support, this could expand to a school-wide recycling center.

4. Create "Treasures from Trash." Make creative art displays from trash and discuss the impact of trash on Earth.

Related Subject Activities

1. Math – Separate, graph, and weigh the trash collected.
2. Art – Create pictures, dioramas, bumper stickers, posters, and journal entries with "Save our Earth" slogans.
3. Drama – Write and prepare a class play or puppet show about the effects of pollution on our Earth. Present it to other classes, the school body, and parents.
4. Music – Create a "Trash Rap" or sing various earth songs, e.g., "Don't Throw Your Trash in My Backyard!"

Resources and References

Geisel, Theodor Seuss [Dr. Seuss]. *The Lorax*. New York: Random House, Inc. 1971.

Reece, James H. *Lester and Clyde*. U.S.A.: Scholastic Paperbacks, 1994.

Grove, S. & Dr. Judi Hechtman. *Reduce, Reuse, and Recycle*. California: Creative Teaching Press, 1996.

Javna, John. *50 Simple Things Kids Can Do to Save the Earth*. Missouri: The Earth Works Group, Andrews and McMeel, 1990.

Waste Away. Vermont: Vermont Institute of Natural Science, 1989.

"Waste-What Is It?" 1-3.

"Don't Throw Your Trash in My Backyard!" 23.

"Roots Of Our Waste Problem." 37-46.