

Analyzing Environmental Issues

You make hundreds of decisions every day. Some of them are complicated, but many of them are quite simple, such as what to wear or what to eat for lunch. Making decisions about an environmental issue can be extremely difficult. A formal analysis of the issue can be helpful in reaching a decision. One approach to evaluating an issue is the four-step decision-making model. Using this model, you gather information, consider values, and explore consequences before making a final decision.

Consider the following scenario:

A bill currently before the legislature will ban the use of polystyrene foam for food packaging. The law would prohibit fast food restaurants, grocery stores, and other food-preparation businesses from packaging their foods in polystyrene containers. Many sound reasons exist for a law of this type. Environmentalists argue that paper biodegrades much more readily than polystyrene, that the high volume of foam packaging in the waste stream contributes to the problem of limited landfill space, and that the incineration of plastic foam containers contributes to air pollution. The passage of this bill into law would impact consumers. Foam containers provide insulation, maintaining food temperature and freshness. Business owners would also be affected by this law, as they would be forced to find effective, alternative methods of packaging food.

In this investigation, you will use the four-step decision-making model to reach a decision about this environmental issue.

OBJECTIVES

Collect data that will lead to an informed decision regarding an environmental topic.

Decide whether to support or oppose a piece of environmental legislation.

Identify values that influence your decision.

Evaluate your decision-making process.

MATERIALS

- computer with an Internet connection
- newspapers, magazines, and other publications containing information about polystyrene containers and recycling in general

Procedure

1. Discuss the bill banning the use of polystyrene packaging with your group. Make notes during the discussion. Consider the following questions: What types of food are packaged in polystyrene? What food-preparation businesses

Analyzing Environmental Issues *continued*

in your area would be affected by this law? How might this law affect businesses and consumers? How serious is this environmental issue? Have one team-member act as a recorder and jot down the main points of your discussion on the lines below.

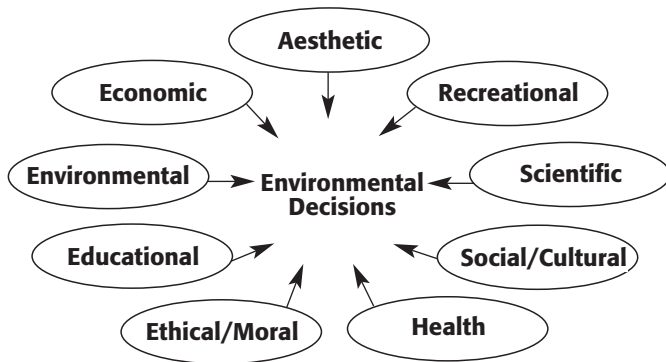
Discussion notes:

2. Use research materials to learn more about the issue. Record the information in the table below.

POTENTIAL IMPACTS OF A POLYSTYRENE BAN

Passage of a Polystyrene Ban		
Potential impacts on consumers	Potential impacts on businesses	Potential impacts on the environment
Failure to Pass a Polystyrene Ban		
Potential impacts on consumers	Potential impacts on businesses	Potential impacts on the environment

Analyzing Environmental Issues *continued*



3. Reconvene your group to discuss results of your research. With your group, study the values shown in the figure at left. Which values apply most directly to the polystyrene issue? Choose at least four values that you want to consider in reaching a decision. Enter those values in the top row of the chart below.

What other values, besides those shown here, might affect your decision on a local environmental issue?

	Values			
Consequences				
Positive short-term consequence				
Negative short-term consequence				
Positive long-term consequence				
Negative long-term consequence				

- 4.** With your group, use the knowledge you have gained about the polystyrene issue to evaluate the short- and long-term consequences of imposing a ban on polystyrene containers. Complete the chart with possible consequences for each value.
- 5.** Consider all the consequences you have recorded on your chart. Based on your evaluation of this issue, do you support or oppose a ban on polystyrene packaging?

Analyzing Environmental Issues *continued*

6. Share your decision with the group. What decision did the majority of group members reach about the proposed polystyrene ban?

Analysis

1. **Analyzing Data** In your evaluation, did you consider short-term or long-term consequences to be more important? Why?

2. **Analyzing Results** Which potential consequences had the greatest influence on your final decision? Why?

Conclusions

3. **Evaluating Data** Did the values and consequences each group member considered make a difference in the decision he or she reached? Explain.

4. **Evaluating Results** At the beginning of this activity, you were asked to evaluate the importance of this environmental issue. Based on the research and discussions in which you have been involved, has your opinion changed? Explain.

Extension

1. **Research and Communications** Attend a meeting of your local planning, zoning, or environmental board. Write a brief summary about how the meeting is conducted, one issue discussed, and the opinions that were expressed about that issue.

Analyzing Environmental Issues

Teacher Notes

TIME REQUIRED Two 45-minute periods

SKILLS ACQUIRED

Collecting data
 Communicating
 Interpreting
 Organizing and analyzing data



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 El Dorado
 High School
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RATING

Easy ← 1 2 3 4 → Hard

Teacher Prep–1
 Student Set-Up–1
 Concept Level–3
 Clean Up–1

THE SCIENTIFIC METHOD

Make Observations Students conduct research concerning polystyrene containers and potential impacts on banning their use for food packaging.

Ask Questions Students communicate with group members to explore opinions regarding this environmental issue.

Analyze the Results Students utilize charts to organize and analyze information gathered while researching this environmental issue.

Draw Conclusions Students are asked to consider their values as well as potential consequences to reach a decision about this environmental issue.

Communicate the Results Group members discuss and compare the decisions they have reached regarding this environmental issue.

TIPS AND TRICKS

Groups of 3 to 5 students work well for this activity. Talk with students about possible reporting bias in newspaper articles, magazines, and other publications they might use to research this issue. Help them understand the importance of separating opinion from fact when evaluating information presented about this issue. Encourage students to record as much objective and proven data as possible in their research notes.

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Name _____ Class _____ Date _____

Analyzing Environmental Issues *continued*

in your area would be affected by this law? How might this law affect businesses and consumers? How serious is this environmental issue? Have one team-member act as a recorder and jot down the main points of your discussion on the lines below.

Discussion notes:

Answers will vary based on the discussion.

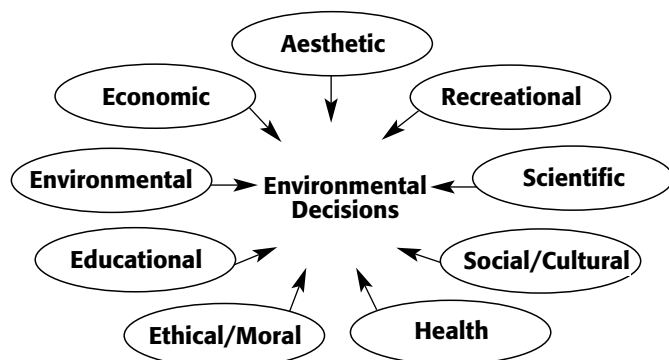
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- With your group, use the knowledge you have gained about the polystyrene issue to evaluate the short- and long-term consequences of imposing a ban on polystyrene containers. Complete the chart with possible consequences for each value.
- Consider all the consequences you have recorded on your chart. Based on your evaluation of this issue, do you support or oppose a ban on polystyrene packaging?

Answers may vary.

Name _____ Class _____ Date _____

Analyzing Environmental Issues *continued*

6. Share your decision with the group. What decision did the majority of group members reach about the proposed polystyrene ban?

Answers may vary.

Analysis

1. **Analyzing Data** In your evaluation, did you consider short-term or long-term consequences to be more important? Why?

In general, long-term consequences will have more weight. However, particularly severe short-term consequences may outweigh less severe long-term consequences.

2. **Analyzing Results** Which potential consequences had the greatest influence on your final decision? Why?

Answers may vary.

Conclusions

3. **Evaluating Data** Did the values and consequences each group member considered make a difference in the decision he or she reached? Explain.

Because people place varying degrees of importance on different values, they can weigh positive and negative consequences differently. This can cause them to arrive at very different conclusions, even when they are working from the same base of factual information.

4. **Evaluating Results** At the beginning of this activity, you were asked to evaluate the importance of this environmental issue. Based on the research and discussions in which you have been involved, has your opinion changed? Explain.

Answers will vary. Students may feel that more knowledge of the facts surrounding the polystyrene issue and the opinions of others influenced their own opinion of the importance of this issue.

Extension

1. **Research and Communications** Attend a meeting of your local planning, zoning, or environmental board. Write a brief summary about how the meeting is conducted, one issue discussed, and the opinions that were expressed about that issue.