NIMBY*

Activity E.l

GRADE LEVELS: 4 - 6

OBJECTIVES:
The students will be able to:

- List concerns individuals have when they learn a resource recovery plant is proposed for their neighborhood.
- List advantages of building a state-of-the-art resource recovery facility.
- Explain how the decision to build a resource recovery plant may have negative effects on individuals not directly involved with the construction and operation of the plant.
- Discuss ways to eliminate or alleviate these naegative effects called indirect costs or spillover costs.

MATERIALS:

Student handouts:	Not In My Backyard – A
	Not In My Backyard – B
Student activities:	Resource Recovery Plant Survey: Hazelton City Council
	Resource Recovery Plant Survey Results

PROCEDURE:

1. As class begins conduct the following demonstration:

Walk around the room eating an orange. Throw the orange peels on the floor. Eat the orange.

Ask students:

What was I doing? Have you seen others do something similar? What were they doing?
Who paid for the orange I ate? (Teacher)
Who benefited from the orange I ate? (Teacher)
Who is hurt by my behavior? (Someone who must look at the mess. The custodian who must clean up the orange peels.)
If I don't clean up the orange peels or ask you to clean them up, who pays for cleaning up my mess? (Taxpayers whose money paid in school taxes is used to pay the custodian's wages.)

Tell students that often an action or decision by an individual or group will have costs and benefits to them and to uninvolved third parties. This effect on others not directly involved is called an indirect or spillover cost or benefit.

2. Give students another example of an indirect or spillover cost by turning up the volume on a portable radio so high that students complain. Tell students that the radio is yours and you like to play it loudly.

Ask student:

a. Who made the decision to play the radio on a high volume? (Teacher) Who paid for the radio? (Teacher) Who reaped the benefits? (Teacher and any students who liked the loud music.)

b. What was the indirect or spillover cost? (Noise pollution to the students in the class and neighboring classrooms.)

3. Explain to students that today they are going to learn about people's reactions when they learn that a resource recovery plant is proposed for their neighborhood. Individuals usually are in agreement that a resource recovery plant is a good idea but respond, "Not In My Backyard!" This reaction, "NIMBY," deals with people's concerns about indirect or spillover costs.
NOTE: Be sure to explain to the students that a resource recovery plant (RRP) is more than an incinerator or landfill. Modern resource recovery plants first remove recyclable materials. Remaining waste is incinerated. During this process steam is generated from the stored energy contained in the waste. This steam is used to create heat and electricity. Finally, the ash created during incineration is placed in a landfill. Today's resource recovery plants have state-of-the-art pollution abatement systems and other safeguards to control emission of pollutants into the air. The primary purpose of RRP, sometimes called waste-to-energy incinerators is to reduce by as much as 90% the volume of solid waste going into landfills.

4. Distribute handouts "Not In My Backyard – A" and "Not In My Backyard – B." Ask students to read the handouts and study the picture. Discuss the following:

Why does City Council want Hazelton to have its own resource recovery plant? (The growing population is increasing amount of solid waste in Hazelton. Tipping fees at the city's present landfill are increasing. Ground transportation costs to and from the landfill are going up.)

What are the advantages of Hazelton having a resource recovery plant? (Create jobs both in construction and operation of the plant. Reduce the cost of trash removal and ultimately reduce costs to the taxpayers. Generation of electricity.)

What are the potential indirect or spillover costs involved with locating a resource recovery plant in Hazelton? (For the immediate neighborhood, noise and air pollution, odor, decrease in property values, traffic; for the community, pollution of the air and water, harm to wildlife.)

5. Explain to the students that the City Council would like their opinions and has asked them as citizens of Hazelton to complete a survey. Distribute the "Resource Recovery Plant Survey." Collect complete surveys. Have a group of students tabulate the results and report to the class.

6. Using the items on the survey that are of concern to the citizens, ask students to make suggestions on what the City Council might do to ensure that the new resource recovery plant does not have a negative impact on the community.

Indirect or spillover costs that occur in our daily lives such as the example with the orange peels in the classroom often require no need for government intervention to correct the problem. However, some problems such as air and water pollution may require government action to reduce the indirect or spillover costs involved.

Government uses essentially regulation, taxation and subsidies to reduce indirect or spillover costs. Regulation, passing laws, is the most common means used to correct indirect costs. Government can also tax the business creating the indirect cost. However, a tax may be used to help a business purchase special equipment to eliminate indirect costs. A community's tax dollars are used to provide subsidies that cause an increase in tax expenditures.

7. Distribute the "Resource Recovery Plant Survey Results" worksheet. Have students compare their recommendations with those of the president of city council as listed on the handout. The president's comments are just some of the methods that can be used to reduce indirect costs involved with locating the plant in Hazelton. Students will suggest others. Ask students to complete part B of the activity for the president so she will have a complete set of notes for her talk. Discuss student answers.

Suggested answers are:

Resource Recovery Plant will reduce tax expenditures for solid waste removal.
Recycled products from the plant put less strain on our natural resources created by the demand for raw materials.
Electricity will be produced.
Plant helps reduce the volume of solid waste going into landfills.
Jobs will be created.
City will collect tax dollars from the plant.
Provide an environmentally safe place for waste that cannot be disposed of in any other way.

*Source: Du Pont Solid Waste Management Curriculum K - 6