



Environmental Impact

Post-Visit Lesson

Grades: 3rd - 5th grade

Class Time Needed: 45 minutes

Big Idea Students will understand how their actions affect their environment and the lives of future generations.

Maryland Curriculum Standards

Social Studies Framework

- Essential Question (3rd grade): What impact does economic development have on Maryland's natural environment?

NGSS Science Framework

- (4th grade): Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.
- (5th grade): Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Materials Needed

Each student needs:

- Personal Environmental Action Survey paper
- Writing utensil

Instructor needs:

- Large container (preferably clear)
- Large quantity of small objects to put in container (ex: popcorn kernels, individually wrapped candy, beads, etc)
- 14 slips of paper (2 marked "First generation", 4 marked "Second generation", and 8 marked "Third Generation")
- 14 paper bags
- Small bowl or other container (for paper slips)



Teacher Resources

- Nonrenewable Resources Video Link <https://youtu.be/PLBK1ux5b7U>

This video can be used to provide background information for students without prior knowledge of renewable vs. nonrenewable resources

Lesson Procedure

Introduction:

Before class, fill the large (preferably clear) container with popcorn, candy or beads. Put the slips of paper (already written on) into the small container so students cannot see what is written on each slip of paper.

Have 14 students each take a slip of paper. Instruct them not to show anyone else what is written on their piece of paper. Each student with a piece of paper gets a paper bag. The two students with "First Generation" papers come to the large container first. Explain to the students that the object inside the container represents the world's supply of a nonrenewable resource (example: coal, petroleum, minerals, oil, natural gas, nuclear energy, etc).

Tell the "First Generation" students that they can take as much from the container as they want for 10 seconds. Let the students fill their bags for 10 seconds as the rest of the class watches. Next, the "Second Generation" students can fill up their bags for 10 seconds. After they've finished, have the "Third Generation" students take their turn for ten seconds.

Discuss with the students what is happening to the world's supply of nonrenewable resources. How much was left for each generation? What happened as the population increased with each generation? Was anything left for the Fourth Generation? Was anyone thinking about what they would do with their full bags, or did they just want to grab as much as they could?

Objective: Students will realize that new generations will have less and less resources available to them until eventually all the resources will be gone.

Direct Instruction (Student Activity):

Give a Personal Environmental Action Survey to each student. Read the instructions and allow students to complete the survey either individually or by following along while the teacher reads each statement to the group.

Conclusion:

Discussion Questions -

- Which activities are good for the environment? Which ones are bad? Why?
- What might make it hard to do good things for the environment? What are some actions you can change to help the environment?
- What rules should be followed in your community to protect the environment? Should there be rules about using nonrenewable resources (connect to introduction activity)?
- How can you encourage your community to do good things for the environment? How can you encourage your community to stop doing things that harm the environment?



Name _____



Personal Environmental Action Survey

Directions: Read each statement. Put a checkmark next to "Yes" if the statement is true for you. Put a checkmark next to "No" if the statement is not true for you.

1. Yes _____ No _____ When I see trash that someone else has thrown on the ground, I usually leave it there because I didn't put it there.
2. Yes _____ No _____ I separate recyclable materials, such as aluminum cans and plastic soda bottles, from ordinary trash to recycle them.
3. Yes _____ No _____ I sometimes throw trash on the ground.
4. Yes _____ No _____ I pick up trash I find on the ground even though I did not put it there.
5. Yes _____ No _____ I put nonrecyclable trash into containers.
6. Yes _____ No _____ I am kind to animals I see in the community and do not try to hurt them.
7. Yes _____ No _____ Sometimes I hurt and bother animals in the community, especially ones I don't like.
8. Yes _____ No _____ I stay away from animals I see in the community that might hurt me.
9. Yes _____ No _____ I don't pick flowers in the community so other people can enjoy them.
10. Yes _____ No _____ I help compost our food scraps.

