WHAT DID YOUR LUNCH COST WILDLIFE?

OBJECTIVES

Students wilL: 1) trace some foods from their source to the consumer; 2) identify the impact those foods and their processing have on wildlife and the environment in general; and 3) recommend, with explanations, some food habits that could benefit wildlife and the rest of the environment.

METHOD

Students trace food sources, diagram environmental impacts, and apply the knowledge they gain by making changes in some of their consumer choices.

BACKGROUND

NOTE: Especially for younger students, this activity makes a nice summary companion to "What's For Dinner?"

Most of us make lifestyle choices each day that have some impact on wildlife and the environment. Many of those impacts are indirect, and therefore we are not as aware of them as we might be. The choice of foods we eat, for example, is an area with many implications for wildlife and the environment.

The places and ways in which foods are grown has impact. For example, we know that loss of habitat is one of the most critical problems facing wildlife.

Age: Grades 4-12
Subjects: Social Studies, Language Arts, Science, Home Economics, Vocational Agriculture
Skills: analysis, application, classification, comparing similarities and differences, discussion, drawing, evaluation, media construction, problem-solving, synthesis, visualization, writing (limited)
Duration: one to three 45-minute periods
Group Size: any
Setting: indoors
Conceptual Framework Reference: I.D., III.B., III.B.1., III.B.2., IV.C., V.A., V.A.1., V.B., V.B.1., VI.A., VI.A.2., VI.A.3., VI.A.4., VI.B., VI.B.1., VI.B.2., VI.B.3., VI.C., VI.C.16., VI.D., VI.D.1., VII.A., VII.A.1., VII.A.2., VII.A.3., VII.A.4., VII.B., VII.B.1., VII.B.3., VII.B.7.
Key Vocabulary: organic, inorganic, source, renewable, nonrenewable, impact
Appendices: Taking Action

Habitat may be lost to agricultural use or development as well as to industrial, commercial, and residential uses. Given that people need food, the ways in which we grow that food—and the ways we care for the land in the process—are very important. Farmers can take measures to maintain and improve wildlife habitat as they grow and harvest their crops. They can pay attention to the impact of their growing practices. Both inorganic and organic fertilizers are commonly used in industrial agriculture. These compounds may run off or leach into water supplies. In lakes, for example, this run-off may contribute to a huge increase in the growth of plant nutrients such as algae. This excess growth can act as a pollutant, poisonous to aquatic animal life such as fish, amphibians, arthropods, and insects.

Use of insecticides and herbicides also affects the environment, including wildlife. Obviously, if pesticides kill and eliminate the food source for wildlife, the wildlife either leaves or dies. Indirect effects can include accumulation of pesticides in the bodies of animals such as predatory birds, fish and mammals, including people.

Not all of the impact is due to some farmers' practices, however. Certainly the transportation, processing, packaging and marketing industries are involved as well. Questions about the natural resources involved in getting the food from its source of origin to the consumer are critically important. One example is increased exploration for and development of fossil fuels used to transport the food from growing site to consumer, used often to fuel the processing, and frequently used in the packaging, as in the case of fossil fuel-derived plastics.

Ethical considerations can also be raised concerning the impact upon individual animals and plants by the methods used to produce food for people, as well as choices of which foods to eat. If the students have concern about adopting lifestyle habits that can be healthful to themselves at the same time they have less impact on wildlife and the environment, they can look at the food they eat as one place to begin.

The major purpose of this activity is to provide a means for students to begin that process.

MATERIALS

writing and drawing materials

PROCEDURE

1. Select a processed food item. Identify the item's ingredients. In a discussion with students, trace the item's ingredients all the way back to their origins. Include where and how they grew or were formed and how they were harvested, processed, transported, packaged and made available to the consumer.
2. Ask the students to generate a list of foods they either brought or bought for lunch. Be sure to include any packaging materials the foods came in.
3. Ask each student to pick one food to trace all the way back to its origins, including where and how it grew, was harvested, was processed (if it was!), was transported, was packaged and was made available to the consumer—the student. Ask the students to make simple flow diagrams of the path the food takes. (The students may want to do some research at this point to get some additional information.)
4. Next ask the students to add drawings of possible and likely impacts to wildlife and the environment along the path their food took to get to them.
5. Ask the students to report back to their classmates—using their diagrams as a visual aid as they describe the path taken by their food and its impact to wildlife and the environment along the way.
6. Ask the students to discuss and summarize their findings.
7. Ask each student to think of one change he or she could make in his or her own lunch-time eating habits that would be likely to have a beneficial—or at least less harmful—effect on wildlife and the environment. Describe the reasoning for this change and evaluate its consequences. If, after examination, each change seems in fact to be helpful, suggest that the students try making their changes for a week. At the end of the week, ask the students to report back. Were they able to stick with the change? What happened? If they didn't make the change, why not? Did they forget? If they did make the change, did they find themselves making or thinking about any other possible changes? If yes, what were they?

EXTENSIONS

1. Map the **energy** used to grow and get the food to you.
2. Include impact on other specified natural resources along the way.
3. Distinguish between renewable and nonrenewable resources.

AQUATIC EXTENSION

If it is not already obvious, do this activity again asking the question, "What Did Your Lunch Cost Aquatic Wildlife?" Think of whole populations of species of aquatic animals and aquatic habitats.

EVALUATION

1. Trace the possible course of a container of milk served in your school back to its probable source. What impact does this journey have on wildlife?
2. Name three food habits that could reduce negative impacts to wildlife and the environment. Explain the reasoning behind your suggestions.