

Study Guide For Teachers

Billy B. In “Recycle Mania”

Presented by

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BACKGROUND INFORMATION FOR STUDENTS

The average American generates four pounds of solid waste a day! Americans are creating waste faster than it can be broken down by nature, and using natural resources faster than they can be regenerated. Effective recycling and reusing practices in the home, school, and workplace can contribute to keeping our environment healthy in the future.

Presently, less than one quarter of the waste generated is recycled. Most of it is put in our landfills, or burned. However, landfills eventually need to be closed when they are full, and incinerators create potentially toxic air pollution and ash. Taking care of our garbage is a growing concern.

In order to help reduce this problem, individuals and organizations can do the following three things:

- Reduce waste
- Reuse as much as possible
- Recycle and compost as much waste as possible

Another way to make a difference is by purchasing products made from recycled materials. Everyday items such as toilet paper, paper towels, and napkins can be made from recycled waste, which means we use fewer natural resources.

We can also take advantage of the natural ways the earth reuses and recycles. For example, collecting and composting kitchen scraps not only creates great fertilizer for the garden, but also decreases the amount of trash otherwise generated.

ABOUT THE PROGRAM

Billy B. blends zany humor with solid science in this performance stressing the importance of recycling. Using audience participation, songs, and dance, Billy explores the use and abuse of landfills, the harvesting of natural resources used in making recyclable products, the many examples of nature's efficient recycling systems, and a practical approach to daily recycling.

LEARNING GOALS

- To define the reasons for recycling
- ·To identify the natural resources and energy used in producing recyclable products
- ·To identify the common problems communities have in dealing with their garbage
- To demonstrate and explain how nature recycles all living matter
- ·To tell students about the practical everyday recycling activities each of us can do

AFTER THE PROGRAM

1. Discuss what is saved or conserved by recycling, such as energy, natural resources, and space
2. Put a clear plastic bag over an indoor plant to explore the transpiration process (water and atmosphere recycling) and the water cycle.
3. Research the local dump or landfill history. Where is it? Is it full or not? Has anything been built on top of an old dump? Does the local community have to ship garbage somewhere else, or is it disposed of locally? With the help of your Department of Sanitation, research the cost of garbage removal and disposal in your community. How much does it cost per year, month, and day for each family?
4. Study the power of worms, one of nature's great recyclers. Visit www.yucky.kids.discovery.com to learn about building, and studying worm bins. Encourage students to begin composting at home. Begin a classroom compost of students' apple cores, banana peels, etc.
5. After reviewing your school or classroom recycling policy, choose one more way to either reduce waste or increase recycling at your school. For example, could used paper in the office be reused in classrooms? Are students bringing a lot of single serving foods in disposable containers, and thus creating a lot of garbage? Could each student make one change in what they bring for lunch or buy at home? For example, instead of buying serving-size containers of yogurt, they can buy a large container and serve it in reusable bowls or cups.

VOCABULARY WORDS

Recycle: to process materials in order to reuse them

Exhaust: the gas or fumes that escape from an engine

Reuse: to use again

Reduce: to make smaller; to lessen

Landfill: a place where trash is buried between layers of earth

Processed: changed or prepared by special treatment

Compost: a mixture of decomposing organic matter, such as apple cores, leaves, and carrot skins, that can be used for fertilizing land

Soil: the loose surface of the earth in which plants grow

Pulp: material prepared from wood that is used to make paper products

Natural resources: materials supplied by nature, such as wood and coal, which are necessary for life

Biodegradable: capable of being decomposed by nature

BEFORE THE PROGRAM

1. Have students list the things they presently recycle in their home. This can be done on the blackboard, with the whole class adding to one list. When the students have exhausted their ideas, add things they may have forgotten, such as phone books, magazines, composting kitchen scraps, cardboard, etc. Then talk about how recycling is collected in your community. Do you have to drop it off, or is there curbside pickup?
2. Have the students identify the natural resources used in making the products they recycle at home. Where do these natural resources come from? How are they harvested? How are they shipped to be processed? If appropriate, processing can also be researched.
3. Identify and discuss any of nature's many recycling processes.
4. Look in your classroom (or in your whole school if possible) and identify what your classroom/school recycling policy is, and/or what products in use were made from recycled materials.

ARTIST INFORMATION

A veteran performer, Billy B. Brennan has performed for the National Geographic Society and the National Wildlife Federation, as well as the White House, the Kennedy Center, the Smithsonian, and in front of 200,000 people during the 20th National Earth Day. Billy B. had recorded several albums of original songs and has also written scripts and music performed for television, videos, and film.

RESOURCES

Chandler, Gary and Graham, Kevin. Kids Who Make a Difference. New York: Twenty First Century Books, 1996. (Environmental education programs that kids have found and run)

Shanks, Anne Zane. About Garbage and Stuff. New York: Viking Press, 1973. (Photos with corresponding explanations, for primary grades.)

Showers, Paul. Where Does the Garbage Go? New York: Crowell, 1994. (Illustrated, storybook form, primary grades.)

www.epa.gov/recyclecity (Fun, interactive website that explores how a town changed its ways of dealing with garbage; includes games and activities for teachers.)

www.afandpa.org(guidelines for recycling, information on the forestry industry, Earth Day paper bag project.)