

THE PLAYING FIELD

A CURRICULUM GUIDE TO PESTICIDE EDUCATION
for
Fourth, Fifth, and Sixth Grades

by
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Austin, Texas

ACKNOWLEDGMENTS

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Finally, and most importantly, we thank the millions of migrant and seasonal farmworkers who, through their hard work and long hours, provide us with the food we eat each day.

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ABOUT...

America's Migrant Farmworkers

Federal agencies estimate that as many as five million migrant and seasonal farmworkers labor each year to produce food in the United States. The hours are long and arduous and the wages are low. Entire families often travel and work together in the fields. It is not unusual for them to be compelled to move as many as thirteen times a year to find work. As a result, many farmworker children cannot complete high school. Most farmworkers are U.S. citizens or legal residents, but many are not fluent in the English language. Although the majority of farmworkers in the U.S. are Hispanic, there are also African American, Anglo, Native American, Caribbean and Asian farmworkers. Their cultural backgrounds may be diverse, but they all share the same circumstances in the fields.

Agriculture is one of the most dangerous occupations in the nation. Many of the labor laws which shield workers in other industries do not apply to agricultural workers. Due to exemptions in the law, many growers are not required to provide restroom facilities, drinking water, or handwashing facilities for workers in the fields. Child care facilities are rare, so many farmworkers must take their young children to the field with them. Housing is often located near or even in the fields. This exposes entire farmworker families, both on and off the job, to one of the greatest hazards in agriculture: **pesticides**. Most American crops are regularly treated with powerful pesticides to control loss of yield. Children may have no other playground but the fields, and are tempted to drink or bathe in contaminated runoff water.

The Video: "The Playing Field"

The Environmental Protection Agency estimates that farmworkers suffer 300,000 acute illnesses and injuries from exposure to pesticides each year. Small body mass and metabolic differences make children even more vulnerable than adults to pesticide-induced illnesses. Recognizing the susceptibility of migrant children to pesticide exposure, the EPA commissioned the National Migrant Resource Program to produce "The Playing Field," a pesticide safety video for children nine to twelve years old. The storyline draws children into the lives of a farmworker family while teaching them about the dangers of pesticides. "The Playing Field" opens a multicultural window for all children, migrant or non-migrant, Hispanic or non-Hispanic. Its value is not limited to migrant education. In addition to health and safety messages, "The Playing Field" touches on universal issues of growing up, caring for others, and developing self reliance and deductive reasoning.

The Educator's Guide

Exercises provided in this Guide can be utilized for a single lesson or a full week of related activities. Teaching elements for Social Studies, Science, Language Arts, and Health as mandated by the state of Texas are addressed. Please determine if these criteria qualify in your state.

LEARNING OBJECTIVES BY LESSON PLAN

LESSON PLANS	CONTENT AREA (TEACHING ELEMENTS)	LEARNING OBJECTIVES
Lesson One— "The Playing Field"	Social Studies (3) Health (1,2,3) Language Arts (1,2,3)	Distinguish between personal opinions and factual accounts; compare/contrast opposing viewpoints; interpret visuals Recognize hazards in environment; acquire knowledge to avoid injury; recognize personal responsibility for protecting environment Listen attentively; respond by retelling what was heard; evaluate intent and content of speaker's message; develop vocabulary; identify main ideas
Lesson Two— Fruits and Vegetables	Social Studies (1,2,3) Health (1,2,3) Science (1,2,3,4,5)	Describe how transportation contributes to economic interdependence; explain how ways of work have changed; describe various geographical regions, climates, and growing seasons; interpret visuals Recognize interdependence of people and the environment, and personal responsibility for protecting environment Explore the environment; arrange time, events, and activities in sequential order; classify; predict outcomes, make inferences, draw conclusions
Lesson Three— Migrant and Seasonal Farmworkers	Social Studies (1,2,3) Health (1,2,3) Language Arts (3)	Describe various geographical regions; describe climates and growing seasons; interpret visuals Recognize interdependence of people and the environment, and personal responsibility for protecting environment Determine strategies such as cause and effect; gather information from a variety of sources; write narratives

LEARNING OBJECTIVES

Social Studies (SS):	<ol style="list-style-type: none">1. Explain the importance of economic interdependence within and among regions of the U.S.; understand economic relationships; identify examples of the factors of production (land, labor, capital, enterprise); describe economic activities; describe how transportation contributes to economic interdependence; explain how ways of work have changed (or not changed) over time.2. Describe various geographical regions of the U.S., their similarities and differences; understand how people adapt to their physical environment; describe climates (and growing seasons) of various regions of the U.S.; locate major geographical features of the U.S. on maps; describe population patterns and the impact of physical features on selected cultures and their work.3. Distinguish between personal opinions and factual accounts of events; compare and contrast opposing viewpoints; organize data to support or refute a viewpoint; interpret visuals (pictures, charts, graphs, tables).
Health (HL):	<ol style="list-style-type: none">1. Recognize hazards in the environment and acquire knowledge and skills needed to avoid injury and to prevent accidents.2. Recognize interdependence of people and the environment; recognize personal responsibility for protecting the environment; recognize that the health of the family is dependent upon the contributions of each of its members.3. Recognize interdependence of people and the environment; recognize personal responsibility for protecting the environment.
Science (SC):	<ol style="list-style-type: none">1. Observe phenomena resulting from life, the earth, and physical sciences and explore the environment.2. Arrange time, events, and activities in sequential order; classify matter, organisms, actions, and events from the environment according to similarities and differences.3. Describe objects, organisms, and events from the environment; describe changes that occur to objects in the environment.

LESSON ONE—"The Playing Field"

Content Area:

Social Studies:

Learning Objectives:

Distinguish between personal opinions and factual accounts, opposing viewpoints; organize data to support viewpoint; interpret visuals.

Health:

Personal health and safety; skills involving interaction between individuals; health and well-being of people collectively.

Language Arts:

Listening behaviors to receive and produce meaning; vocabulary and comprehension concepts; writing and language concepts.

Materials:

Video player, monitor, and video, "The Playing Field"; discussion questions; vocabulary matching worksheet.

Opening:
(3 min.)

Teacher's Note: It is suggested that the teacher not discuss the story line of the video prior to showing it to the class, but allow the students to sort out the narrative and outcome as part of the learning objective. The teacher may want to explain that this is a video about a boy and his sister whose parents work as farm laborers, making sure students understand that farm work is an occupation.

Activity #1:
(17 min.)

Video Presentation (whole class)

Objective: Students will watch, listen, and at times read (subtitles) to receive and produce meaning from the story.

Procedure: Students should be prepared to watch and listen to the video so they will be able to participate in the discussion of topics related to the story, and to complete the matching vocabulary exercise.

Activity #2:
(10 min.)

Discussion (whole class)

Objective: Students will distinguish between personal opinions and facts, recognize opposing viewpoints, and interpret visuals. Students will respond by retelling what was heard, identifying main idea, and drawing conclusions.

Procedure: A number of discussion questions are included on the following page. The teacher should choose questions and

DISCUSSION QUESTIONS

1. Who is the main character in this story? What is his name?
2. Who else was this story about?
3. What kind of work did the children's father do?
4. Where did this family live and work?
5. What happened to Isabel?
6. Why was Isabel's family worried about her?
7. Why did Isabel feel sick?
8. What did Miguel do to help his sister get well?
9. What did Miguel learn in trying to help his sister get well?
10. What did Miguel and his family learn about their home and playground?
11. How are pesticides spread?
12. How do people come into contact with pesticides?
13. What changes did Miguel's parents make in and around the house to protect the family? (List responses.)
14. What will Miguel and Isabel do differently now to protect themselves? (List responses.)
15. Did you like this story? Would you watch it again?
16. Do you think your parents would enjoy watching it?
17. What did you like best about the story? ...the least?
18. Was there anything in the story you did not understand?

LESSON TWO—Fruits and Vegetables

Content Area:

Social Studies:

Health:

Science:

Learning Objectives:

U.S. economic system; local, state, national geography; interpret visuals (U.S. map).

Foster personal health and safety; healthy interaction between individuals; affect the well-being of people collectively.

Acquire data through senses; classify, order, sequence, and communicate data; draw logical inferences, form generalized statements; relate objects and events to other objects and events.

Note: If you are doing the semester-long science project, Phase I should begin now (see appendix, pg. 43).

Materials:

U.S. map; overlay of locations where certain fruits and vegetables are typically grown; overlay of climate zones that affect growing seasons; overlay of U.S. highways that transport produce.

Opening:
(2 min.)

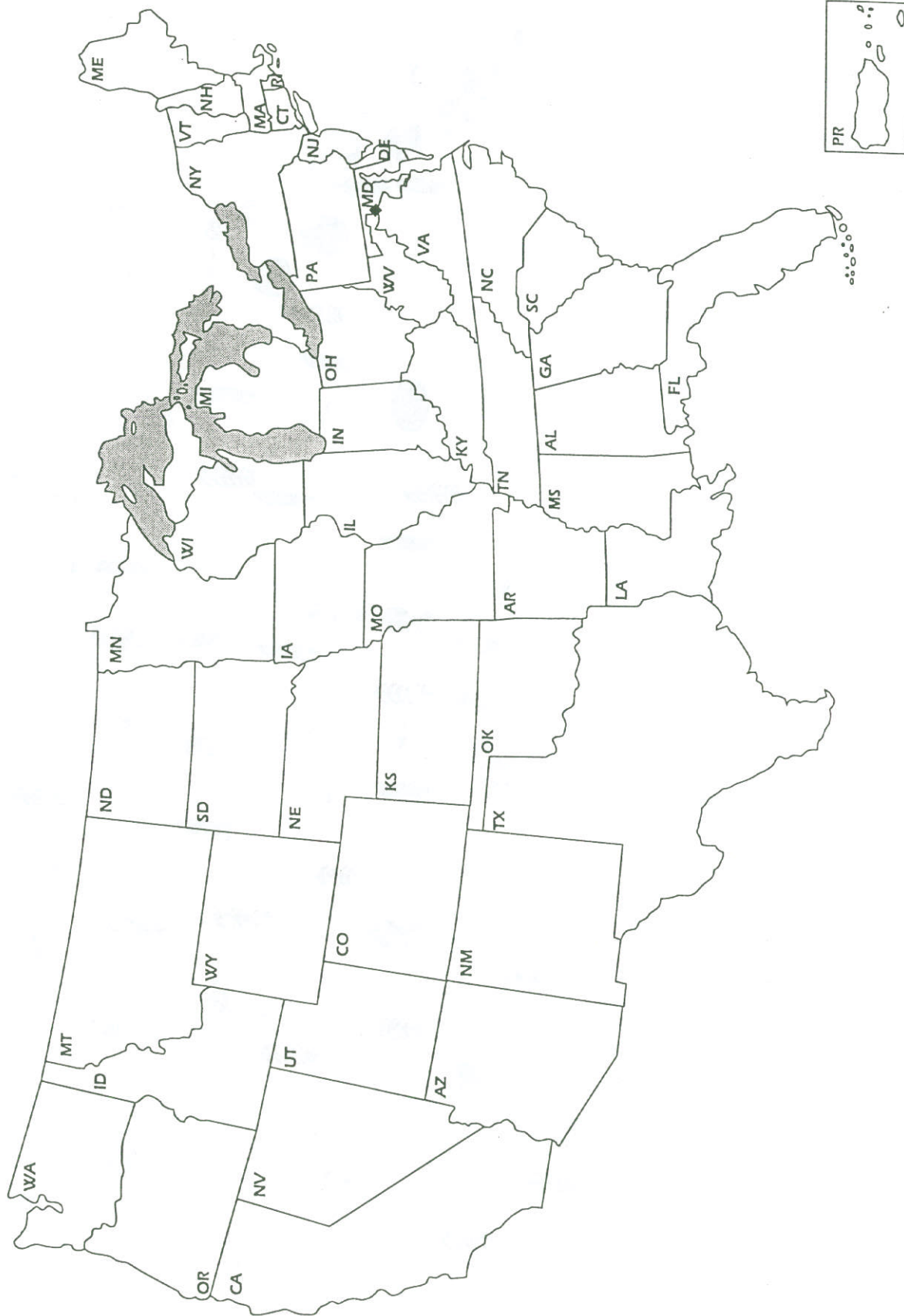
Ask students to recall the video from the previous day, have them concentrate on the type of work Miguel's father was doing in the field.

Activity #1:
(20 min.)

The Food We Eat (whole class)

Objective: Students will describe various regions of the U.S.; describe climates (and growing seasons) of U.S. regions; locate major geographical features; describe impact of regions on selected cultures and their work.

Procedure: Ask students to name some of the foods they ate for dinner last night, for lunch, for breakfast. List responses on the board under four categories: FRUITS, VEGETABLES, GRAINS, OTHER (dairy, sodas, etc.). Using the U.S. Crop Map, ask students to match the foods listed with the locations where those foods are grown. Using the climate map, ask students to note that certain foods grow in the same temperature "bands" or locations. For example, citrus grows in the tropical region of the southern U.S. from Florida to California; fruit trees and root crops grow in the colder zones of the northern U.S.



KEY TO CROP SYMBOLS



apples



berries, including blueberries, cranberries, strawberries



cherries



chili peppers



corn



cotton



grains, including wheat, rice, barley, sorghum, hay



lettuce



maple products, including maple syrup, maple sugar



mushrooms



onions



oranges



peaches



peanuts



potatoes



soybeans



sugar cane



sugarbeets



sunflowers



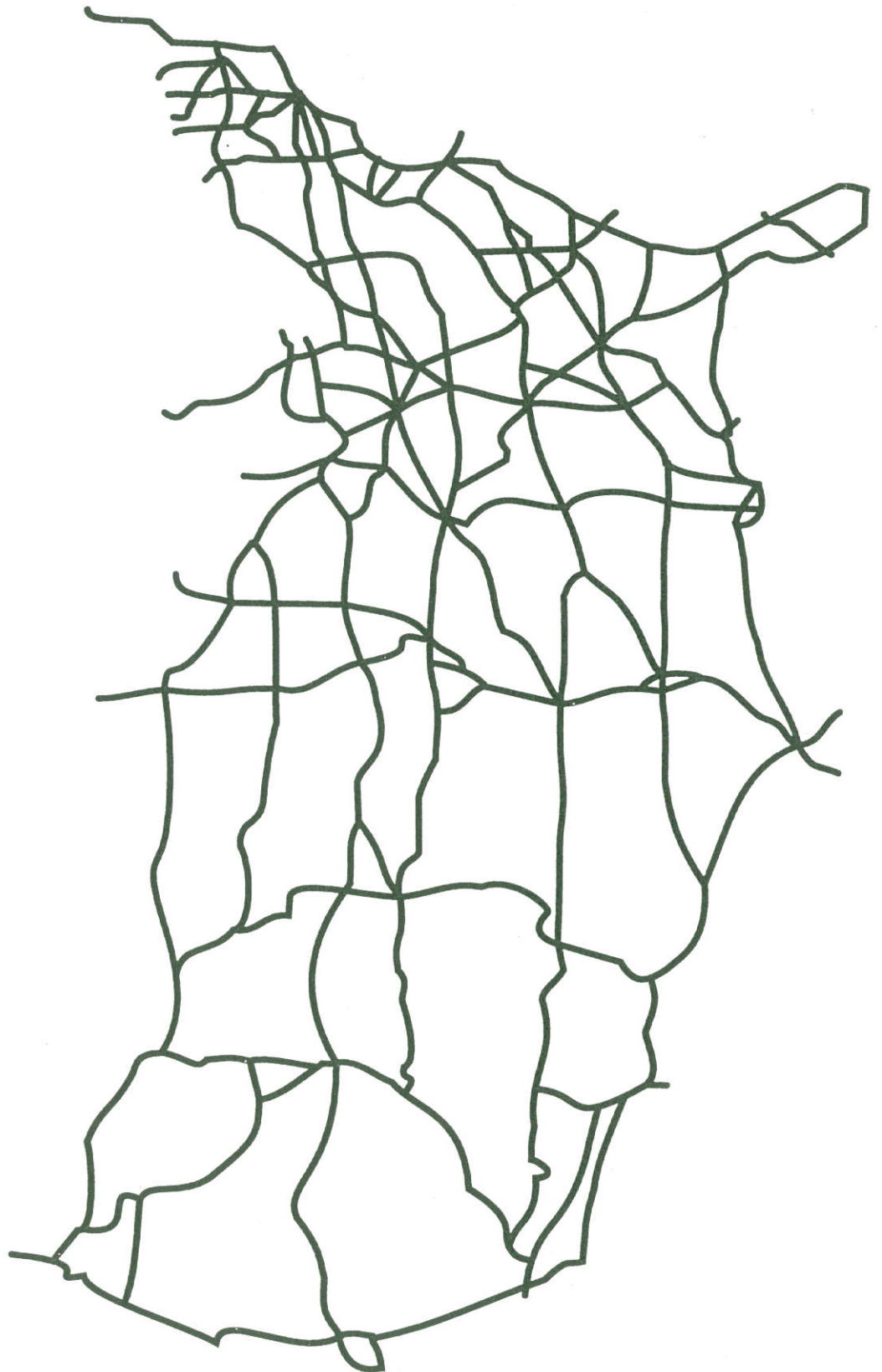
tobacco



table grapes, wine grapes



tomato



LESSON THREE—MIGRANT AND SEASONAL FARMWORKERS

Content Areas:

Social Studies:

Health:

Language Arts:

Learning Objectives:

U.S. economic system; local, state, and national geography; social study skills.

Concepts and skills that foster personal health and safety; involve healthy interaction between individuals; and affect the well-being of people collectively.

Determine strategies such as cause and effect; gather information from a variety of sources; and write narratives.

Materials:

U.S. map overhead transparency; migratory stream map (provided at end of this lesson). (Re-introduce crop map and U.S. highways map).

Opening:
(5 min.)

Introduce the idea of farm work as an occupation, define migrant, distinguish from seasonal, and relate migrant farm work and seasonal labor. (See Definitions in appendix, page 41.) Many families have been migrant and seasonal farmworkers for several generations, much like business owners pass the family business from father to son or daughter to grandchild, etc.

Activity #1:
(15 min.)

Who Are Farmworkers? (whole class)

Objective: Identify examples of the factors of production (land, labor, capital, enterprise); describe how transportation contributes to economic interdependence; explain how ways of work have changed (or not changed) over time.

Procedure: Ask students to identify characteristics of farm work and conditions of leading a migratory life style. Pose the question: If you had to travel the U.S. by car for six months or more each year, and could only take with you one suitcase full of belongings or possessions, what would those items be? Students can either create their own list or call out suggested essential travel items. Use the migratory stream map to illustrate the distances and directions that migrant and seasonal farmworkers travel in order to be employed as much of the year as possible.

WHAT IF?

Pretend to be the person in **one** of the following scenarios. Write a two-page essay about what you would do in this situation. You may talk with parents, other family members, and friends to get ideas for your essay.

1. You do not speak much English. You have not been able to find work in your home area and decide to travel by bus to another region in the United States. You have heard there is work in the state of Iowa, and you go to the bus station and buy a ticket to Des Moines. The cost of the ticket is 75% of the money you have, but you are hopeful that you will be working and earning money soon. When you arrive, you discover that Iowa has been devastated by heavy flooding; there is no clean water, no electricity, and no work in the fields and farms since they have all been flooded. What should you do first?
2. You have just finished picking apples in Washington State. The season is over. The money you have left from your last pay is \$100.00. You know you will have to travel at least 500 miles to reach the next area where there is agricultural work. You have a family (a spouse and two children) and a car. How will you budget your money to allow enough for gasoline for the car and food, shelter, and necessities for your family? Set out the categories and assign an amount of money to each category.
3. You have been offered a job picking strawberries in California. The crew leader says you can either be paid by the hour, or by the amount of strawberries you can pick each day. If you choose to be paid by the hour, you will be paid \$4.25 for each hour worked (not including the time it takes to get to and from the field each day). If you choose to be paid by the amount of strawberries you can pick each day, you will be paid \$1.50 per box. Which is the better deal? Assuming you can work a 10-hour day, how many boxes of strawberries will you have to pick to earn more than what you would earn if you were paid by the hour?

LESSON FOUR— PESTICIDES AND THEIR USE

Content Areas:

Social Studies:

Health:

Science:

Learning Objectives:

U.S. economic system; local, state, and national geography; interpret visuals.

Concepts and skills that foster personal health and safety, healthy interaction between individuals, and affect the well-being of people collectively.

Acquire data through senses; classify, order, and sequence data; draw logical inferences; predict outcomes, form generalized statements. Relate objects and events to other objects and events. **Note:** If you are doing the semester-long science experiment, begin Phase II now (see appendix, page 43).

Materials:

Figure: Ways Pesticides Contact Us. Figure: Ways Farmworkers Are Exposed to Pesticides. Pesticide Safety Checklist.

Opening:
(2 min.)

Check progress of Semester-Long Science Experiment. Begin Phase II.

Activity #1:
(6 min.)

What Are Pesticides/Where Do They Come From? (whole class)

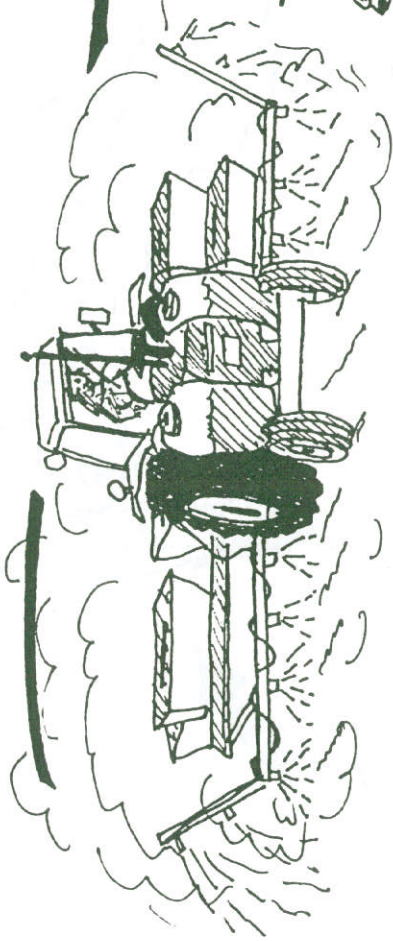
Objective: Students will understand economic relationships and identify examples of the factors of production (land, labor, capital, enterprise).

Procedure: Using the flow chart, "Ways Pesticides Contact Us," begin identifying and defining pesticides as man-made chemicals, produced in factories, used to kill insects and rodents. Refer to the first phase of distribution on the chart, to farmers, ranchers, and others who are involved in the production of food crops. Refer to the parallel phase of distribution to grocery stores and other markets where consumers purchase pesticides for use in their homes and in caring for their lawns and gardens. Emphasize the interrelatedness and the interdependence of each phase to the next, concluding with the recognition that each involvement with pesticides has a direct effect on everyone in the foods we eat and the water we drink. Review the Pesticide Safety Checklist with students.

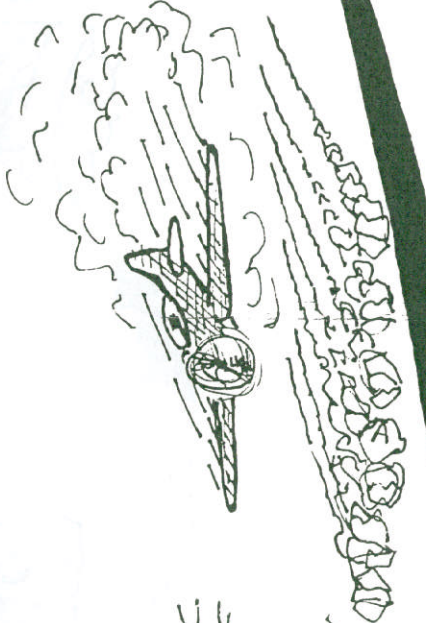
FOR THE TEACHER:

Questions to prompt role-play discussion for Activity #3:

- a. What do you need to know to...?
- b. Could you be more specific?
- c. Could you offer a suggestion?
- d. What would you prefer?
- e. What are your suspicions?
- f. What is your objection?
- g. If you could guess at the answer, what would it be?
- h. Can you say that in another way?
- i. What is the worst/best that could happen?
- j. Do any of the rest of you feel the same as...?
- k. What does that suggest to you about...?
- l. What are the options to...?
- m. What changes would you make to this system?
- n. What are the costs? ...the benefits?
- o. If you had it to do over again, what would you do?



Ways farmworkers are exposed to pesticides



LESSON FIVE— PROTECTING OURSELVES FROM PESTICIDES

Content Areas:

Social Studies:

Learning Objectives:

Describe the impact of farm labor and the use of pesticides on the special population of migrant and seasonal farmworkers; compare and contrast opposing viewpoints; interpret visuals.

Health:

Concepts and skills that foster personal health and safety, healthy interaction between individuals, and affect the well-being of people collectively.

Materials:

Bookmarks/stickers showing examples of warning signs in Spanish and English. Sample cleaning or insecticide containers (empty and cleaned) which display warning symbols and messages. Poster, "Be Safe in the Field." Home Safety Checklist for Parents and Children.

Opening:
(3 min.)

Pass out stickers/bookmarks. Ask students to identify the symbols and read the warning signs. Ask students whether they recall seeing any of these symbols/signs from the video, "The Playing Field." Perhaps replay that portion of the video dealing with household sprays, containers, healthy habits.

Activity #1:
(10 min.)

How Do We Identify Harmful Materials? (whole class)

Objective: Students will recognize hazards in the environment and acquire knowledge and skills needed to avoid injury and to prevent accidents.

Procedure: The teacher should display a variety of household products, bug sprays, etc. and ask students to identify each item (guess or read labels) and state its use in the home, yard, garden, garage, etc. Students should be directed to look at the warning symbols on their stickers and compare the symbols to the labels on the products. Discuss the possible danger of combining solvents or chemicals found around the house; e.g. ammonia combined with Comet[®]. Students should be given appropriate emergency procedures to follow in the event someone swallows a dangerous or harmful substance. (Ask students to recall what

Who is responsible for our health and for the health and well-being of our families and friends?

IN CLASS ASSIGNMENT
OR HOMEWORK:

Have the students compile a list of substances which emit strong fumes; e.g., gasoline, paint thinner, glue, hair spray, insecticides, household cleaning agents, etc.

HOMEWORK:

Have each student take a copy of the Home Safety Checklist. Students and their parents should fill out the list and the student should return the completed form to the teacher. Have students design their own labels for poisonous or dangerous substances.

"THE PLAYING FIELD" EVALUATION FORM

Please take a moment to give us your comments regarding the lesson plans, activities, or visual materials contained in this curriculum guide. Please identify the subject area(s) and grade level for each response:

1. Of the materials on safety rules for contact with pesticides or dangerous chemicals, which activities and/or materials were most useful?
2. Of the materials on occupational and cultural aspects of migrant and seasonal farmworkers and their families, which activities and/or materials were most useful?
3. Of the materials on U.S. geography, the agricultural industry, and economic relationships, which activities and/or materials were most useful?
4. If the Curriculum Guide contains materials and/or activities which were not useful, please list them below:
5. If you noted any errors that should be corrected, please list them below:
6. Do you have any suggestions for items that should be added?
7. Other comments (use the back of this page or a second sheet if necessary):

PLEASE RETURN TO:

NATIONAL MIGRANT RESOURCE PROGRAM, INC.
1515 Capital of Texas Hwy. South, Suite 220
Austin, Texas 78746
Attention: Deliana Garcia

FROM:

Name: _____

School: _____

Address: _____

City/State/Zip: _____

Telephone: _____

APPENDICES

QUESTIONS

NOTE TO TEACHER: These questions can be used to lead classroom discussions, or as a general assessment tool to gauge your students' prior knowledge of agricultural issues against the effectiveness of the lessons provided in this curriculum guide. Suggested answers are provided following the questions. Some questions are open-ended and lend themselves more to discussion than others. Please feel free to pick and choose test questions in order to meet your students' needs and grade level.

PRE-TEST/POST-TEST:

1. What is a farm?
2. What are some examples of farm work?
3. Name six different fruits and vegetables that migrant workers pick?
4. Name five different steps involved in growing fruits and vegetables from seedlings to maturity.
5. Can farm work be dangerous?
6. Name three possible dangers that migrant farmworkers face.
7. Who does farm work?
8. Name three things that might keep a migrant farmworker from being able to work every day of the year.
9. What do farmworkers do when it rains, or when they cannot work in the fields?
10. Are migrant farmworkers only Hispanic/Latino?
11. What language(s) do migrant farmworkers speak?
12. How do migrant and seasonal farmworkers travel?
13. What does it mean to migrate?
14. What is meant by seasonal?
15. How do you think migrant children have fun?
16. Where/how do you think migrant children go to school?
17. If farm owners do not provide housing, where do you think migrant workers live?

11. Most migrant farmworkers speak English as well as another native language if it is not English, such as Creole, Spanish, Chinese, Japanese, Russian, Vietnamese, Native-American languages, etc.
12. Migrant and seasonal farmworkers travel by bus, car, plane, or truck to find work.
13. To migrate: to move from one region to another within a country; to change location periodically, usually depending on the yearly seasons.
14. Seasonal refers to the four weather periods of the year: summer, winter, fall, spring; and to dry and rainy growing periods.
15. Migrant children have fun the way all children have fun: playing games, being with friends, reading, etc.
16. Migrant children attend schools in rural areas, near where their parents are working; they arrive by school bus, by car, or by walking. Often migrant children must change schools several times during the year, in order to stay with their families.
17. Sometimes farmworkers can be considered homeless, if they have no housing provided by their employer. They may live in cars and trucks or in lean-to temporary shelters in the open air until they can move to more permanent housing.
18. In some regions, it is common for groups of men to travel, work, and live together away from their families. When families travel together, several families will live together in migrant labor housing; sometimes men are assigned to separate housing from women and children. There is usually one kitchen for several families to use, and limited indoor and outdoor bathroom facilities. In many cases, the building material used to make farmworker housing is not very durable and deteriorates rapidly. Some farmworkers live in trailers or campers.
19. Advantages: Work outside, travel to different parts of the country, work as much or as little as needed to provide for yourself. Disadvantages: No sick leave, vacation time, or health insurance provided by employer; very low wages; difficult to predict future work or earnings; health hazards, illnesses, injuries.
20. Because of low wages, and the nature of farm work, few farmworkers will have social security benefits from which to retire. They will have to save earnings throughout their working life, or rely on family members to support them.
21. Without the work of migrant and seasonal farmworkers, the cost of food would be too expensive for many people to buy. We would not have the quantity and variety of fruits and vegetables available to us in the grocery stores if each of us had to buy our food directly from farmers in our area. Food does not grow well in certain parts of the country (mountains, deserts), so people who lived there would have to travel great distances to obtain food.

DEFINITIONS

Agriculture: Food growing, planting, harvesting, not to include fishing, lumber, dairy, cattle, or poultry industries.

Cultivate: To improve and prepare land, by plowing or fertilizing, for raising crops; to till. To loosen or dig soil around growing plants; to tend a plant or crop; nurture.

Farmer: Someone who owns land on which fruit or vegetable crops are grown for public distribution and consumption; grower.

Farmworker: Someone who is paid earnings by a landowner for planting, cultivating, growing, and harvesting fruit and vegetable crops for commercial distribution and use.

Harvest: The act or process of picking or gathering a crop. The amount of crop gathered; yield. The time or season for gathering a certain crop.

Migrant farmworker: Someone whose work is in food growing, harvesting, planting, and who establishes a temporary residence in a variety of locations throughout the year in order to have work. Also known as migratory agricultural worker or migrant laborer.

Pesticides: Chemical powder or spray that is used on plants, fruits, and vegetables that kills insects; can be harmful to people if swallowed or exposed to in certain quantities.

Piece work: Work paid for according to the number of products turned out. In farm labor, number of pounds, bushels or crates of crops picked, as opposed to work paid for by the hour.

Season: One of the four natural divisions of the year, spring, summer autumn, and winter indicated by change in weather and intensity of the sun. In tropical climates, the two divisions of the year, rainy and dry. Also refers to phases in growing cycle.

Seasonal farmworker: Someone who maintains a permanent residence, but works in several industries on a seasonal basis; in agriculture, during a recurrent period of time from planting to harvesting, when the food is available for picking or ready to be eaten.

Streams: Major routes regularly traveled by farmworkers seeking seasonal jobs; e.g., Western Stream, California to Washington State/Idaho; Midwest Stream, Texas to Montana/ Minnesota; Eastern Stream, Florida to New York/Michigan.

Worker Protection Standards: Rules, regulations, and policies established by the U.S. Environmental Protection Agency and provided for the protection and safety of agricultural and other industrial workers in the United States.

SEMESTER-LONG SCIENCE PROJECT

Objective: Students will observe phenomena resulting from life, the earth, physical sciences, and the environment; predict outcomes, make inferences about possible changes that occur to organic objects in the environment.

Length/Time: Depending on whether you have an outdoor garden or conduct this as an in-class experiment will influence the amount of time for this project. Students can use the tables on page 45 to chart the growing process over a six-week or six-month period.

(If your school has an outside area that could be used as a "class garden," students could be assigned an area in which to grow three groups of the same vegetable. If there is not enough space for a garden, use the materials and follow the procedures below.)

On-Going Experiment: Phase I

Materials: Enough plastic cups (6" tall) for each student to have three; potting soil; vegetable seeds (GREEN BEANS and/or SUNFLOWER SEEDS); student charts (one sheet containing three charts is provided at the end of this lesson). The chart can be photocopied and distributed to each student. One sheet should be used for Phase I, and one sheet should be used for Phase II.

Activity: Comparison of seed sprouting time and plant growth, keeping variables equal.

Procedures: Have each student plant vegetable seeds in each of the three cups in potting soil, and expose seeds to equal ranges of light, temperature, and moisture. A variety of seeds can be used, but the type of plant chosen should be constant. That is, one student could have three cups each filled with green bean seeds, while another student would use only sunflower seeds; not a mixture of the two. Each student will chart light, temperature, water (amount and frequency), and time it takes for seeds to sprout. Once seeds have sprouted, each student should chart growth rate and size (keeping plants growing until time for Phase II, see Lesson Four).

WORKSHEET FOR SCIENCE EXPERIMENT

Week:	Hrs. of Light	Temp.	Water (Amount)	Seed(s) Sprouted	Growth Size	Leaf Color

Student Name: _____
 Name of plant: _____
 Chart for Plant #1 #2 #3 (circle one)

Week:	Hrs. of Light	Temp.	Water (Amount)	Seed(s) Sprouted	Growth Size	Leaf Color

Student Name: _____
 Name of plant: _____
 Chart for Plant #1 #2 #3 (circle one)

Week:	Hrs. of Light	Temp.	Water (Amount)	Seed(s) Sprouted	Growth Size	Leaf Color

Student Name: _____
 Name of plant: _____
 Chart for Plant #1 #2 #3 (circle one)

OTHER SOURCES OF INFORMATION

U.S. Environmental Protection Agency
Occupational Safety Branch
MS H7506C
401 M Street, S.W.
Washington, DC 20460
(703) 557-7666 or (703) 305-7666

Poison Control Centers
Northwest Texas Hospital
Box 1110
Amarillo, TX 79175
(800) 692-1331

National Migrant Resource Program Inc.
1515 Capital of Texas Hwy. South, Suite 220
Austin, Texas 78746
(512) 328-7682 or (800) 531-5120

Comite de Apoyo a los Trabajadores Agricolas (CATA)
P.O. Box 458
Glassboro, NJ 08028
(609) 881-2507

Farmworker Justice Fund, Inc.
2001 "S" Street, N.W., Suite 210
Washington, DC 20009
(202) 462-8192

Migrant Legal Action Program (MLAP)
Bea Bobotek
2001 South Street, NW, Suite 310
Washington, DC 20009
(202) 462-7744

Association of Farmworker Opportunity Programs (AFOP)
1925 North Lynn Street
Arlington, VA 22209
(703) 528-4141

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- Delgado, Concha. **Cesar Chavez, Apostle of Non-Violence.** Berkeley, CA: BABEL Productions, 1971.
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- Kafka, Sherry and Coles, Robert, eds. **I Will Always Stay Me: Writings of Migrant Children.** Austin, TX: Texas Monthly Press, 1982.
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- Weiner, Sandra. **Small Hands, Big Hands: Seven Profiles of Chicano Migrant Workers and their Families.** New York: Pantheon Books, 1970.

FOR FURTHER RESEARCH:

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- Emmet, Herman LeRoy. **Fruit Tramps: A Family of Migrant Farmworkers.** Albuquerque: University of New Mexico Press, 1989.
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- Hintz, Joy. **Poverty, Prejudice, Power, Politics: Migrants Speak About Their Lives.** Columbus, OH: Avonelle Associates, 1981.

TOP THREE CROPS FOR EACH STATE BY CASH RECEIPTS, 1991

State	#1 Crop	#2 Crop	#3 Crop
Alabama	Peanuts	Cotton	Soybeans
Alaska	Hay	Potatoes	Barley
Arizona	Cotton	Lettuce	Hay
Arkansas	Soybeans	Rice	Cotton
California	Grapes	Cotton	Tomatoes
Colorado	Corn	Wheat	Hay
Connecticut	Tobacco	Hay	Apples
Delaware	Soybeans	Corn	Potatoes
Florida	Oranges	Tomatoes	Cane
Georgia	Peanuts	Cotton	Tobacco
Hawaii	Cane	Pineapples	Macadamia Nuts
Idaho	Potatoes	Wheat	Sugarbeets
Illinois	Corn	Soybeans	Wheat
Indiana	Corn	Soybeans	Wheat
Iowa	Corn	Soybeans	Hay
Kansas	Wheat	Corn	Sorghum
Kentucky	Tobacco	Soybeans	Corn
Louisiana	Cotton	Cane	Soybeans
Maine	Potatoes	Apples	Blueberries
Maryland	Soybeans	Corn	Wheat
Massachusetts	Cranberries	Apples	Tobacco
Michigan	Corn	Soybeans	Apples
Minnesota	Corn	Soybeans	Sugarbeets
Mississippi	Soybeans	Rice	Corn
Missouri	Soybeans	Corn	Cotton
Montana	Wheat	Barley	Hay
Nabraska	Corn	Soybeans	Sorghum
Nevada	Hay	Potatoes	Wheat
New Hampshire	Apples	Hay	Maple Products
New Jersey	Peaches	Blueberries	Soybeans
New Mexico	Hay	Chili Peppers	Onions
New York	Apples	Hay	Corn
North Carolina	Tobacco	Soybeans	Corn
North Dakota	Wheat	Barley	Sunflower
Ohio	Soybeans	Corn	Wheat
Oklahoma	Wheat	Cotton	Peanuts

