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The National Association for Interpretation has awarded

Environmental Protection Native American Lands:

A CULTURAL APPROACH TO INTEGRATED ENVIRONMENTAL STUDIES

Second in the Interpretive Curriculum Program Category

1995 National Interpretive Media Competition
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Native American Lands:

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Introduction

Environmental Protection Native American Lands: A Cultural Approach to Integrated Environmental Studies is dedicated to the Native American people of Northwestern California. The Center for Indian Community Development at Humboldt State University wanted to heighten the awareness of local native people regarding solid and hazardous waste issues. The Center, with the assistance of the Environmental Protection Agency, gathered information from tribal leaders, Indian educators, and the public about hazardous waste issues in Indian country. In 1993, this begun a two year project to develop a curriculum from nationally distributed materials that serve as the backbone of the curriculum were adapted to reflect the culture of the Hupa, Karuk, and Yurok people. Tribal leaders, educators and the public identified the goals of the project.

The curriculum is 51 lessons for grades 1-12. It includes several activities adapted from twelve quality integrated waste management instructional materials collected nationwide. Analysis of the published instructional materials show they are designed for enfranchised suburban populations. None meet the needs of Native children on rural tribal lands. Therefore, several original activities were designed.

Environmental Protection Native American Lands: A Cultural Approach to Integrated Environmental Studies is more a record of the process the designers experienced than a curriculum. The application of the materials outside the ansestral lands of the Yurok, Karuk and Hupa people may be limited. Teachers in other areas can use the curriculum as a guide for the development of materials useful to Native people.
Program Goals

The goals of the Environmental Protection Native American Lands: A Cultural Approach to Integrated Environmental Studies curriculum are to address:

1. Environmental and cultural integrity through enhancing a sense of place.
2. The issue of Native stewardship, historically and presently.
3. The impacts of solid waste on health, Indian culture, traditions and sovereignty.
4. The terms: toxic, hazardous, corrosive, and flammable.
5. The effects of personal actions on health, culture and traditions.
6. The effects of industrial actions on Native American environmental and cultural integrity.
7. Solutions to issues by working together
8. Consumption habits that rely on disposable of products that are disposable.

Program Objectives

All of the activities in this curriculum address one or more of the Unesco objectives for environmental education as outlined in the Belgrade Charter. The objectives serve as a hierarchy that lead to active community involvement. The activities that comprise this curriculum target student’s ability to demonstrate:

- a new consciousness regarding the environment; **Awareness**
- new facts and ideas regarding the environment; **Knowledge**
- positive feelings and sentiments toward the environment; **Attitudes**
- the proficiencies necessary for solving environmental problems; **Skills**
- sound judgments and assessing environmental data; **Evaluation**
- a willingness to be involved in solving community problems; **Participation**
All Things Are Connected

Major Concept
Daily actions affect the environment.

Objective
As a result of this activity, students will be able to describe ways their actions affect the environment.

Background
American Indian philosophies have certain dominant themes that are common to many native cultures. One of these themes is the belief that humans are a part of and connected to, their environment. A well-known example of such thinking is the speech attributed to Chief Seattle (European settlers changed this to Seattle) of the Duwamish Nation from the Puget Sound region.

Chief Seattle made a speech in connection to the Port Elliot Treaty of 1855. The speech was given in the Duwamish language in 1854. His words were transcribed into English by Dr. Henry Smith who was in attendance. No written form of the speech is in existence, only the recollections of Dr. Smith. His transcription has been reprinted in various forms.

In 1970, under contract from the Southern Baptist Convention, Ted Petty of the University of Texas wrote a film script for a television program addressing pollution. Wishing to illustrate the traditional American Indian land ethic, he created a speech for a “generic Indian chief” character. He used William Arrowsmith’s adaptation of Henry Smith’s translation. Arrowsmith’s adaptation was presented at an Earth Day rally. The television program was very successful. The speech was reprinted, attributed to Chief Seattle, and commonly referred to as a letter to President Franklin Pierce from Seattle.
**Procedure**

In small groups, have students read and discuss the student hand out on Chief Seattle’s speech. Topics for discussion might include the historical background of the speech; an analysis of the speech in terms of its use of metaphor, simile, etc.; and the relation of the speech to household waste.

For homework, ask students to express their reaction to the reading and discussion through drawing, poetry, short story, or dramas, etc. Ask students to consider how they are a part of the web of life and what actions they can take to minimize their environmental impact on the Earth.

Select students to give a dramatic reading (interpretation) of the speech. Prior to their presentations, encourage the rest of the class to imagine they are among the audience hearing the speech for the first time. Have them share their reactions.

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_In union there is strength._ —Aesop

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![Image](Image 1)
Connections are sometimes hard to recognize. The relationship between house-
hold waste and American Indian philosophy is one of those connections that
seems obscure. On the surface, these two topics seem totally unrelated. Yet if
you read the following speech given by a well-respected American Indian leader,
you may be able to see how they relate. This speech was said to be given by
Chief SealthL from the Duwamish Nation in 1854. Chief SealthL gave this speech
in response to a proposed treaty under which the Indians were to sell two
million acres of land for $150,000. The city of Seattle is named for the chief.

Chief SealthL was born in 1790, about the time when his nation first made
contact with white traders from Canada, and the newly formed United States.
During his lifetime, he experienced many differences between the Duwamish
culture and European settlers’ culture. Chief SealthL describes an important
Duwamish cultural belief in his speech.
How can you buy or sell the sky, the warmth of the land? The idea is strange to us.

If we do not own the freshness of the air and the sparkle of the water, how can you buy them?

Every part of this Earth is sacred to my people. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. The sap which courses through the trees carries the memories of the red man.

Among the stars our dead never forget this beautiful Earth, for it is the mother of the red man. We are part of the Earth and it is part of us. The perfumed flowers are our sisters; the deer, the horse, the great eagle, these are our brothers. The rocky crests, the juices in the meadows, the body heat of the pony, and man—all belong to the same family.

So, when the Great Chief in Washington sends word that he wishes to buy our land, be asks much of us. The Great Chief sends word he will reserve us a place so that we can live comfortably to ourselves. He will be our father and we will be his children.

So we will consider your offer to buy our land. But it will not be easy. For this land is sacred to us. This shining water that moves in the streams and rivers is not just water but the blood of our ancestors. If we sell you land, you must remember that it is sacred, and you must teach your children that it is sacred and that each ghostly reflection in the clear water of the lakes tells of events and memories in the life of my people. The water’s murmur is the voice of my father’s father.

The rivers are our brothers, they quench our thirst. The rivers carry our canoes, and feed our children. If we will you our land, you must remember, and teach your children, that the rivers are our brothers and yours, and you must henceforth give the rivers the kindness you would give my brother.

We know that the white man does not understand our ways. One portion of land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs. The Earth is not his brother, but his enemy, and when he has conquered it, he moves on. He leaves his father’s grave behind, and he does not care. He kidnaps the Earth from his children, and he does not care. His father’s grave, and his children’s birthright are forgotten. He treats his mother, the Earth, and his brother, the sky, as things to be bought, plundered, and sold like sheep or bright beads. His appetite will devour the Earth and leave behind only a desert.
I do not know. Our ways are different from your ways. The sight of your cities pains the eyes of the red man. There is no quiet place in the white man’s cities. No place to bear the unfurling of leaves in spring or the rustle of the insect’s wings. The clatter only seems to insult the ears. And what is there to life if a man cannot hear the lonely cry of the whippoorwill or the arguments of the frogs around the pond at night? I am a red man and do not understand. The Indian prefers the soft sound of the wind darting over the face of a pond and the smell of the wind itself, cleansed by a midday rain, or scented with pinon pine.

The air is precious to the red man for all things share the same breath the beast, the tree, the man, they all share the same breath. The white man does not seem to notice the air he breathes. Like a man dying for many days he is numb to the stench. But if we sell you our land, you must remember that the air is precious to us, that the air shares its spirit with all the life it supports.

The wind that gave our grandfather his first breath also receives his last sigh. And if we sell our land, you must keep it apart and sacred as a place where even the white man can go to taste the wind that is sweetened by the meadow’s flowers.

You must teach your children that the ground beneath their feet is the ashes of our grandfathers. So that they will respect the land, tell your children that the Earth is rich with the lives of our kin. Teach your children, that we have taught our children, that the Earth is our mother. Whatever befalls the Earth befalls the sons of the Earth. If men spit upon the ground, they spit upon themselves.

This we know: The Earth does not belong to man, man belongs to the Earth. All things are connected. We may be brothers after all. We shall see. One thing we know which the white man may one day discover: Our God is the same God.

You may think now that you own Him as you wish to own our land: but you cannot. He is the God of man, and His compassion is equal for the red man and the white. This Earth is precious to Him, and to harm the Earth is to heap contempt on its creator. The whites too shall pass, perhaps sooner than all other tribes. Contaminate your bed and you will one night suffocate in your own waste. But in your perishing you will shine brightly fired by the strength of the God who brought you to this land and for some special purpose gave you dominion over this land and over the red man.

That destiny is a mystery to us, for we do not understand when the buffalo are all slaughtered, the wild horses are tame, the secret corners of the forest heavy with scent of many men and the view of the ripe hills blotted by talking wires.

Where is the thicket? Gone. Where is the eagle? Gone. The end of living and the beginning of survival.
"As we walk our own ground, on foot or in mind, we need to be able to recite stories about hills and trees and animals, stories that root us in this place and that keep it alive. The sounds we make, the patterns we draw, the plots we trace may be as native to the land as deer trails or bird songs. The more fully we belong to our place, the more likely that our place will survive without damage."

—Scott Russell Sanders
Lesson 2

Needs or Wants?

Major Concept

Increasing self awareness and identifying personal values helps raise cultural awareness.

Objectives

As a result of completing this activity, students will be able to demonstrate the ability to:

1. distinguish between basic human needs and personal wants; and

2. state that wants are often relative to a person’s culture, age, and place in history.

Background

People have different ideas about what defines “needs” and “wants” depending on their culture, background, values, and situation. For example, electricity might be viewed as a need but millions of people around the world live happy and productive lives without electricity. Similarly, a computer might be considered a need by many business people while other people would consider a computer a want, not a need.

Students have different ideas about needs and wants; allow them to express their own ideas. Some of the items illustrated in the student activity pages were purposely chosen because they could be viewed as either needs or wants, depending on the student. To help students express their ideas, they create simple poems called cinquains. Cinquains are a wonderful way to combine feelings and facts about the world into a poetic image. They are easy to create and fun.

Grades:
Primary-Intermediate.

Subject:
Language Arts, Science, Social Studies, Mathematics.

Materials:
Scissors. One set of duplicated activity pages per pair of students. Paper for each student. Pencil for each student.
Although every person has different ideas about what is necessary to him or her, there are certain basic needs that all humans share, including biological needs (food, water, air, and shelter), social needs (clothing, feelings of belonging, and protection), and spiritual needs (faith, hope and love). Students will explore some of these needs in this activity.

**Procedure**

1. Make copies of the “Needs and Wants” activity pages so that each pair of students will have a set. Cut the cards along the dotted lines and place each set of cards into an envelope.

2. Divide students into pairs. Pass out one envelope of cut-up cards to each pair. Direct student pairs to sort the cards in their envelopes into piles so that the things in each pile are alike in some way. Ask students to share with the class the “rule” by which they sorted. On the board, develop a class list of ways to sort the objects. Allow students several opportunities to sort the objects, encouraging them to look for new ways of combining them.

3. Have students put the cards back into the envelopes, then discuss with students the difference between needs and wants. Ask: Could you live without the things you need? The things you want? Tell students to sort the cards according to needs and wants, then discuss which things they think are needs, which are wants, and whether different people have different ideas about what they need.

4. Tell students that there are certain things, called basic needs, that everyone absolutely has to have in order to stay alive and healthy. Ask which of the things on the cards are basic needs and list student responses on the board. Ask students if they can think of any other things not on the cards that might be considered basic needs. Add appropriate responses (trees, animals, and love, for example) to the list.

5. Explain to students that they will create poems of five lines called cinquains about one or more of the basic needs listed. Write on the chalkboard the sample cinquain or a cinquain you create.

**SAMPLE CINQUAINS**

**WATER**
Wonderfully wet
Trickling, roaring, moving
It feels so cool
Wetness

**WIND**
Waving, blowing
Moving, rain, clouds
Nice on my face
Breath

Explain to students the rules for cinquains:

**First line:** One word, giving title.

**Second line:** Two words describing title.

**Third line:** Three words expressing an action.

**Fourth line:** Four words expressing a feeling.

**Fifth line:** One word, a synonym for the title.

Have students work alone or in pairs creating these brief, evocative poems, then ask students to share their creations with the class.
Discussion

1. What kinds of things do Indian People need?

2. What is the difference between a need and a want?

3. Is there anything that you consider a need that someone 100 years ago (or in another country today) might consider a want?

4. What are some needs or wants for people of 100 years in the future.

5. What are some things that you feel are wants that others try to convince you are needs?

Adapted from The No Waste Anthology, California Department of Toxic Substances Control, 1991.
<table>
<thead>
<tr>
<th>VEGETABLES</th>
<th>FRUIT</th>
<th>CLOTHES</th>
<th>ELECTRICITY</th>
<th>MEDICINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>BICYCLE</td>
<td>COMPUTER</td>
<td>INSECT</td>
<td>CANDY</td>
</tr>
<tr>
<td>GARDEN</td>
<td>GRASS</td>
<td>QUITE</td>
<td>FRIENDS</td>
<td>CAR</td>
</tr>
<tr>
<td>TELEVISION</td>
<td>RAIN</td>
<td>FISH</td>
<td>TREES</td>
<td>CEREMONIES</td>
</tr>
<tr>
<td>SEA SHELLS</td>
<td>BOAT</td>
<td>SHELTER</td>
<td>FAMILY</td>
<td>SUN</td>
</tr>
</tbody>
</table>
Circles-Silence-Respect

Major Concept

Human life must remain in balance with the natural world.

Objective

As a result of this lesson students will be able to:

1. express an understanding that living in harmony with the Earth is essential for human survival and to the Earth's.

Background

When we fail to be respectful, to prepare and give thanks in a ceremonial way, when we take from the Earth, or when we harm the Earth, we are on bad terms with the spirits and their manifestations in this world.

Grades: Primary-Intermediate
Subject: Social Studies, Music
Time: One class period.
Materials: A Journey With The Abenakis

Procedure

Read the story A Journey With The Abenakis. Discuss the meaning of circles, silence, and respect. Follow the story with teaching the chant, Hupa Flower Dance Song.

Discussion

Is the clothing everyday or ceremonial? Do you kill deer with arrows in the side?
Journey with the Abenakis

Our journey begins in the pine woods. As we walk, the wind sighs through the pine boughs and causes them to wave. Little patches of sunlight shine on the soft pine needles beneath our feet. A twig cracks underfoot. There is a clearing in the distance and gentle curls of smoke rise into the sky. We can smell wood burning as we approach.

In the clearing are some dome-shaped shelters with arched roofs made of bark wrapped over poles. There are holes in the roofs for chimneys and smoke pours out of them. Many lodges are arranged in a big circle that is surrounded by a high log fence. We walk over to one house and feel the lines in the bark on its side. There is a pair of snowshoes leaning on the house.

We turn and walk to a great fire ring in the center of the camp, where a group of men and women are warming themselves by the blazing fire. The women wear their hair long, as do the men. Women are wearing leather skirts and leggings with moccasins attached. A blanket covers each woman’s head and flows down over a leather coat. Men wear leggings and a small, skirt-shaped piece of leather. But on each man’s head is a hood-like cap with two feathers sticking out of the tip. A bow and arrows are carried by the hunters, along with spears and knives that are laced to their belts.

These people prepare to go on a hunt by burning tobacco, a sacred plant whose smoke carries their prayers up to the “Owner” or Creator, Tabaldak, and the animal spirits. These prayers ask for permission to hunt. They also express the people’s respect and appreciation for the lives of the animals they will soon hunt, and offer thanksgiving for the food, clothing and other gifts the animals will give the people. Soon the hunters leave the fire ring, carrying their weapons, and walk through the pine grove.

Some faint deer signs are found and two of the hunters begin to follow the trail very quietly. After a long, slow, tiring search, some animals are heard chewing on the buds of small trees up ahead. The hunters creep closer and look through the branches of a low bush. The animals are deer! And so we learn one of the lessons of survival in nature: SILENCE.

The hunters look carefully at the deer in the herd, recognizing each one individually. Two of the deer are pregnant does who the hunters know are expecting fawns these two will not be hunted. Finally, the hunters decide on a certain buck as their quarry.

In an instant several arrows are strung and sent whistling through the air. The buck is shot and it falls kicking on the ground, blood flowing from wounds. One deer alone is taken because the others are needed to produce more young to keep the herd alive and because the hunters take only what they need. A second lesson of survival in nature is learned: RESPECT for other life besides human.

The hunters quickly skin the deer, cut up the meat and lash the pieces onto a pole that is carried between them on their shoulders. When they arrive in camp people are excited to see them with their catch. “A successful hunt,” a child cries out. “We will have food to eat!”

The deer is not kept by the hunters and their...
families; it is cut into smaller pieces and given to all those who need food beginning with those who are the most hungry. Another lesson is learned of how people can survive in the natural world and with one another: SHARING the gifts of nature.

As the meat is prepared, the people burn some fat on the glowing coals of the cooking fire. The smoke that drifts upward is an offering to Tabaldak. Every part of the deer is used, because to waste any would show disrespect for Tabaldak and make the animal spirits. Finally, the deer’s bones are returned to the land where it was killed. This offering of the bones completes the circle of giving and receiving. The Creator and deer give life through the gifts of food and clothing to the people, and the people complete the circle by giving the deer bones back to show respect, appreciation, and thanks. A final lesson is learned for living well with the natural world.

SILENCE - RESPECT - SHARING - CIRCLES
These are lessons to be remembered each day. If we live by them we will be able to live in peace with each other and in balance with the Earth and all living things.

Although rooted in antiquity, these lessons are directly relevant to contemporary environmental issues. The symptoms of our present life out of balance can be found in the plethora of environmental problems that we must confront: destruction of the forest, poisoned rivers, declining fish populations, and social justice.

It is up to each of us to establish balance in our lives and pass it on to future generations.


Hupa Flower Dance Song

Talk about the meaning of the song. How might we take care of the earth. What does “The Hupa Flower Dance Song” mean? How might we unite the people? It is an ancient chant that is relevant to today. Practice the chant until the group is able to sing it.

Arrange the children in one large circle or one outer and an inner circle, if space is a factor. Go outside if possible. While holding hands, have the children enlarge the circle(s) until their arms are outstretched. Drop hands. Have them turn to their right so that they are front to back, one behind the other. Have the children hold their hands together behind their backs. Keep a rhythm by either clapping your hands or, better yet by beating a drum. While walking in rhythm have the children sing the song.

Discuss the attitude Native American Indians have historically had regarding the Earth. Was litter a problem? What has changed? What can we do about it? Why is the Earth sacred? Is precious another word for sacred? What does sacred/precious mean?
Hupa Flower Dance Song

Da:yi di-ding Kyaw do: ningya tinixwa-hey
Da:yi di-ding Kyaw do: ningya tinixwa-hey
Da:yi di-ding Kyaw do: ningya tinixwa-hey
Da:yi di-ding Kyaw do: ningya tinixwa-hey
Da:yi di-ding Kyaw do: ningya tinixwa-hey

Miloy

TRANSLATION:

Where can I go where there is no disease? (bad things)

Where can I go where there is no disease? (bad things)

Where can I go where there is no disease? (bad things)

Where can I go where there is no disease? (bad things)
A Sense of Place

Major Concept

People who have a sense of belonging to the environment feel ownership of it, and a desire to protect it.

Objective

As a result of this activity students will demonstrate a concern for maintaining a connection with a special place or object.

Background

Developing a sense of place and belonging is fundamental to American Indian life. When people embrace and treasure a place or thing, they are willing to actively work to maintain its integrity. This lesson is central to the curriculum. Hence, the reason it is suggested for all grade levels. There are five activities that comprise the lesson. Collectively, they elicit a feeling of being "centered and grounded" with the environment.

Grades:
Primary - Secondary.

Subject:
Social Studies, Language Arts.

Time:
One class period and the rest of the school year.

Procedure

Activity 1. Grok a Rock

Instruct students to bring to class a rock the size of a fifty-cent piece. Encourage them to be selective, and bring a rock that attracts their attention rather than simply the first one they find. Keep extra rocks on hand for those students who forget to bring their own.

With rock in-hand, have your students sit in a circle. Tell them that for the next minute they are to get to know their rock. They may feel it, smell it, examine it.
Activity 3. Your Special Place

One of the rarest commodities of modern life is silence. Without silence it is difficult to be deeply reflective or become spiritually energized. To retain our humanness we need to commune with ourselves, and to bond with the world around us regularly. One of the most powerful experiences for students is silent listening. Students learn to deeply appreciate the opportunity to be alone, if only for a short time.

Challenge your students to find a “special spot” somewhere in their environment. Encourage them to find their spot outside. It might be under a tree near their home, an open hillside across town, or on a rock by the river. Their special spot can be looked upon as a spiritual place, known only to them. Tell your students it may take them several tries to find a special place. Help them realize it may not be easy to find place of personal ownership, but with effort it will

Activity 2. The One Meter Hike

This activity heightens the senses. Have your students work in groups of three. Each group receives a piece of string one meter in length and at least one magnifying glass. Challenge them to find a grassy area of the school ground in which to lay their string in a straight line. Give students 15 minutes to explore the environment along the string. Encourage them to record their discoveries in a group journal. Emphasize that discovery is the goal.

Back in the classroom have the students share their discoveries. Finally, have your students close their eyes and imagine what it would be like to be a tiny creature living in the environment they explore. Have them write a story about their adventures as that creature.

Activity 2. The One Meter Hike

This activity heightens the senses. Have your students work in groups of three. Each group receives a piece of string one meter in length and at least one magnifying glass. Challenge them to find a grassy area of the school ground in which to lay their string in a straight line. Give students 15 minutes to explore the environment along the string. Encourage them to record their discoveries in a group journal. Emphasize that discovery is the goal.

Back in the classroom have the students share their discoveries. Finally, have your students close their eyes and imagine what it would be like to be a tiny creature living in the environment they explore. Have them write a story about their adventures as that creature.
become known to them.

Instruct your students to visit their special spot three times each week for at least 10 minutes. You may wish to agree on the days and times they are to go to their spot.

Discuss with your students their thoughts and feelings when visiting their special place. Treat all responses equally.

Activity 4. The Journal

Journals are a personal record of every day events, feelings, and thoughts. Many people keep a written record of their thoughts and emotions. Throughout history many important people have passed along their vision of the world from which future generations have learned.

One of the strengths of keeping a journal is that writing helps you clarify thoughts and feelings. Often, we communicate in writing differently than we do verbally. Teachers can gain new insights of their students from reading their thoughts. The journal is an excellent technique to help students develop a "sense of place."

These guidelines may help when assigning journal writing to your students:

a. Have your students write every day. Try to make it a habit.

b. Write in the same place at the same time each day. For this activity encourage your students to write while visiting their special spot.

c. Write at least one page each day. Let students write about anything they want. However, if your students are having trouble thinking of things to write you can give them themes, such as: patterns in nature, similarities of things around them, examples of change, variety of objects in their immediate environment.

d. Use the journal to address feelings and thoughts, not just as a chronology of daily events.

Activity 5. Adopt-A-Spot

People often feel powerless concerning economic, political, or social problems. But even if individual action by itself cannot solve problems, it can be the basis for a positive, personally enriching way of living.

Have your students read the article, “My 20 Foot Swath.” Discuss the following questions:

a. What worries this man?

b. What does he try to do about it?

c. Does he think his response is effective?

d. What response do you make when faced with a problem of this kind?

Have the class identify a waste, litter or recycling problem of their own, and determine what to do about it.
“I worried so much about world hunger today, that I went home and ate five cookies.” Did personal or global problems ever become so overwhelming that you were immobilized, or driven to some action that actually aggravated the problem? Have you experienced such frustration about the hopelessness of solving the problems of poverty, environmental pollution, or human suffering that you could avoid it only by deciding that you were powerless to do anything about their alleviation? This is called Responsibility Assumption Overload (AAO). Here’s how I dealt with the feeling.

I park my car a way from my building at work. That way I get both exercise and a parking space! Everyone else competes for spots next to the entrance. My morning and late afternoon strolls take me on a stretch of lawn between the tennis courts and the soccer field, and across an occasionally used softball diamond. The lawn is twenty feet wide, more or less. Soft and green, it was originally very littered. Tennis players discard tennis ball containers (and their flip-tops), worn out sweat socks, broken shoelaces and candy bar wrappers. Soccer game spectators leave behind beer bottles and junk food cellophane.

In my early days it disgusted me, and my thoughts centered on ways of correcting the situation: writing letters to the campus newspaper (no doubt totally ignored); campaigning for anti-litter regulations (who would enforce them?); organizing a “Zap-Day” cleanup (leaving 364 days for littering). All my noble efforts would have demonstrated my indignation, raised my blood pressure, and attracted attention, but they would not have changed the appearance and/or condition of the area.

So, I decided to take ownership. I would be the solution. I did not tell anyone of this; it was probably against some rule or another. I decided that I would be responsible for the environmental quality of this twenty-foot swath. I did not care what other parts of the campus were like. They were someone else’s problem. But each day, going from and to my car, I picked up litter.

At first, it was as much as I could conveniently carry. Then I made a game of it, limiting my picking to ten items each way. It was an exciting day when I realized I was picking faster than “they” were littering. Finally, the great day arrived when I looked back on my twenty feet of lawn now perfectly clean.

Where did I put the litter? At first, I brought it I’ve done this for several years now. Has general campus appearance changed? Not much! Have litterers stopped littering? No! Then if nothing has changed, why bother?
Here lies the secret. Something has changed. My twenty-foot swath and me! That five minute walk is a high spot of the day. Instead of fussing and stewing and storing up negative thoughts, I begin and end my workday in a positive mood. My perspective is brighter. I can enjoy my immediate surroundings—and myself—as I pass through a very special time and space.

It is better because of me. I am better because of it. We enjoy the relationship. Maybe, even, ‘it’ looks forward with anticipation to my coming.

What Would You Do?

Major Concept

Our beliefs are reflected in the way we act.

Objective

As a result of this activity students will be willing to more openly share their feelings regarding solid waste issues with their classmates.

Procedure

This activity can be done as a homework assignment or at school. Sharing student responses is fundamental to the exercise. Because students are relating their feelings it is advised that some ground rules be set: 1) students always have the right to “pass,” and 2) classmates are not to pass judgment on anyone’s contribution. Following these two rules will help establish an atmosphere of trust and belonging.
“At each dance site you must first ask Kixanâ:y to use the land.”

Melodie Carpenter
1. You are with your family at a softball game. You are all enjoying sandwiches, candy, soft drinks, and ice cream while you cheer for your team. When the game is over, your mom and dad put all the food wrappers and soda cans underneath the seats.

What would you say?

2. You are helping your sister clean the shed. It is a mess! Tools, nails, bolts, nuts, wire, and wood are scattered all over. You notice some soda cans and some jars in the trash.

What would you do?

3. You and your brother are in the grocery store. You put a few things in your basket, then come to the cereal department. Your brother wants to buy the “snack pack” cereals. The snack pack has ten little cardboard boxes wrapped in plastic.

How would you react?
4. You and your friend are walking home from school. You notice that your neighbor’s trash can is overflowing with aluminum cans, and newspapers.

What would you do?

5. You and your family are sitting at the dinner table. Your mother mentions that the ease of disposing trash at the collection facility is too difficult. Your father wants to start burning trash in a burn pile.

What would you say?

6. You are walking home from school with three of your friends. You stop by the market and each of you purchase some food and soda. One of your friends opens a candy bar and throws the wrapper on the ground.

What would you do?
The Consequences of Litter

Major Concept

Protecting the environment requires personal commitment.

Objectives:

Students will:

1. associate feelings of protection for a special place in the environment; and

2. be able to articulate how consequences of people’s actions toward the land affect other people.

Background

The guided imagery in this activity enables students to begin to understand that everyone has a special place to which he or she is emotionally attached. Guided imagery is a good way to allow students to use their imaginations; it also enables students to go on mental journeys even if they are unable to take physical ones.

Procedure

1. Close your eyes and think of a place that is special to you. A place in your community you like to visit that makes you feel good. It is a place where you can think and where you enjoy being...think about the smells at that place, the sounds you might hear, the things you see around you. Now imagine that while you are in your special place, someone walks by and throws an empty soft drink can on the ground...imagine how you feel...now imagine that someone else walks by and throws
a bunch of candy wrappers and milkshake cups on the ground. Now imagine that someone comes by your special place and empties a huge garbage can full of garbage right in the middle of your special place so that there is a huge pile of trash in your special place. How do you feel? Think about how your special place looks now and remember what you see and feel...when you are ready, open your eyes.

---

**DISCUSSION**

How did you feel when your special place was littered?

Do you think that most people have a special place that they care about? What are some of the special places of your family members?

Can you think of things that people sometimes do that affect another person's special place?

What are other things people do that affect the environment?

---

2. Distribute pieces of drawing paper and crayons or marking pens. Instruct students to fold their paper hot dog style. Have students draw two pictures. On the left half of the paper a picture of their special place before the trash, and on the right half a picture that includes the trash.

3. Discuss with students what they experience in their guided imagery. Ask volunteers to share their drawings.

For homework, ask students to express their reaction to the reading and discussion (through drawing, poetry, short story, dramatics, etc.).

Ask students to consider how they are a part of the web of life and what actions they can take to minimize their environmental impact on the Earth.

**Enduring Litter**

Litter at the roadside is ugly. How long will it stay before decaying may be an ugly surprise?

<table>
<thead>
<tr>
<th>Item</th>
<th>Decomposition Time</th>
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<tbody>
<tr>
<td>TRAFFIC TICKET</td>
<td>2-4 weeks</td>
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<tr>
<td>COTTON RAG</td>
<td>1-5 months</td>
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<tr>
<td>ROPE</td>
<td>3-14 months</td>
</tr>
<tr>
<td>WOOL SOCK</td>
<td>1 year</td>
</tr>
<tr>
<td>BAMBOO POLE</td>
<td>1-3 years</td>
</tr>
<tr>
<td>PAINTED WOODEN STAKE</td>
<td>13 years</td>
</tr>
<tr>
<td>TIN CAN</td>
<td>100 years</td>
</tr>
<tr>
<td>ALUMINUM CAN</td>
<td>200-500 years</td>
</tr>
<tr>
<td>PLASTIC 6-PACK COVER</td>
<td>450 years</td>
</tr>
<tr>
<td>GLASS BOTTLE</td>
<td>Undetermined</td>
</tr>
</tbody>
</table>
We did not think of the great open plains, the beautiful rolling hills and the winding streams with tangled growth as “wild.” Only to the white man was nature a “wilderness” with “wild” animals and “savage” people. To us it was tame. Earth was bountiful and we were surrounded with the blessings of the great mystery.

—John Greenleaf Whittier
What Are Your Habits?

Major Concept

Personal actions impact the environment.

Objectives

As a result of this activity students will demonstrate the ability to:

1. explain why people act in ways which improve or degrade their environment; and

2. write survey questions that are directed at addressing litter and garbage problems.

Background

Students design and use a survey to gather information. They represent data on a chart and make a graph. Survey data is discussed and solutions to undesirable environmental behaviors are proposed.

Procedure

1. Begin a discussion with the question: “What is your personal environment?” Students will probably say their home, some may say it is everywhere they are at any given time. Have a student look up the words in a dictionary and share the definitions with the class. Try to arrive at an operational definition: THE THINGS THAT ARE IN YOUR IMMEDIATE SURROUNDINGS THAT AFFECT YOU.

2. Ask students to list all the things that make their environment look good and that make them healthy. Place some of the answers on the board. Now, ask students to list all the things that make their environment look bad or that might hurt them.
Place some of these answers on the board. Compare and discuss the two lists.

3. Discuss the word behavior, and ask students to identify desirable behaviors. Ask students what behaviors degrade their environment. Identify these as undesirable behaviors. Pass out the handout, "Personal Environmental Action Survey," and explain it. Have the students complete the survey, being as honest as possible. After they finish, ask the class to discuss the impacts on their personal environments.

4. Tally the YES and NO answers in chart fashion on the blackboard or chart paper. Have a student volunteer collect answers by counting hands and putting tally numbers on the chart.

5. Give students the handout, "Survey Graph," and have them complete it using the information recorded on the board or chart paper.

   a. Instruct students that each horizontal bar is divided into a YES space and a NO space running across the page.

   b. For each question, students are to find how many YES answers there are and how many NO answers. They record these on the graph by making horizontal color bars, filling in all YES bars with one color and all NO bars with another color. (Students can use different pencil markings for YES and NO answers.)

   c. To make color bars, students can put their ruler vertically on the chart and line it up with the number of YES and NO answers recorded for the question. They make a vertical mark to indicate the designated number. Then, they color the bar to that mark. A sample above the chart has been done in this fashion.

6. Have students give the survey to other students in the school that are not in their class. Graph and compare results. Or have each student take the survey home to give to an adult. Graph and compare results in class.

Adapted from *Super Saver Investigators*, Ohio Department of Natural Resources, 1990.

### Example Questions for the Personal Survey Form

1. I put paper scraps in my pocket when there is no trash can nearby to throw them in.
2. I sometimes throw trash out of the car window when I travel.
3. I sometimes throw trash on the ground.
Place a check in the box that best describes what you do.

1. I put paper scraps in my pocket when there is no trash can nearby.
2. When I see trash that someone else has thrown on the ground, I usually leave it there because I didn’t put it there.
3. I buy returnable soda bottles and return them to the store.
4. I sometimes throw trash out of the car window when I travel.
5. I put all trash into the garbage including materials I could recycle.
6. I have a cluttered room with no container for trash.
7. I throw away all food containers and paper bags after they are used.
8. I throw all old, out of style clothing in the trash and buy more.
9. I sometimes throw trash on the ground.
10. I throw returnable bottles in the trash.
11. I reuse paper bags and food containers.
12. I give my old clothes to someone who can use them, or I use them as cleaning rags rather than throwing them away.
13. I pick up trash I find on the ground even though I did not put it there.
14. I make sure there is a bag for litter in the family car when we travel, and I empty it when we get home.
15. I sweep and clean my room and empty the trash from it daily.
16. I maintain a compost pile at home.
Survey Graph

What Are Your Habits?
What Are Your Habits?
What Are Your Habits?
Crow and Weasel

Major Concept

We all have our special talents, skills and adaptations, yet, we cannot survive as a people without bonding with others. The story of Crow and Weasel explores the meaning of friendship, respect, and personal responsibility in our relationships with others, of all species and races.

Objectives

As a result of this activity students will be able to:

1. show how adaptations help animals to survive in the environment;

2. relate how human’s special adaptations help us to survive, while at the same time creating some special problems unique to our species;

3. demonstrate a familiarity with the personal stories of their classmates while developing their own oral presentation and listening skills;

4. show a better understanding for the importance of friendships and the personal responsibility that it requires to maintain them;

5. express an appreciation for where their food comes from and demonstrate a greater reverence for all living things; and

6. demonstrate an increased awareness about important historic, biological and geological features of their community.

Background

During their adventures, Crow and Weasel encounter many unknown plants and animals. They are far from home, and in order to survive they must be able to understand the nature of these animals and plants so that they can have food to eat, medicine to heal and.
most important, a friend to help them in time of need. They must adapt to the new environments that they encounter just as all plants and animals must adapt to their specific habitats in order to survive. The following four activities are designed to assist students in becoming more sensitive regarding these attributes and to appreciate the richness of the literary work, *Crow and Weasel*.

The book should be read aloud by the class prior to the activities.

**Activity 1**

**Design an Animal.**

**Time:**
Two class periods.

**Materials:**
*Crow and Weasel*, by Barry Lopez, tape, glue, paints, cardboard, ribbon, string, egg cartons, and various other “found” materials.

**Procedure**

In this activity children will select from a list of characteristics (see questionnaire) that will help them to describe the environment and the adaptations of their own imaginary animal. Then using materials from home and school (pipe cleaners, cardboard, ribbons, old hair curlers, shells etc.) they will construct an animal that is adapted to living in the environment that they have described. After they have finished constructing their imaginary animal it should be displayed in the classroom within the special habitat that is adapted to survive in, and everyone should be given a chance to share their special animal and how it lives.

An alternative activity would be to collect the questionnaires after the children have filled them out, and pass them back randomly. Have each student construct another student’s imaginary animal, without telling whose they are making (if possible). When they finish have them place the animal in its classroom habitat (chalkboard, teachers desk, drapes, etc.), and then have the children see if they can find the animal that they had originally described and explain to the class why they think it is their animal. This activity may also be conducted outside.

**Questions:**

- What are adaptations?
- Why are they important?
- What makes each species of plant and animal unique?
- What adaptations do humans have to survive?
- What makes humans unique?
- Human’s adaptations afford us certain advantages. Do these same adaptations create any problems or disadvantages?
Follow-up:

Have each child pick an animal from the real world and describe how it has adapted to live in its own environment, and what it needs to survive. How do adaptations affect competition between species for food, water, and shelter? Can animals choose which way they will live? How do humans' adaptations affect our interaction with other species in the competition for food, water and shelter? Can humans choose how they live? Are we able to decide what we need to survive?
Design an Animal

My animal is the following color (circle one or more):
- red
- blue
- yellow
- orange
- green
- brown
- black

My animal has the following color pattern (circle one):
- checks
- stripes
- triangles
- circles
- lines
- spots

My animal has the following number of legs (circle one):
- two
- four
- six
- eight
- more

My animal has (circle one or more):
- antennae
- wings
- feelers
- claws
- big legs
- big eyes

My animal has the following number of eyes (circle one):
- one
- two
- four
- eight
- more

My animal lives (circle one):
- on the wall
- on the table
- on the floor
- on the ceiling
- among books
- on chairs
Activity 2

A Natural Interview for Making Friends

Materials:
Pencil and paper.

Background

“We are very grateful for your hospitality, Badger,” said Crow, “Each place we go we learn something, and your wisdom here has helped us.”

“I would ask you to remember only this one thing,” said Badger. “The stories people tell have a way of taking care of them. If stories come to you, care for them. Sometimes a person needs a story more than food to stay alive. That is why we put these stories in each other’s memory. This is how people care for themselves. One day you will be good storytellers. Never forget these obligations.” (Pg. 48)

Procedure

This activity is a treasure hunt to find some of the personal stories of our friends. Each child will be given a questionnaire to fill out about his or her classmates. After allowing them time to fill in the blanks (the number of questions can be limited to control the time involved) have each child share several of the questions with the class and what they learned about their friends and themselves.

A variation might be to pair children into partners and have one child tell the other a story about themselves, or answer a select group of questions from A Natural Interview For Making Friends. Then the child who listened would share the story that they have learned about their friend to the group. Then switch and allow the other child to share their story.
Interview for Making Friends

Find someone who:

• Has participated in a traditional ceremony: ____________________________
• Has a relative who works in the field of natural resources: ________________
• Sits quietly every day and observes nature: _____________________________
• Has written a letter about an environmental issue: ______________________
• Has seen an endangered species: ____________ Species: ________________
• Knows who Chief Seattle is: _________________________________________
• Knows a good story about how the stars were created: __________________
• Has slept in a traditional plank house: _________________________________
• Has spent the night fishing or camping on the river: _____________________
• Has helped an injured animal or tree: _________________________________
• Has an exciting or inspiring nature experience to tell: ___________________
• Can recite a poem, song, or quotation about nature: _____________________
• Has a favorite outdoor activity: ________________________________

• Has gotten lost outdoors: _____________________________________________
• Has lived without electricity for an extended period of time: _____________
• Has overcome a personal fear while in nature: __________________________
• Has seen at least three of the following animals in the wild: A Bald Eagle, A Ring-tail cat, a Fisher, Mink, a Sturgeon, a Coyote, a Mt. Lion, a Red-tail Hawk, a Bobcat:
  _________________________________________________________________

• Can name three books he or she would like to have while taking a long camping trip in the woods:
  _________________________________________________________________

Names of the books ____________________________________________
Activity 3

Giving Thanks

Time:
One class period and a few hours at home.

Background

"I had almost given up when this one came to me," said Weasel. "I had turned back and was circling around there, only a short way off, when I saw the movement. I notched an arrow immediately, and when I had a clear shot I took it. My arrow went wide and high. But this one did not run. Instead it took several steps toward me. I notched another arrow and shot again...this time it went true. He sat down, then went down on his chest. When I got to him the light was still in his eyes. I extended my hand and could feel life vibrating around him, very strong for one like this I thought. I stood away until the light faded and the eyes were quiet."

“Well the Above Ones heard you, perhaps even before you asked for their help.”

“I never forget now to give thanks, to them, to this one. In the morning we must put these bones in a tree, where no harm will come to them” (Pg. 51-52).

All animals and plants are alive and whether we eat meat, or are vegetarians, we all take life to live. Survival is an exchange of one life for another. It is an act that requires a spirit of gratitude and care.

Procedure

From either your own garden, a friend’s or community garden pick a vegetable directly from the ground or vine and prepare it for a meal in a proper manner. Write a grace for the gift you have received. Share your impressions with your fellow classmates.
Activity 4

Bioregional Reflections

Time:
Two class periods, homework, and the rest of the year.

Background

The best place to begin cultivating an awareness of nature is at home. Everyone should have an understanding of some of the basic components that influence the environment that they live in. To begin to understand the natural world around us is to begin to understand ourselves.

Procedure

Pass out copies of the check list and review it with the students to make sure that they understand the questions. Encourage them to consult family, friends, neighbors and area experts to collect the information. After they have completed the check list review it with the class to summarize student's knowledge, share their insights and complete any unanswered questions.
Bioregional Check List

- Have you ever traveled to a different place? Did you carry your way of life with you, for everyone to see?
- Have you ever played a trick on a friend? Why?
- What does it mean when Mouse says “It’s difficult to lead a good life”?
- What does it mean to have courage?
- What is a Red Berry Moon? What phase is the moon in at this time?
- After Grizzly Bear saved Crow and Weasel from starving, Weasel told him that, “Sometimes it is what is beautiful that carries you.” What do you think he meant by this?
- What was the historical land use of your home?
- Trace your tap water from the source to the tap.
- What was the total rainfall in your area last year?
- From what direction do winter storms come from in your region?
- What primary geological event or process influenced the land form where you live? What is the evidence?
- When was the last time that a fire burned in your area?
- Name five edible plants in your region and their seasons of availability.
- What are the major plant and tree associations of your region?
Wisdom of Nature calls at all seasons, when will you learn from her instruction, understanding speaks aloud and gives sound reasons, when will you listen, hear and take discretion.

At the entrance of the forest wisdom hails, at the entrance of the prairies she is at hand, at the heights beside the mountain trails and in the valleys she takes her stand.

Stony elders
Shopping for Waste

Major Concept

Excessive packaging increases costs and wastes natural resources.

Objectives

As a result of this activity students will demonstrate an understanding:

1. how recycled materials are used in packaging; and

2. which natural resources can be conserved through careful buying and recycling.

Background

The Environmental Action Foundation published research showing that the energy used to package fast food chain hamburgers in a year was equivalent to the amount of energy required to supply the people of Boston, Washington DC, San Francisco, and Pittsburgh for a year. More than 10 percent of the price of an item is packaging alone.

Procedure

1. Explain to students that they will be conducting a survey of some grocery store products and packaging.

2. Review definitions of survey items:

   - Organic: derived from living organisms.

   - Renewable Resources: naturally occurring raw materials derived from an endless or cyclical source such as the sun, wind, falling water (hydroelectricity), fish, and trees.

Adapted from The No Waste Anthology, California Department of Toxic Substances Control, 1991.
• *Nonrenewable Resources:* naturally occurring raw materials, which because of their scarcity, the great length of time required for their formation, or their rapid depletion are considered exhaustible. When they are gone, they are gone: Examples are petroleum, and metals.

3. Review how to identify packaging made from recycled materials—look for recycling symbol. The grey paper-board used for cereal boxes is made from recycled paper.

4. Review and distribute survey forms: “Product and Packaging Chart” and, “A Potato by Any Other Name.”

Discussion

Approximately what percentage of the cost of the food you buy goes for packaging?

How can you reduce the amount of packaging?

What are some examples of over-packaged items?

What are some examples of items with appropriate packaging.

Take apart a package of Bubble Yum or Wrigley’s Gum. Place the gum in one pile and the disposable waste in another. Also, point out the chewed gum is waste as well.

*These mountains are our temples, our sanctuaries, and our resting place. They are a place of hope, a place of vision, a place of refuge, a very special and holy place where the Great Spirit speaks with us. Therefore, these mountains are our sacred places.*

—Chief John Snow
Survey Instructions

SURVEY 1. Product and Packaging Chart

1. Choose 10 products and complete the Survey 1 chart for each.

2. Choose at least 2 products available in a choice of packaging.

3. After examining the products you chose, answer the following questions:

   - Which products need special packaging to protect public health.
   - Which product’s packaging was made from recycled materials? (Look for recycling symbol.)
   - Which products could be bought in bulk or in large containers?
   - Which products could be bought in a less processed or packaged form?
   - Which product’s packaging could be improved to save energy and resources and reduce waste?
Survey Instructions

SURVEY 2. Find at least 12 potato products. Fill in the chart “A Potato by Any Other Name.”

NOTE: Price per pound listing can be found on shelf labels beneath products. Analyze and discuss your findings.

1. What effect does processing and packaging have on a product’s cost?
2. What effect does package size have on price?
3. What effect does package size have on the amount of waste?
4. What else is added to food as it becomes more highly processed?
5. List examples of recyclable packaging.
6. List examples of products for which recyclable packaging is not even a choice.
7. List examples of packaging made from recycled materials.

Adapted from, The No Waste Anthology, California Department of Toxic Substances Control, 1991.
### PRODUCT AND PACKAGING CHART

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>RENEWABLE OR NONRENEWABLE PACKAGING</th>
<th>IS THIS PRODUCT NECESSARY?</th>
<th>IS THERE AN ALTERNATIVE</th>
<th>CAN PACKAGE BE IMPROVED?</th>
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<tbody>
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</tbody>
</table>
**SURVEY FORM 2**

**A POTATO BY ANY OTHER NAME**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>PACKAGE SIZE</th>
<th>PRICE</th>
<th>PRICE PER POUND</th>
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<tbody>
<tr>
<td>Russets potatoes</td>
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</tr>
<tr>
<td>White potatoes</td>
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<td>Bag potatoes</td>
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<td>Bag potatoes</td>
<td>10 lbs</td>
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<tr>
<td>Bag potatoes</td>
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<tr>
<td>Frozen hash browns</td>
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<tr>
<td>Frozen french fries</td>
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<td>Ore-Ilda potatoes O’Brien</td>
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<td>Ore-Ilda golden fries</td>
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<td>Ore-Ilda dinner fries</td>
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<tr>
<td>Betty Crocker potato buds (box)</td>
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<tr>
<td>Eagle potato chips</td>
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<td>Pringles</td>
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<tr>
<td>Lays potato chips</td>
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<tr>
<td>Lays potato chips</td>
<td>10.5 oz</td>
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<tr>
<td>Ruffles potato chips</td>
<td>15 oz</td>
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<tr>
<td>Small order fries from fast food</td>
<td></td>
<td>3.5 oz</td>
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We are learning about how our actions and lifestyles affect our environment. Please help us by answering the following questions. To answer the questions think back to how things were when you were growing up.

Your Name

What is the date of your life are you remembering to answer this survey?

1. What type of items did you throw away weekly?

2. How much weekly trash did your family generate?

3. What happened to trash and garbage when it was disposed?

4. Have you noticed more or less litter in your community since you were young?
5. How were items packaged when you bought food or general items at a store?

<table>
<thead>
<tr>
<th>Item</th>
<th>How was the item packaged for sale?</th>
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Thank you for your help!
$1000 FINE FOR LITTERING
The Lorax

Major Concept

Decisions about how we live our everyday life affect the environment.

Objectives

As a result of this lesson students will be able to:

1. describe the impact of humans on natural systems; and
2. draw conclusions and make predictions about the environmental impact of certain behaviors.

Procedure

1. Read the book or watch the video The Lorax.

2. Have students fill out the worksheet, share their responses in pairs, then discuss the questions in the whole class.

Adapted from the AVR Teacher’s Resource Guide, Association of Vermont Recycler, POB 1244, Montpelier, VT 05601.
1. Did you like the story? Why or why not?

2. What is the message of the story?

3. Why did the Once-ler cut down the Truffula trees?

4. What happens to the Once-ler when there are no more Truffula trees?

5. What happens to the Lorax?

6. Is bigger always better? Give an example to back up your opinion.
7. A “Thneed” is defined as a thing that everyone thinks they need. What are some examples of thneeds - things that you think you need?

8. If you were the Once-ler, what would you have done differently to protect the environment?

9. What do YOU think the Lorax’s message “Unless” means?

10. What can you do to help preserve natural resources?
11. The Lorax spoke for trees “for trees have no tongues.” What would you choose to speak for, and what would you say?

12. Identify and research real-life examples of the following items in the story:
   Swomee-Swans, Truffula Trees, Brown Bar-ba-loots, Humming Fish, Thneeds.
13. Write a conclusion... "What happened next?"
Trash in the Past

Major Concept

In the past, people created less waste.

Objectives

As a result of this activity students will:

1. be able to describe the effects of littering and what particular situations induce people to litter or generate waste;

2. be able to relate the underlying causes of solid waste in North America;

3. be able to describe historical changes in the generation and disposal of waste in their community; and

4. improve their abilities to collect data and organize information.

Background

Students gather historical data by giving a survey interview form to an older adult in their community. Students compare and contrast information from surveys with present day waste problems. This information is used to write a class historical essay.

Procedure

Students listen to a story and assume the roles of two contrasting character types in the story. They discuss and write about their feelings as litterer and/or as someone who keeps others from littering and who cleans up. They
describe and act out particular social situations that present groups of people with an opportunity to litter. They discuss and implement solutions to classroom litter problems.

1. Read aloud the book, *Wump World*. (*Wump World*, inhabited by Wumps, was a beautiful, unpolluted world until it was invaded by Pollutians from Pollutus. The Pollutians drove the Wumps underground and nearly destroyed Wump World by polluting the air with smoke, littering the land and polluting the water with waste. When they left Wump World, there was only one grassy meadow remaining. Slowly, Wump World recovered, but it would never be the same.)

2. Discuss the book as a class. What are some things the Pollutians did after they landed in Wump World? What were the effects of the things the Pollutians did? How do you think the Wumps felt after their planet was polluted by the Pollutians? In what ways are the actions of the Pollutians similar to those of people on our earth?

3. Have students identify group situations where the people involved might be considered Pollutians. Identify age or sex of group, place and activity involved. (Example: young boys at theater watching a movie; parents at home generating garbage; teenage girls riding around town in an automobile; senior citizens at a baseball game.) Ask students to suggest what could be done to keep people from littering in these situations. Plays could be produced in groups with role(s) of Wumps and Pollutians being acted out in regard to these situations.

4. What are some parallels to real-life situations? Are there “Wumps” in real life who sell-out?

5. Write a new ending to the story. What are the Wumps doing today? Have your students respond individually in their journals, then discuss their ideas in small groups, and finally in an all class discussion.

6. Give each student an Adult Survey Form. It should be completed by the oldest adult relative in the family or a senior tribal member.

7. The following week, as the survey forms are brought back to school, compile the information into a chart, one section for each question. You might want to make copies of the completed survey form and cut out answers, gluing them according to categories on the chart.

8. At the end of the week conduct a group discussion of the items on the chart. Compare answers to the way we handle our waste today. How have things changed? How have changes caused problems for our environment?

9. Have students predict how the questions on the chart, rephrased in present tense, might be answered when they are grown, reflecting on what must be done with solid waste in the future.

Adapted from *Super Saver Investigators*, Ohio Department of Natural Resources, 1990.
In the myth time, the Jump Dance was taught to the people (in the form we see today) to chase away this large, black cloud that was hovering over the North End of the Valley. It was full of disease and famine. It worked and the cloud left. That's why we dance... so that it doesn't come back.

— Melodie Carpenter

— photo courtesy of Merv George family