



Environmental Impact

Pre-Visit Lesson

Grades: 6th - 12th grade

Class Time Needed: 45 minutes

Big Idea Students will work together to consider how they would solve dilemmas that directly affect the environment and their communities.

Maryland Curriculum Standards

NGSS Earth and Space Science Framework

- Middle School: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- High School: Evaluate and refine a technological solution that reduces impacts of human activities on natural systems.

Materials Needed

Each student group needs:

- Environmental Dilemmas packet (3 pages)
- Writing utensils

Instructor needs:

- List of discussion questions for conclusion
- Timer



Teacher Resources

Alternative scenarios for Environmental Dilemmas discussion

- You know there is a waste problem now and that the problem is growing. You want to start recycling, but your parents don't seem to have much interest. What do you do?
- At the end of an outdoor party, your friends start throwing bottles into the river even though there is a garbage can nearby. The bottles break and pieces of glass are scattered down below. You know this makes the river unsafe. They are throwing more bottles. What do you do?
- Your friend just bought some candy. You eat the candy, and your friend tries to throw the wrapper into a garbage can and misses. You both laugh, and your friend starts walking away. What do you do?
- You go to visit some of your family on the other side of town. You notice that your uncle dumps his garbage on the side of his hill where it goes down onto the street. You see kids walking by the mess and notice that the water flows down the street, carrying the garbage. What do you do?
- Your family has a large garden. You have always fertilized with cow manure, but you need more for the garden. You've talked about composting with your family, but they continue to throw the kitchen scraps down the drain or in the garbage. What do you do?
- You are becoming aware that litter is unappealing and dangerous. But when you pick garbage up and throw it in the can, sometimes people laugh at you. What do you do?
- You walk down the street and notice some kids in front of you who stop and pick up some litter and throw it away. You think this is wonderful. What do you do?
- You find an empty can and some plastic bottles on the street. You bring them home to reuse as something else. You use them as planters, and they look good. Your mother compliments you and is very happy. What do you do?
- You want to start a cleanup crew. You meet once a month to clean a specific area around the town. People notice the difference and like it. You know you need more people to continue the project. What do you do?
- You notice an abundance of litter and think that some of these things can be reused for something else, but you can't think of all the ideas and don't know how to use some of your ideas. What do you do?

Lesson Procedure

Introduction:

Divide students into small groups. Explain that all the groups will be given a paper with several environmental dilemmas on it. Each group will be given 5 minutes to discuss what they would do and why. They can write their thoughts/answers on the paper if they choose. Once the timer has ended, each group will be asked to share what action they chose and why.



Lesson Procedure Continued

Direct Instruction (Student Activity):

Give each group the Environmental Dilemmas packet. Begin the 5 minute timer so group members can discuss Example 1. Once students have shared their answers, repeat with Examples 2 and 3.

Direct Instruction (Student Activity):

Ask the following questions for discussion

- Is littering, cutting down trees, or waste disposal a problem in our community?
- How does littering, cutting down trees or waste disposal affect your personal environment?
- What problem does littering, cutting down trees, and waste disposal create for people and animals in your community?
- What can you or other members of your community do about these problems?



Group Member Names _____



Environmental Dilemmas Packet

Example 1:

One day you are walking through a park with a good friend, who is eating food out of a plastic bag. When your friend is finished eating, they drop the bag on the ground. You ask your friend to pick it up, but they refuse, with the reasoning that this is a public area and therefore it is not important to care about it.

In this situation, what would you do?

- a) Again ask your friend to pick up the trash.
- b) Pick up the trash yourself.
- c) Use this as an educational opportunity to tell your friend about the problems that littering causes in the environment.
- d) Do nothing.
- e) Something else (be specific).

Write the reason for your answer below:





Example 2:

You live near a wooded area where you like to watch wildlife and enjoy the shade from the many tall trees. One day you discover that your neighbors are planning to cut down all the trees. You ask them nicely not to cut down the trees so the trees can serve both as shade and as home for different types of animals. They both laugh at you and say no.

In this situation, what would you do?

- a) Plead with them again to preserve the area for wildlife, etc.
- b) Move to a different place.
- c) Replace the trees cut down with baby trees.
- d) Use this as an educational opportunity to tell them about the importance of trees in the environment.
- e) Do nothing.
- f) Something else (be specific).

Write the reason for your answer below:





Example 3:

You are a builder/mason. You have recently been given a grant by an international organization to renovate a large city building. As part of the renovation, you are required to dispose of construction debris in an environmentally safe manner. However, there is no money specifically for this.

In this situation, what would you do?

- a) Rent a truck and ship the construction debris to the official city landfill 10 miles away.
- b) Take the debris to an unofficial, but commonly used, dumping site on the river 1 mile away.
- c) Leave the debris piled near the renovate building.
- d) Use this as an educational opportunity to tell them about the importance of trees in the environment.
- e) Something else (be specific).

Write the reason for your answer below:

