DOCUMENT RESUME

ED 135 690 SO 009 790

AUTHOR King, David C., Ed.; Long, Cathryn J., Ed.
TITLE Patterns for Teaching Interdependence; Part A, K-3 [And] Part B, 4-6. Global Perspectives: A Humanistic Influence on the Curriculum.
INSTITUTION Center for Global Perspectives, New York, N.Y.; Denver Univ., Colo. Center for Teaching International Relations.
SPONS AGENCY Hazen Foundation, New Haven, Conn.; National Endowment for the Humanities (NFAH), Washington, D.C.
PUB DATE 76
NOTE 51p.; For related documents, see SO 009 791-792

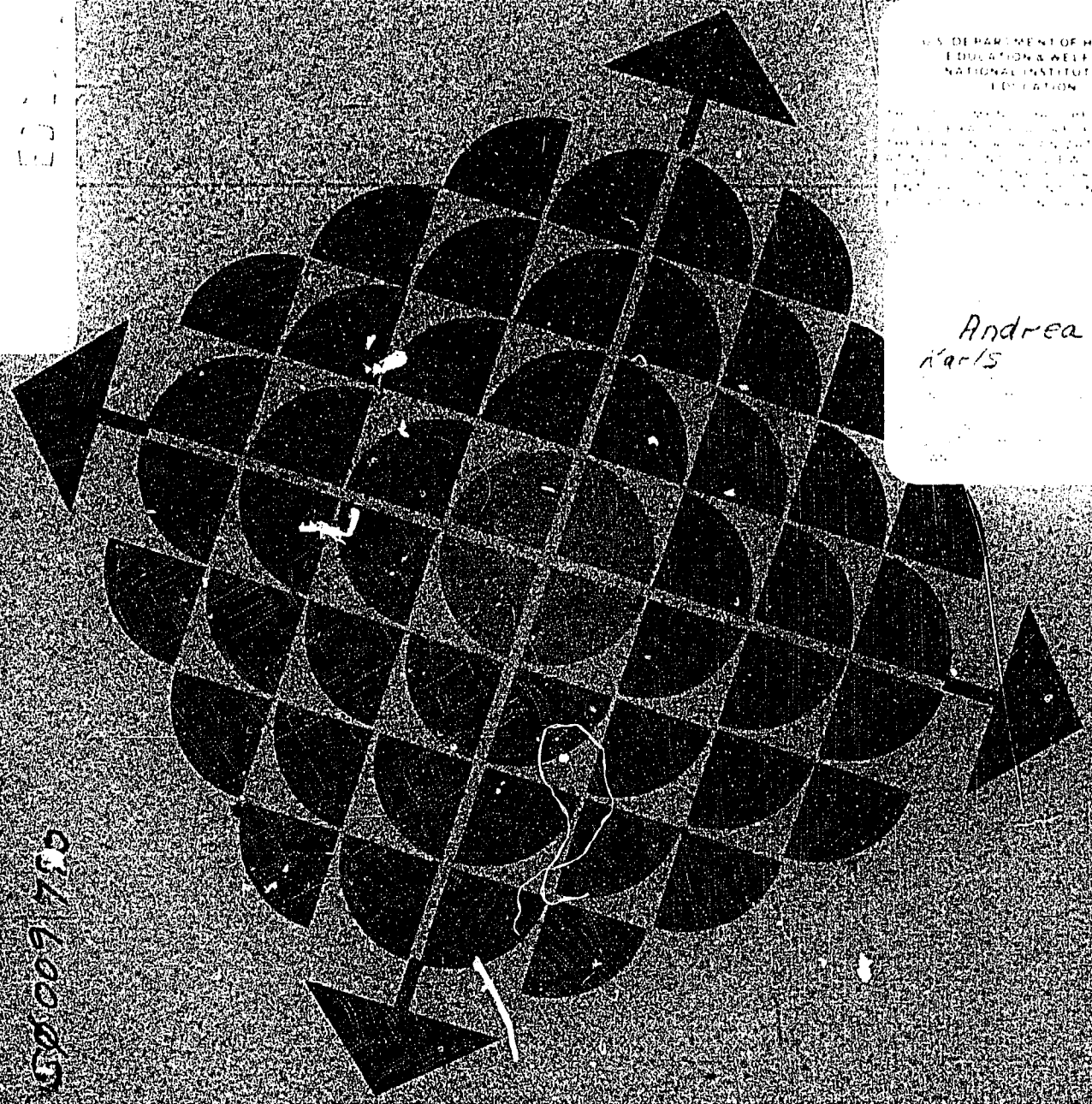
EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS Class Activities; *Concept Teaching; Curriculum Development; Educational Objectives; Elementary Education; *Global Approach; Humanistic Education; Interdisciplinary Approach; International Relations; Learning Activities; *Lesson Plans; Skill Development; Social Change; *Social Studies; *Teaching Techniques
IDENTIFIERS *Interdependence

ABSTRACT

Ideas for creating lessons to introduce global perspectives on interdependence into the elementary social studies curriculum are presented. The booklet is intended as a companion to a series of guides for teaching selected universal concepts to K-12 students. Section I introduces five lessons for use in grades K-3. Lessons stress the interdependence of the parts of the human body, groups such as the family, basic needs of people, and plants and animals. For each topic, performance objectives are specified and the teaching procedure is outlined. Activities include question games, class discussion, role playing, mural drawing, story telling, and cooking. Section II suggests lessons for grades 4-6. Lessons stress the concepts of systems and mutual dependence on a global scale. Performance objectives are specified for each topic and the teaching procedure is outlined. Activities include simulations, drawing analysis, class discussion, group role play, science activities, science fiction fantasies, and group research. Concepts and key ideas are stressed in each lesson through suggested questions. Teacher reactions and lesson suggestions are solicited. (Author/DB)

Global Perspectives:
A Humanistic Influence
on the Curriculum

Andrea B.
Paris



Patterns for Teaching INTERDEPENDENCE

Edited by:
DAVID C. KING
CATHRYN J. LONG

CENTER FOR
GLOBAL PERSPECTIVES

A SPECIAL NOTE: The concept guides and patterns for teaching should be viewed as a stage in a process, rather than volumes with any pretense of finality. Your comments and suggestions for building and reshaping the conceptual framework and sample lessons are welcomed and needed. It is anticipated that the framework will be adapted by each user, as it functions to complement and supplement a wide variety of disciplines and courses. Further, we welcome the comments of students, parents, and administrators, as well as teachers and curriculum specialists.

This project has been made possible by a grant from the National Endowment for the Humanities.

Early development work on the project was carried out partly under a grant from the National Endowment for the Humanities for the Center for Teaching International Relations and with the assistance of participants in the Connecticut Project for Global Perspectives under a grant from the Hazen Foundation.

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GLOBAL PERSPECTIVES:
A HUMANISTIC INFLUENCE ON THE CURRICULUM

PATTERNS FOR TEACHING INTERDEPENDENCE
PART A, K-3 PART B, 4-6

TABLE OF CONTENTS

INTRODUCTION

PATTERNS FOR TEACHING is one component of Global Perspectives: A Humanistic Influence on the Curriculum, a project designed to develop a sequential, K-12 framework for incorporating global perspectives into existing curricula. The central element of this project is a series of guides, each of which is an aid to teaching a selected universal concept. Each guide for each concept provides objectives and outlines of suggestions keyed to major topics currently taught.

PATTERNS FOR TEACHING is a companion series to the guides. It offers some ideas for creating your own lessons as well as lesson suggestions illustrating how aspects of the guide might be brought into your classroom. We have not tried to include lessons on every topic covered in the guides. Rather, we offer these primarily as samples of the kinds of lessons you might devise from guide suggestions to meet your own course needs.

We hope you will send us your reactions to Patterns and any lessons you develop which illustrate suggestions in the guide. These, with your permission, might be included in later versions. Several teachers who helped pretest the guide on Interdependence in the summer of 1975 have contributed lesson ideas to the present collection. We hope you will do the same.

LESSON 1: PARTS OF YOU

Lesson Ideas by
Jim Hedges, Willow Creek Elementary School, Concord, California

PERFORMANCE OBJECTIVES

Children will

1. state ways in which parts of the human body depend on other parts.
2. give examples of how a breakdown in one part of the body influences the entire person.
3. compare interdependence in the human body with the functioning of a family.
4. demonstrate greater willingness to work together as group and class members.

PROCEDURE

One common art project for grades K-3 can easily be used to introduce the idea of interdependence. Make a picture of each child by having the child lie down on butcher paper and tracing his or her outline. If you like, you can then cut out the figure and allow the child to paint or color in hair, clothes, features, etc. Play a question game, pointing to parts of various children's pictures:

- How do Anna's feet depend on her eyes? (she has to see to walk, to wash her feet)
- How does George's hair depend on his hands? (to be combed)
- How does your left arm depend on your right? (etc.)

You may wish to talk a little about the handicapped as part of this exercise. What happens when part of the human system breaks down, or is missing? If some very important parts don't work, a person may die; but often, other parts simply work extra hard to make up for the missing part. Thus, blind people sometimes develop very acute hearing; a person with one leg will have extra strength in the other leg.

Extend the analogy to the family. If a parent or sibling goes away or is sick, does the family work as well? Do chores get done, and does everyone

get as much loving attention, or have as much fun? What should other members of the family do to help when a family member is sick or absent? (Try harder to keep the family going, just as the body adjusts to keep itself going.)

Finally, discuss how we depend on one another in the classroom. It has been said that one of the most difficult tasks with young children is teaching Johnny why he should pick up a paper that Jimmy dropped. The idea of a "class body" may help the children to see themselves as parts of a whole group. Make a composite child picture, using a copy of some part of every student's picture. Or, put the pictures in a linked circle on the classroom walls to illustrate class interdependence.

LESSON 2: PICNIC ROLE PLAY*

by Wendy A. Bergseth, Judith B. Hill, and William H. Hobson, Hopkins Public Schools, Hopkins, Minnesota

This role-playing exercise should help children to see family members as parts of a system, and to see age groups within the family as sub-systems. Do not try to use much "systems" terminology with young children. They should get the idea through the role-playing activity itself.

PERFORMANCE OBJECTIVES

Students will

1. state ways in which a family system shows how people work together in forming that system.
2. describe what it feels like to be different members of the family.
3. hypothesize (make guesses) about who performs specific tasks.
4. imagine make-pretend activities -- like a picnic -- and use this to illustrate cooperation.
5. hypothesize about the results if some roles are *not* performed.
6. make inferences about other kinds of systems.

PROCEDURE

Ask the children what they would like to do on a lovely, warm summer day (swim, camp, picnic, fish, horseback ride, etc. Many ideas will be suggested). Suggest that you all go on a family reunion picnic near the water. At this time explain that you will refer to the whole family as a "system." Each age group you discuss will be referred to as a "subsystem." Now talk about each age group and things they might like to do on a picnic.

Subsystem:	*Ideas the children might have:*
Great-grandpas, great-grandmas, grandpas, and grandmas.	Play checkers, talk, fish, knit, crochet, read, watch their grandchildren.

Discuss: Why wouldn't they waterski? Why do they often make things for children? Are some grandparents somewhat dependent? Why?

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* Adapted from an article in INTERCOM #73, *Teaching Toward Global Perspectives*, pp. 7-8.

Ask a child. Pretend (through pantomime) that you are 83 years old, alone, walking on the beach. Your muscles are weak, joints stiff. You feel tired. Concentrate hard! Now come back and sit down—as an 83 year old. When you are sitting you are your own age again. How did you feel? Would you have wanted to water-ski or whatever?

Subsystem:	*Ideas:*
Moms, dads, aunts, and uncles.	Play ball with us, teach us to swim, watch babies, make picnic lunch, call us to eat.

Discuss: Who would make the food? Why? Could the dads too?

Ask a child: Pretend you are making something (pantomime only). Teacher and other children can guess. Pretend you are eating something. Guess. Comment that moms and dads are a very interdependent subsystem.

Subsystem:	*Ideas:*
Teenagers.	Dance, listen to music, flirt, watch girls (or boys), water-ski, etc.

Discuss: How can you pantomime a game of catch? What do you need to know first of all (kind of ball, who has the ball first, etc.)?

Have volunteers play. If there is time, play a quick volleyball game. Stress cooperation.

Subsystem:	*Ideas:*
Babies	Cry, drink bottle, suck your thumb, etc.

Discuss: After having all the children pantomime being a baby, ask why did so many cry? Babies are the most dependent subsystem.

Now suggest the following: Let's play our picnic. We will use pantomime. We will have three goals for this picnic. First, we want all to be fed; second, we all care about each other and will work at showing that; and last, we all want to have a good time!

Assign roles with about equal numbers in each subsystem. Set up where the barbecues are, the picnic tables, the water, the beach, the woods, the open field.

Then ask each child to find a place and freeze, to close his eyes, to concentrate for a minute on the age he will be. All right, begin. (Play as long as it is fresh.) Remind everyone to pantomime everything (if they need reminding). Call "Curtain" at a good stopping time (probably after four or five minutes). Discuss what they did. Point out dependent, independent, and interdependent behavior. Comment positively as much as you can!

Reassign roles. Ask them all to be a different age this time, so they can "try on" a new role. Replay, discuss.

Reassign roles, leaving out moms. Keep the same three goals. Replay, discuss.

How many were fed this time? Why not as many? Did any babies need help and not get it? Why? What happened to our system when we pulled out one subsystem?

Concluding Discussion: Can you think of anything else that could be a system? Possible answers--car, factory production line, flashlight, our classroom, etc.

With each, discuss why they think it is a system. Think of the biggest system you can (our world). What are some of the subsystems (water, air, land, food, people, etc.)? What's happening to our air, our water? (Pollution is affecting them.) What will happen to our world system if we lose our water subsystem? Discuss the meanings of the three words you began with—dependent, independent, interdependent. Conclude that we all need to work at being interdependent to keep our world system working well.

LESSON 3: MAKING MURALS

Lesson ideas by
Mary Lou Wright, Mt. Diablo Elementary School, Clayton, California

PERFORMANCE OBJECTIVES

Children will

1. draw pictures to show things we *need*.
2. give examples of things we depend on for these basic needs and what those *things*, in turn, depend on.
3. compare these linkages (avenues) of interdependence with those in a simple or primitive society.
4. recognize that greater interdependence is not an unqualified "good thing."

PROCEDURE

A mural showing "what we depend on" can be a useful teaching tool. Begin by asking the children to name some of the things they can't do without -- basic needs. Help them to distinguish between *likes* and *needs*. The list should include food and drink, clothing and shelter. Have them draw pictures of these items. The pictures may then be cut out and pasted around a central drawing of a child on a large sheet of butcher paper.

The next stage is to ask the children what these items depend on in order to exist. Another way to put it is: where do they come from? Food and clothing will suggest the proper stores; water comes from a tap; a house is built by a building company, etc. Drawings of these sources go around the "basic needs" pictures, attached to them by appropriate lines or arrows. Then, ask about the sources of *those* sources. That is, the food store depends on the farm, which depends on soil and seed; the house builder depends on the lumberyard which depends on the forest; etc. As the children suggest answers and draw their pictures they should gain a better awareness of the modern web of dependency.

You can reinforce the idea that this far-reaching web is a modern product of industrialized, urbanized society by doing a similar mural centered on an

Indian or primitive child and how his needs are met. The students should see quickly that the person in the simpler, nontechnological society is closer (both in distance and in number of processes) to the primary sources that satisfy basic needs. Ask comparison questions, such as:

- How many people do you think have to work in order for you to eat a bowl of cereal? (Children will need help with this question, but they should see that many people are involved.)

- How many take part in preparing the Indian child's acorn mush?

- How many people have helped so that you can get a drink of water from the school water fountain?

- How many helped the Indian child to get a drink?

Be sure the children understand that "more interdependent" doesn't mean "better." Ask the following questions, and have the students reply "us" or "Indian children":

- Who knows more about how to get his own food and shelter from the land?

- Who has more choice of things to eat, or things to work or play with?

- Who has help from many experts, some far away, in getting what he or she wants?

- Who finds what he needs nearby, and needn't worry about people doing jobs far away?

LESSON 4: SQUIRRELS AND PEOPLE

This short reading and activity should help children see how one animal fits into his environment, and recognize some similarities and differences in the way people interact with their natural environment.

PERFORMANCE OBJECTIVES

Students will

1. give examples of how plants and animals depend on (help) each other.
2. recognize that nature's system includes the killing of animals of one species by animals of another.
3. make inferences about a squirrel's life in a human-dominated environment.

PROCEDURE

Read the story of the squirrel (below) to the class, or tell it in your own words. Pictures of squirrels should help. Ask the children to tell about their own experiences with squirrels. This may lead at the end to a discussion of the difference between squirrels that live in parks and those that live in the wild. But begin with these questions:

1. In nature, animals help plants and plants help animals. How does the story show that squirrels help trees? That trees help squirrels?
2. Hawks sometimes kill squirrels. Is this cruel? Can you think of any way in which this helps squirrels in general?
3. Can you think of ways that forest plants help people? (wood for houses, pretty spots for hikes and picnics, edible berries and herbs)
4. Can you think of ways that people help forest plants? (fire control, reforestation)
5. Can you think of ways people have hurt the forest?

6. Is it easier for squirrels or people to hurt the plants and animals around them?

7. Why do people have to be extra careful to *help* living things in the forest?

As a final activity, have the children make pictures of a day in the life of a squirrel and a day in the life of a human dweller (can be a child camper, forest ranger, native American, logger, etc.).

For more readings and questions on the environment that you may adapt for the primary level, see *Environment: Earth in Crisis*, edited by Sandra Sanders Breuer and William F. Goodykoontz, Scholastic Book Services, 1973. An excellent book for young children that shows how living things interact in a limited environment is *Once There Was a Tree: The Story of the Tree, A Changing Home For Plants and Animals*, by Phyllis S. Busch (Scholastic Book Services, 1972).

TAKE THE SQUIRREL*

"Ecology is the study of how things fit together."
-- Gene Marine

Take the squirrel. He lives in the hollows of dead trees -- killed by disease and dug out by woodpeckers. There he stores acorns and other nuts for the winter. He buries some nuts in the ground where they will stay moist till he digs them up on bright warm days in winter and early spring. Some of these he may not use -- because he dies, has enough food somewhere else, or is just absentminded. These nuts which the squirrel has "planted" often live to grow into new trees.

In spring the squirrel scampers through the branches of the forest. He cuts off and drops twigs that are in his way and eats buds, rich in stored-up food. In this way, the squirrel does a lot to cut away extra stems. If

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* Reprinted from *Where There is Life* by Paul B. Sears. © 1962, 1966, 1970. Used by permission of the publishers, Dell Publishing Co.

they grew, they would compete with each other for light inside the crown of the tree. So, by cutting away extra stems, the squirrel is probably helping to keep the trees healthy. And there is no doubt that his habit of burying nuts is as valuable to oak and hickory as the food they furnish is to him.

This is not all the squirrel does. He dodges snakes, hawks, owls, and foxes. When he fails, he becomes food for these animals. In turn, these animals keep the number of squirrels from becoming too great.

The squirrel defends his nesting and feeding territory, keeping other squirrels spread out at a distance. This makes sure that there are never too many squirrels for the food supply. His droppings enrich the forest soil.

The squirrel's body, inside and out, provides home and food for many different parasites. To say that squirrels are lousy is simple truth, and no insult to these lively, complicated little fellows.

LESSON 5: BAKING BREAD WITH THE LITTLE RED HEN

by Cathryn J. Long

Classroom cooking can be an engaging activity for small children, as long as it is well planned. There is always that extra reward for your work at the end -- eating what you've made! This breadmaking activity should be helpful in teaching the children more about glo[illegible] interdependence as well as about how groups cooperate to achieve a comm[illegible]

PERFORMANCE OBJECTIVES

Students will

1. describe how kinds of bread show how parts of the world are interrelated.
2. use the labels on bread packages to find examples of interdependence.
3. make inferences about different places involved in supplying bread ingredients.
4. on a large map, show how different parts of the country or world are tied together by bread.
5. recognize that interdependence involves people far away and people we never see.
6. demonstrate, through a bread-baking activity, that working together can be better than working alone.

PROCEDURE

Begin by asking the students, what kind of bread do you eat at your house? A wide variety of answers should be accepted -- many breads for instance are not made with yeast, such as biscuits and muffins. Crackers and tortillas count, too; you may point out that bread in many countries is unleavened, like our crackers.

Next, have the children bring in a variety of old bread wrappers or recipes from home. Ask:

- Where do you think the recipes for these breads come from? Were most of them invented here in the U.S.A.?

  (Responses you may get or suggest include French bread from France, tortillas from Mexico, corn bread from the U.S., English muffins from England, rye bread from Central and Eastern Europe, crackers from the Middle East.)

- Why do you think we eat so many kinds of bread in this country? Is it because of something in our history? Today, does it have to do with the way we trade with other countries?

Go through some of the wrappings and talk about where the ingredients come from. Some of the materials should be easy for the children to figure out, but with others they will need help. Some possible responses:

Flour - mill - wheat farm

Water - tap - reservoir - river

Salt - refinery - ocean - salt mines

Milk - dairy - cow

This would be a good time, too, to talk about preservatives in food. Why do some breads have these special chemicals? If all bread were made here in our neighborhood, would we need the chemicals? How do we keep watch to make sure the chemicals are not harmful to us? (consumer groups, F.D.A.)

Then turn to the ingredients you plan to use in making your own classroom loaf (see sample recipes following). List the ingredients on the board, or post pictures of them. With the students' help, write down the actual or probable location of the source(s) of each ingredient. Then mark all the sources on a big simple map (you may want two maps -- one of the world or continent and one of your community or state). Have the children draw in transportation links between the sources and your school. Ask:

- What would happen if the trains (or trucks, or ships) didn't run?

- Will it make a difference to us here if there is a long dry spell in Montana?

- The people who work on these ingredients live very far apart. Is it still correct to say they work together?

Explain that you are going to learn more about working together from the story of the Little Red Hen. After you have read or told the story, ask:

- Why did the hen have to do everything herself?
- What made the other animals change their minds about helping in the end?
- Could you do what the Little Red Hen did, and make bread yourself? Why not? (lack of materials and skills)
- Why do you think so many people spread over such a big area are helping to make bread in our modern world?

Finally, have the children take turns mixing the bread, in small groups. The Little Red Hen story should encourage them to work together. Make a special event out of dividing the baked product and eating together.

SAMPLE RECIPES

1. *CORN PONES*

Corn pones are a favorite food in the southern U.S., but the recipe originates with Indians. The word "pone" comes from an Indian word meaning "bake."

Preheat oven to 400° F.

Heat 1 1/4 cups water until it boils. Meantime, measure out 2 1/2 cups stoneground cornmeal and 1 teaspoon salt. Stir the boiling water into the cornmeal and salt, until well mixed. Add 1/4 cup corn oil and 3/4 cup water. Stir well. Make a stiff batter, but not too dry; add a little more water if needed. Oil 2 cookie sheets. Press handfuls of batter onto sheets to make little flat cakes (about one dozen). Bake 45 minutes, until brown around the edges. Eat hot with butter and jelly.

2. *PITA BREAD*

Pita bread comes from the Middle East. It is shaped like a pancake. You can easily slit the bread and insert a filling for a quick sandwich.

In a large bowl place 1 1/4 cup lukewarm water and 2 teaspoons honey. Stir in 1 package yeast. Let it sit in a warm place until it bubbles.

Then stir in 1 teaspoon salt and 3 cups flour. Knead dough about 10 minutes. Sprinkle on a little more flour if it is too sticky. Divide into 12 balls. Roll or pat into circles 6" across and 1/4" thick. Place on lightly buttered cookie sheets, cover with a damp cloth. Let rise in warm place about 45 minutes.

Bake in preheated 500° oven 12 minutes, until lightly browned.

LESSON 1: WHEN I WANT A DRINK OF WATER, I....*

by David C. King, Staff Associate, Center for War/Peace Studies

This simple lesson can be used to familiarize your students with the concept of systems. They will quickly see how all the parts of the system (faucet) are needed to make it work. They will also be surprised to discover some of the many other systems this simple faucet depends on. Thus, they will begin to be aware that many of the things in their life that they take for granted are really complex systems made up of interrelated parts; that these systems, in turn, often depend on many other systems.

PERFORMANCE OBJECTIVES

Students will

1. make inferences about the kinds of systems involved in getting a drink of water.

2. demonstrat that a system involves mutual dependence of its parts.

PROCEDURE

You can begin by simply telling the class that they are going to learn about a new idea or word and write *system* on the chalk board. Or you may prefer to begin with something less direct, such as asking them what they do when they want a glass of water.

(If at all possible, it would be helpful to buy the basic parts of a faucet at a hardware store to use for demonstration purposes. An alternative would be to reproduce the drawing on the next page -- either draw it on the board or xerox enough copies of it for the class.)

To get at the knowledge objectives stated above, here are some questions to ask:

- What do you do when you want a glass of water?

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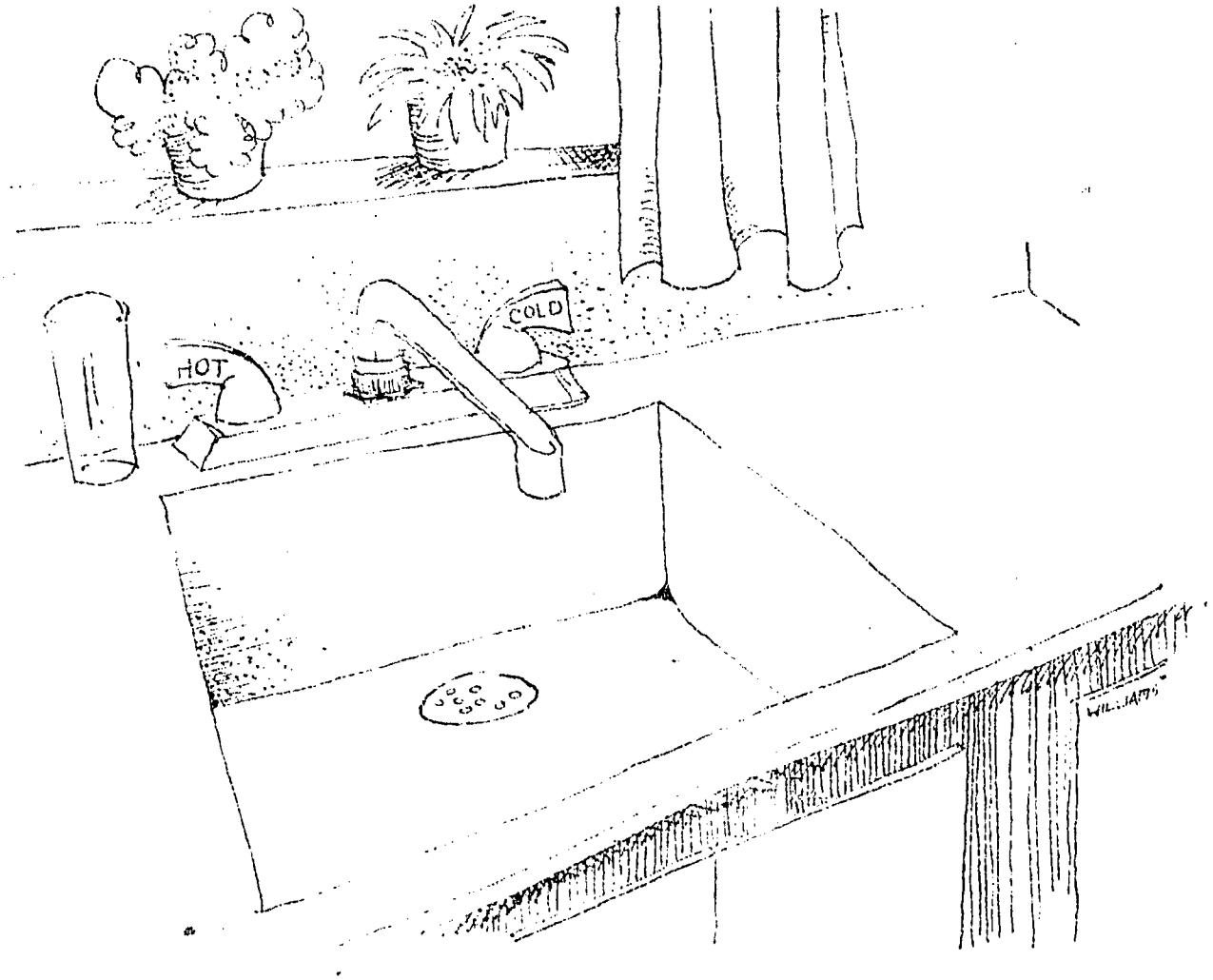
* Adapted from *So You Want To Teach About Interdependence* (Elementary) by David C. King, Center for War/Peace Studies, 1973.



- The faucet you turn is pretty simple, isn't it? Or is it? Let's look at a faucet and see just how simple or complicated it is.

- Can you tell what some of the parts are that make up the faucet? (handle, spout, pipe, screw, washer, valve)

- If we take one of the parts away, will the faucet work? And what happens if one of the parts breaks - like a washer wearing out or a pipe bursting?

By now they will know the flow and you can tell them that a faucet is a *system* -- anything made up of parts that need each other is a system. We say that the parts are dependent on each other.

Now ask them *where* the water comes from -- how does it get to the faucet in the first place? As they begin to volunteer answers (and often some pretty wild guesses) point out each of the systems mentioned and something about the parts making up each. (A list on the board would be helpful.) With some assistance from you, they will be able to mention such systems as:

- the pipes within the house;
- perhaps a hot water tank;
- drain pipes;
- the city or town pipes (water main);
- the community's water intake system;
- purification plants;
- sewage treatment plants;
- water meters (if this isn't complicating things too much for them) which determine how much water each household uses.

You can carry this exploration even further in two different directions.

(1) By helping them to see how many other man-connected systems are involved with those they've already mentioned -- such as the manufacture and laying of pipes; people to build, install and read the meters; all the equipment in the water treatment plants; local government (for setting standards, seeing that pipes are properly installed and repaired). A photograph of a water treatment plant would illustrate dramatically just how complicated the systems are that make possible that first system which seemed so simple. (Notice, too, if they mention machinery, electricity or manpower as being essential subsystems.)

(2) By asking where the water comes from that goes into the water purification plant, thus leading them into weather and climate systems and systems of rivers and lakes (someone may have brought this up earlier).

Conclude the lesson by bringing them back to the original concept of systems. Once someone has restated the definition, point out that all of the systems (or *subsystems* if you prefer that term) that make up our water supply system *depend* on each other. To stress the point, you might ask them again what would happen if any parts of the system broke down.

If you think the class can handle the term, you could mention that this is what we mean by *mutual dependence* -- when parts of a whole depend on each other.

As a homework assignment, you might ask each child to bring in a magazine picture of a system -- being sure that he can tell what some of the parts are that make it a system. Or, you can proceed directly with Lesson 2.

LESSON 2: HOW MANY SYSTEMS AT A CORNER?*

by David C. King, Staff Associate, Center for War/Peace Studies

This lesson will reinforce the concept of systems and mutual dependence; it will give the students a wider opportunity to identify and explain systems within their own environment.

PERFORMANCE OBJECTIVE

Students will demonstrate a greater awareness of the many and complex systems around them by identifying systems on a street corner.

PROCEDURE

Advance preparation: xerox enough copies of the drawing so that each student (or pair of students) has one. (The drawing is on the following page.)

Have the children work in pairs, with the task of identifying as many systems in the picture as possible. Remind them that they should be able to *prove* that each item is a system by explaining how its parts depend on each other.

In going over the picture with the class, it would be best to have each pair of students name (and explain) only two or three items so that everyone has a chance. (And, of course, this is a good opportunity for students who are slow in other skills to make a contribution.)

The number of systems in the drawing is quite extensive and there is no need to list them all, but rather prepare to stop if they seem to be losing interest.

Some important elements to look for (or draw out of the discussion) are:

- the milk truck is actually made up of numerous subsystems -- fuel system, electrical system, brake system, etc. It is also part of a

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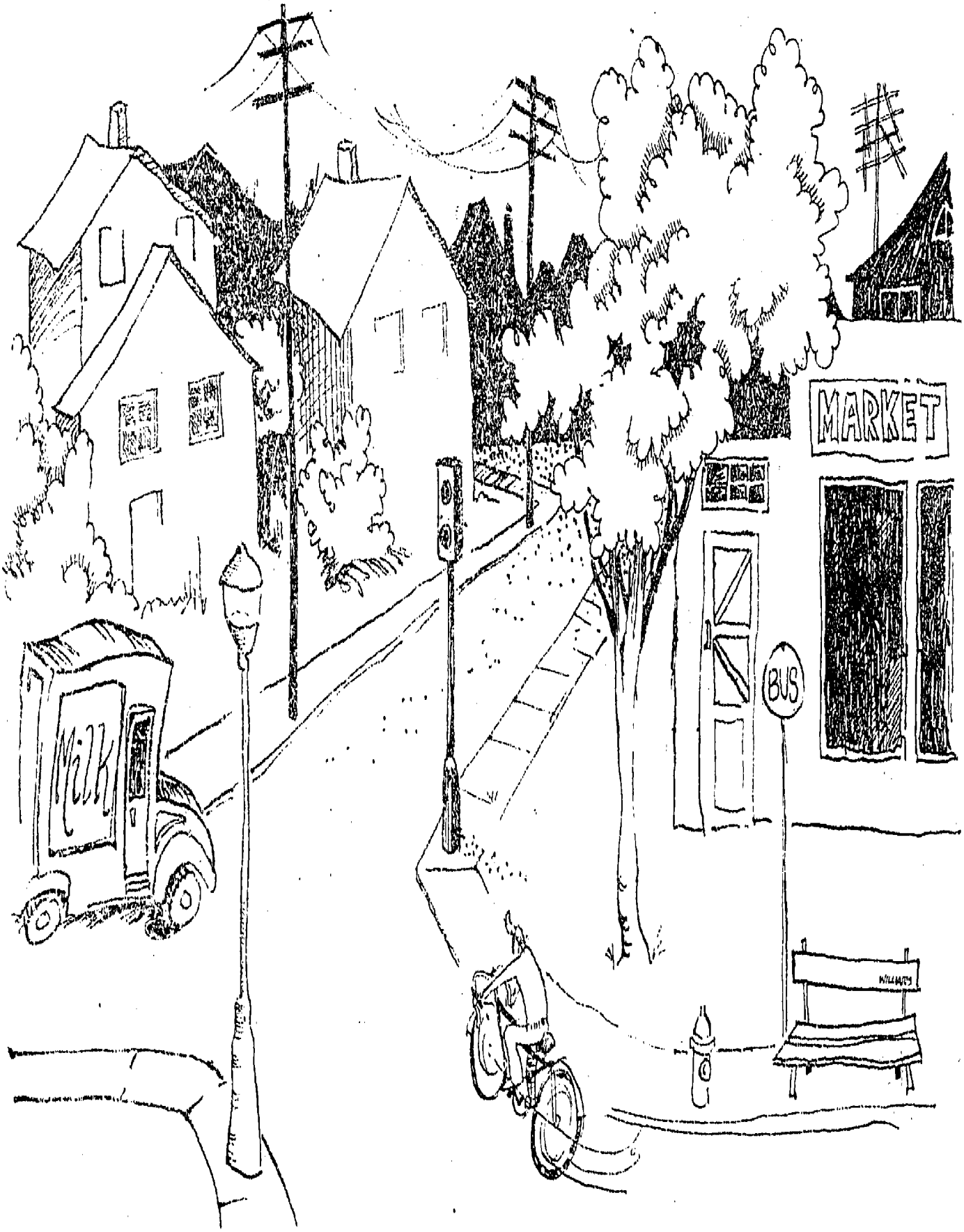
* Adapted from *So You Want To Teach About Interdependence* (Elementary) by David C. King, Center for War/Peace Studies, 1973.


MARKET
BUS
Milk

larger system -- the food or dairy industry, plus the particular dairy company.

- Similarly, the traffic light is itself a system, and is also part of a widespread traffic control system.

- The streets are part of a road or transportation system.

- Does anyone identify the television antenna as part of a complex series of systems?

- In what ways is the tree a system? What are its parts? How do they depend on each other? What other systems does it depend on? (A good place to point out the dependence of all life forms on the various systems that make up our environment.)

If no one has brought it up yet, you can point out that human beings are systems, too. They will quickly grasp the point that the body consists of a great variety of subsystems (circulatory, digestive, etc.). Here, as with all systems, if something goes wrong with one part of a system (like a stomach ache) the whole system will be affected.

To avoid having the children get dizzy using the word *system*, you might switch now to the idea of mutual dependence. Divide the class into 7 small groups, appointing a child to be leader of each. Give each group a system to discuss -- their task is to report to the class on how the parts of the system are mutually dependent and what other systems the people or things depend on. No more than 5 or 10 minutes should be needed for their group meetings. The following is a list of useful systems for them to deal with (*city* and *forest* being the most challenging):

family	grocery store
school	fire department
farm	city
baseball team	forest

LESSON 3: A SIMPLE CHOCOLATE BAR*

by David C. King, Staff Associate, Center for War/Peace Studies

This final sample lesson will broaden the students' understanding considerably by challenging them to think of systems on a global scale.

PERFORMANCE OBJECTIVES

Students will

1. describe how a candy bar illustrates the working of global systems.
2. recognize that a breakdown in one part of a system affects other parts.

PROCEDURE

Have the students sit in the same groups they formed for the previous lesson.

For this lesson, they will consider a very simple item: a candy bar.

Suppose we think of a small town where most of the people earn their living working in a candy factory (Hershey, Pennsylvania is an obvious example). Appoint *one group* to represent the candy town.

Ask the class what goes into a candy bar. Besides sugar, chocolate and nuts, you might mention corn syrup and coconut.

For each of these items, identify on a world map or globe where it comes from. Thus:

- Chocolate comes from cacao seeds, cultivated, among other places, in central Africa. Appoint a *second group* to represent the Africans who grow and sell cacao seeds.

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* Adapted from *So You Want To Teach About Interdependence* (Elementary) by David C. King, Center for War/Peace Studies, 1973.

- Sugar might come from a Caribbean island -- *Group 3.*

- Coconut from the South Pacific -- *Group 4.*

- Corn syrup from the corn fields of Iowa -- *Group 5.*

- Nuts from Brazil -- *Group 6.*

In addition, the candy needs a paper wrapper, which might involve a lumber company in the Pacific Northwest (*Group 7*).

Make sure that the children are well aware of the wide geographical distribution of each of these. Then, with each of the following events, ask the students how their groups might be affected:

- A drought in the midwest damages the corn crop, making corn syrup hard to get.

- A good advertising campaign on television makes many more people want to buy this particular brand of candy bar.

- A tropical storm destroys the plantations that sold their coconuts to the factory.

- A revolution in a Caribbean island cuts off an important supply of sugar.

- War in central Africa involves the cacao regions.

- The workers in the candy factory go on strike for higher wages.

It is important that the children not be overwhelmed by the potential catastrophes. Make sure that they see that none of the negative events will necessarily wipe out the candy bar industry. But these calamities would make things difficult for everybody involved. And that's the key concept: that even in a simple thing like a candy bar, we are mutually dependent on people scattered all over the world and events that we might not even be aware of.

LESSON 4: INTERDEPENDENCE ON THE ASSEMBLY LINE*

Part of learning about technology is understanding the interdependence fostered by the division of labor on the assembly line. Here is a way for students to feel for themselves the nature of that interdependence.

PERFORMANCE OBJECTIVES

Students will

1. use a simple simulation to compare assembly-line work with that of individual craftsmen.
2. evaluate the advantages and disadvantages of an assembly-line system.
3. draw inferences about the need for assembly-line production.

PROCEDURE

Divide the class into groups of twelve, leaving a few students out. Seat the students in rows or semicircles of twelve desks each. Every student will take on the role of a worker on the line with a specialized task to perform.

Choose a product you can draw easily, such as an automobile. Divide the drawing of the product into twelve reproducible parts. Draw and number each part on the board, then assign the students corresponding numbers. Thus, the first student may do the chassis, the second the right front fender, etc. Hand the first worker in each line 25 sheets of paper. He draws his part on each sheet, then hands it to the worker next to him. The product grows as it moves down the line. It is important that everyone try to draw his part according to the pattern on the board every time. No creativity allowed.

Those students not on the assembly lines may create their own car drawings. They work as individual craftsmen. Have them start at the same time as the assembly-line students.

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* Adapted from *LEARNING The Magazine for Creative Teaching*, December 1973, p. 27.

When the "work" of the lines is finished, collect all models. Discuss how and why the work of the assembly lines is different from that of the individual craftsmen. Ask what the advantages and disadvantages of the assembly line method seem to be. What special benefits and problems arose just from being more interdependent? (More cars are produced, there's a chance for good team spirit; one slow worker can hold up the others, not everyone gets an equally interesting job, etc.)

Finally, talk about how similar your classroom experiment is to actual production of a car. What factors made the assembly line a necessity for producing some items? What suggestions arise from your experiment for making the assembly line a more efficient or pleasant exercise in interdependence?

LESSON 5: TERRA II

Terra II is a Spaceship Earth simulation. Children pretend they are on a space voyage and have to cope with problems that are parallel to those we face on a global scale. Only the first two lessons, dealing with water supply and pollution, are presented here. The entire game, including sections on food shortages and the problems of underdeveloped countries, constitutes Item #71 (available from the Center for War/Peace Studies, 218 East 18th Street, New York, NY 10003 for $2.50).

The following game consists of a teacher's guide, two science activities on water pollution, a scenario for students to read, and a set of role cards.

PERFORMANCE OBJECTIVES

Children will

1. use a simulated setting to describe what happens when part of a system breaks down.
2. hypothesize (make guesses) about the consequences of trying to correct the malfunction.
3. demonstrate cooperation by working in groups to solve problems.
4. use two science experiments to demonstrate how damage to one part of a system affects other parts.
5. draw inferences about how the spaceship simulation is like Planet Earth.
6. state consequences of damage to one of Earth's life support systems.

PROCEDURE

NOTE: The number of copies needed, as indicated in parentheses, is based on a class of 25 children. If the class is larger, assign additional Second Class Passenger roles; if smaller, assign fewer First Class Passenger roles. It is important that there are almost twice as many Second Class as there are First Class Passengers.

Lesson One

(approximately two hou[illegible] dr[illegible] into two parts; Steps 1, 2, and 3; and Steps 4 and

STEP 1: Before [illegible] e sure students know what a system [illegible] You [illegible] want to use the water faucet exercis[illegible] with these lessons.

STEP 2: TERRA II—THE SETT[illegible] FOR THE STORY (5–10 minutes, 25 copies)

Distribute one thermal copy [illegible] together with a picture of the spaceship (or project[illegible] of the spaceship).

STEP 3: INDIVIDUAL ROLES ([illegible]

Distribute one role to each c[illegible] directed to form into groups according to roles assigned an[illegible] their parts.

a) "Crew" (5 copies). Wr[illegible] one of the following roles: Captain, Navigato[illegible] Crew, Food Rations Officer, Hydroponics Engineer.
b) "Technicians" (5 copies)[illegible] sheet one of the following roles: Doctor, Pharma[illegible] Nurse, Scientist, Electrical Engineer.
c) "Shopkeepers" (4 copies). [illegible] each sheet one of the following roles: Movie Theater [illegible] Game Room Manager, Top O' Space Manager, Cloth[illegible] Supplier.
d) "First Class Passengers" ([illegible]
e) "Second Class Passengers" [illegible] copies)

STEP 4: DAY 300 ON TERRA II [illegible] minutes; 5 copies, 1 to each group; or 25 copies, 1 to each child

Distribute sheets. Children should [illegible] into groups, read material, and begin discussion and interac[illegible] prescribed on their sheets. If any group seems to be lagging, you may circulate using the information below for *clue* questions or comments to stimulate further thought or inquiry on their parts.

GUIDE FOR GROUP DISCUSSION—SYSTEMS

Direct Functions of the Water System:

—keeps the temperature at the proper level for humans
—keeps the temperature at right [illegible] for plant life
—keeps air purified for breathing
—keeps plants at proper moisture [illegible] growing
—is used by humans for drinking
—is used in preparation of some foods
—is used for hygienic purposes, bathing, etc.
—is used for luxury items such as in Top O' Space Shop
—is used for freezing and refrigeration units to keep food from spoilage and medical and other supplies intact

Indirect Functions of the Water System:

—helps maintain normal oxygen supply through plant support system
—helps maintain basic food supply through plant growth
—helps maintain general health through temperature control
—helps maintain its own temperature through cooling air system
—helps maintain cooling of electrical and other engine systems

When groups seem to have carried discussion as far as they are able, call a meeting—Step 5.

STEP 5: FIRST SPACE COUNCIL MEETING (30–40 minutes)

Select four children, each to list on the chalkboard the items discussed under one of the four categories of problems. Each group should then have an opportunity to mention everything raised in that group relating to "Food Supply," then to "Air Supply," "Temperature," and "Other Living Conditions," so that the discussion rotates equitably among the children. Every time a problem is repeated by another group, the student at the board should make a check mark next to the item. This process allows a sharing of the small group's ideas and also brings out the larger and more important issues. Allow the children to react to each other's views at any time. Note which problems are repeated. Why? Note which systems are most affected by water loss. Encourage, through questions and comments, as much discussion as possible of *systems* and the *interdependence* of systems on the spaceship.

Lesson 2

(approximately two hours—may be divided into three steps)

STEP 1: SCIENCE ACTIVITY D—SYSTEM POLLUTION (30–40 minutes)

Do prior to continuing the simulation. Science Activity E is an optional extension of D.

STEP 2: DAY 301 ON TERRA II (30–40 minutes; 5 copies, 1 to each group)

Distribute sheets. Children again separate into groups, read the material, and proceed as directed. The information below may assist you in helping individual groups analyze some of the problems that would arise from the solutions suggested. It is by no means exhaustive, and children will probably anticipate many other problems which are valid. Use in small groups as questions.

GUIDE FOR GROUP DISCUSSION—SOLUTIONS

Solution 1: Grow fewer plants—reduce the water supply for the "Jungle."

PROBLEMS: This would directly affect the food supply. It would affect the air supply, since recycling of oxygen depends on this system. The "Jungle" is an essential part of the closed ecological system and to tamper with it would be much too dangerous.

Solution 2: Cut down the temperature on half the spaceship.

PROBLEMS: Close down what areas? If you close the First Class space, how will those passengers feel? Where will you put them? If into Second Class, it will produce crowding, and what effects will that produce? Can the Crew areas be closed? The "Jungle" has already been eliminated. If you close down the shops, since these are not essential for survival, how will the shopkeepers react? (See end of simulation for related activities—analogies to use of resources for nonessential purposes.) If you close down recreation areas, how will people spend their leisure time? Will this affect them psychologically? (How about you? How would you feel spending 24 hours a day, being anxious or worried and having little or nothing to do with your time?)

Solution 3: Reduce temperature to 50° over entire ship and keep everything open and running.

PROBLEMS: How long can people be comfortable at this temperature and continue to function normally? Will this eventually affect the general health of people? Of plant life? Can the crew perform its duties well under this reduced temperature? (Make a separate investigation into what is tolerable for the human body; compare with the usual temperature of about 70° maintained in homes during winter.)

Solution 4: Ration the water supply for drinking, bathing, washing, eating.

PROBLEMS: How will this affect the well-being of passengers? Could it in any way affect health? Are any of the above uses more essential than the others? Could the rationing allowances be different for crew, technicians, or passengers, according to their importance on ship? If so, how can unequal distribution of water be arranged? Who makes the decision? How will each group react to rationing on such a basis?

Solution 5: Passenger's own solutions.

Most of these will probably result in the above kinds of problems, and in the same way. These can be discussed in the Second Space Council Meeting.

STEP 3: SECOND SPACE COUNCIL MEETING (30–40 minutes)

Call the group together again to report their findings. Start with Solution #1. Ask a student to go to the chalkboard to keep notes as each of the five groups reports its comments on this solution. Continue having a different child list in another column on the board the five groups' comments on Solution #2, and so on through the four suggested solutions. A fifth column can then be set up to look at the other proposed solutions which the children themselves have identified. Do these solutions, too, have problems? Encourage groups to react to them. How are these different from the first four solutions offered? Can you deal with any part (or system) without affecting the other parts (or systems)? Can you deal with any system without affecting man? Note both the direct and the indirect damaging effects.

SCIENCE ACTIVITIES

D. Pollution of a System. (To be used prior to lesson 2.)

CONCEPT: All parts of a system are connected; if you damage one part, you damage the whole system.

ITEMS NEEDED: A clear jar filled with clean water; masking tape or a large permanent marker; a small glass of colored water (use tempera or other opaque pigment rather than clear food coloring); a spoon or eye dropper, a small map or globe.

Step 1: Set the jar high enough so that all the class can see it. Place masking tape or make a very visible line with the marker about 1" below the top water level of the jar. Ask a child to begin dropping the "polluted" colored water into the jar slowly with the spoon or dropper. Caution him to pollute *only as far down as the tape or mark*—DO NOT pollute below tape.

Step 2: As the children watch, ask: Can it be done? What is happening? What about the water in a stream? In a river? In an ocean?

Step 3: Do Science Activity E at this point; if a relief map is not available, then proceed as follows:

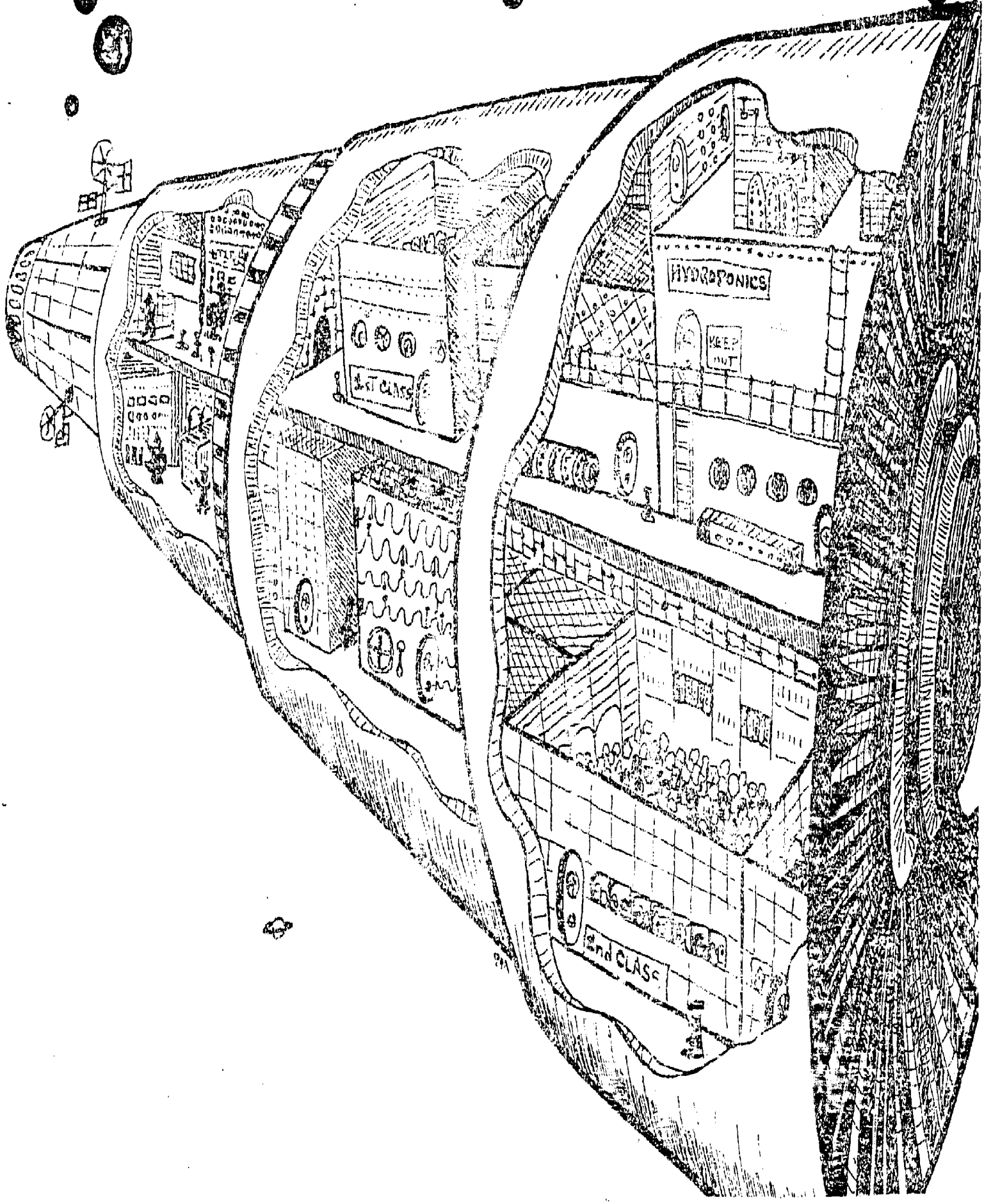
Step 4: Have a child go to a map or globe and find as many bodies of water as he wishes—at least 4 or 5. Name them. Trace them to see if they are connected to each other. Are they parts of a larger system? What is that system? As a system, are they interdependent on each other? How they like the water in the jar? What is the effect of pollution in any part of this water system?

E. Pollution of the Earth's Water System. (Optional activity, an extension of Science Activity D.)

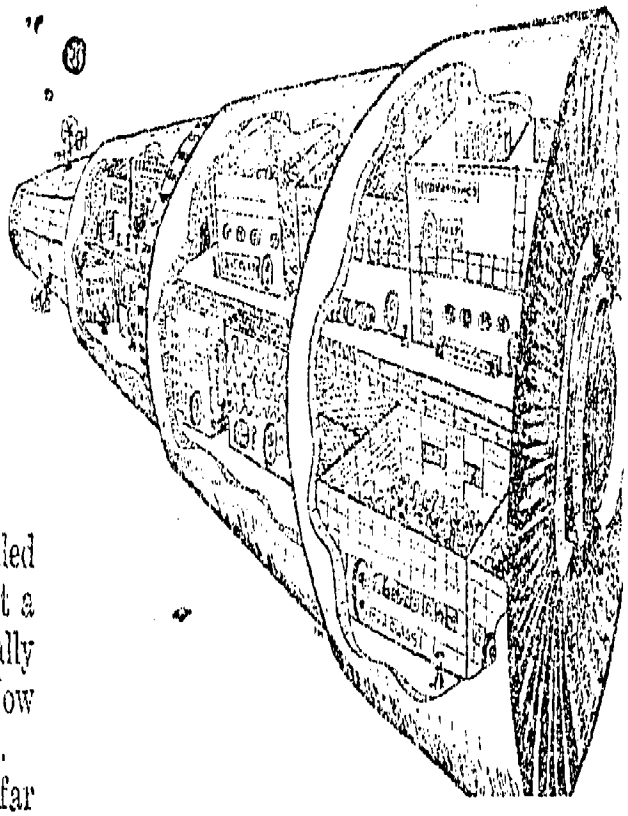
CONCEPT: The water system of the earth is one unified system; damage to any part ultimately damages the world system.

ITEMS NEEDED: A relief map of any size or kind (the most easily manageable for a large group demonstration is a 24" x 36" world map, but smaller local maps will do); a quantity of clear water; an eye dropper or spoon; some colored water (as in D); and paper towels for cleanup.

Step 1: Have the children gather around the table holding the map. One child pours clean water over the map base so that the world's water areas are completely covered. Another child selects any small body of water on the map and pollutes just that area with the eye dropper or spoon, using colored water. Continue the addition of the pollutant a little at a time, until it seems into connecting bodies of water and eventually into the ocean. Then follow with questions in Step 4 of Science Activity D.


HYDROPONICS
KEEP OUT
1st CLASS
2nd CLASS

Terra II—A Setting for the Story



You and 100 others are on a huge spaceship called "Terra II." About ten months ago you looked out a porthole and saw Earth for the last time. It really looked small then—about the size of the moon. Now you can't even see it, for you are far out in space.

Earth and all the planets are far behind—too far behind to be of any help. Terra II has to solve all its own problems. But it's a good ship, made to take care of itself. Terra II is a wonderful experiment—the largest ship people have ever seen or known. Scientists believe that people can live on a spaceship for a long time and be healthy and happy. They hope that the supplies of air, water, and food will never be used up; these things are "recycled"—which means they can be used over and over again. The green plants on the ship recycle the air after people have breathed it. Other plants are eaten as food. Wastes are recycled to feed the plants. Terra II is a self-supporting small world in space.

But can Terra II really support itself and keep you healthy and happy? Experts say it depends on how the ship is run. You are one of those who decide how the ship is run, for you are a member of the Space Council—the elected government of the people on board. Of course you want the ship to succeed anyway. After all, you are out in space, and your life depends on the ship!

All Systems Go

Terra II is a big system made up of many smaller systems. One is the plant system. This is a large space filled with gigantic plants growing in water and chemicals instead of soil—a process that scientists call "hydroponics." The crew calls this the "Jungle" because everything is large and green. The temperature must be just right and the amount of water flowing into the system watched very carefully so the plants stay healthy and grow at super speed. The "Jungle" is quite important to the spaceship for two reasons: (1) it supplies continuous food for everyone, and (2) the plants turn carbon dioxide back into oxygen to help recycle air on the ship.

Another important system is the weather system. This keeps the temperature just right for human and plant life on the ship. It also cools the machinery and refrigerates food and other supplies. The crew calls this system the "Teapot," because it steams and whistles like a boiling teapot if something goes wrong with the temperature or moisture in the air. Of course, you don't have to worry about rain or snow on Terra II, but you certainly don't want to be living in 30° or 110° temperatures. And neither do the plants in the "Jungle!"

The "Teapot" circulates air and water all over the ship through sets of pipes. The air keeps the water at the right temperature, and the water flow heats or cools the air as needed. Water filters in the system purify air as it moves around the ship. There are valves and thermometers attached to the pipes to measure the temperature and moisture. If there is too much change, a whistle blows and a light flashes on a computer showing where the trouble is so the crew can check it out.

There are two levels on the spaceship. On one level are the crew, the technicians, and a few passengers. The rest of the passengers are on the second level. You have brought the basic necessary clothing for this trip. But there are also shops where you can buy things, a movie theater, and a game room for recreation. These are located on Level Two. Much of the food you eat is condensed, like instant food, and needs water added to it. On Level One is the Top O' Space Shop, a special eating place which has all kinds of special treats for sale. The refrigeration units and the "Jungle" are both located on Level One also.

You will be given a sheet which says who you are on this ship. Everything you think about and do should be based on being that person. Keep this paper since you may need it later for some research—just in case anything happens and the Space Council has to meet.

Day 300 on Terra II

Three hundred days have gone by since you left earth. Living on a spaceship is great! The food is good; people are friendly; it's like living in a little town. But—this morning an emergency was declared! The Captain has called a special meeting of the Space Council for today. Water pollution! One of the tanks that recycles the water overloaded and broke down. Before the alarm went off on the "Tea-pot" and the crew could get in to shut off the tank, some polluted water was forced through the filter into the rest of the clean water. They don't know how much polluted water got through. It is being checked now. The big problem for the moment is that 15% of the ship's water is in that broken tank and cannot be used unless it can be purified and recycled. There is a water shortage. Water cannot be used at the regular rate.

Of course, everyone on the ship is worried. The Space Council is going to try to figure out what problems this may cause. Before the meeting, the Captain is asking you to talk about all the things on the ship that may be harmed by this water shortage—everything you can think of that needs water to work or live properly. In one way or another, all your lives may be at stake!

Meet with the others in your group. Choose someone to write down the ideas you have. Use the other side of this sheet and list them under the four headings given. Take time for everyone in your group to add something to the list.

Day 301 on Terra II

The Space Council meeting has shown that many systems are endangered by the water loss. There is still enough water to keep the ship going, but the water cannot be used in regular fashion. Something has to be cut down. The Captain has given you a list of possible solutions (other side of this page).

Everybody on the ship is involved, and he wants you to look at these solutions and decide what should be done. Look at each solution and think about any problems it might cause. List these in the column called "Problems." You have plenty of time to think these over. Compare all the solutions and see if some are better than others. If so, why? Compare the problems each solution might cause; see if they are different from each other.

The Captain feels that you may have other good solutions besides those he listed. If so, add them to the list. Be sure to consider whether they may cause problems, too.

POSSIBLE SOLUTIONS	PROBLEMS
1) Grow fewer plants. Reduce the water supply for the "Jungle."	
2) Cut down the load on the "Teapot" by completely closing off a third of the spaceship. (Choose which parts of the ship should be closed up.)	
3) Reduce the temperature to 50° all over the ship and keep all parts of Terra U operating.	
4) Cut down and ration water supply for drinking, bathing, eating, washing. Different rations are possible for crew, technicians, and passengers.	
5) Your solution.	

EFFECTS OF WATER SHORTAGE

On Food Supply	On Air Supply	On Temperature	On Other Living Conditions

ROLE OF FIRST CLASS PASSENGER

You are traveling on this spaceship as a passenger, but a special one. You are quite rich, have paid well for your space, and have living quarters that are large and very comfortable on Level I. The Top O' Space Shop on Level I is a place you go often to enjoy special food treats. The recreation room, movie theater, and other shops are located in the Second Class area on Level II. You are free to go there any time and as often as you wish. The passengers in Second Class, however, are only allowed to come to the Top O' Space Shop once a day.

ROLE OF SECOND CLASS PASSENGER

You are traveling on this spaceship as a passenger. Your living quarters are on Level II where most other passengers also live. You do not have much money for special treats but enough to go to the movie and game rooms which are on your level. The First Class Passengers have paid a much higher rate to be on Level One, where it is not nearly as crowded. They can come down to the movie theater and game rooms any time. You are allowed to go once a day to Top O' Space Shop for food treats.

ROLE OF SHOPKEEPER Your Special job is.....

You have come aboard this spaceship for one main reason—to make money. There are several private shops on the spaceship to provide the crew and passengers special things not usually found on a spaceship. Since this is an experiment for a long period, these and leisure entertainment were included in the spaceship. You are anxious for people to keep wanting the things you have to sell.

ROLE OF TECHNICIAN Your special job is.....

You are on Terra II to do research. Although you are not a regular member of the crew, you would help out if a problem came up. You live in the First Class Level but may go to Second Class any time you wish.

ROLE OF CREW Your special job is.....

As a member of the crew you have a special responsibility to everyone on this spaceship. You have to do your job to keep the ship going. Whatever happens on board, you are one of the people who makes sure that things are in working order. You see that passengers live a comfortable life during this trip and feel "at home." It is up to you to see that the ship's systems run well. The crew takes care of food, air, water, and other essential parts of the ship. You are free to go anywhere on the spaceship at any time.

LESSON 6: ONE CITY'S LINKS WITH THE WORLD*

A variety of lessons on interdependence are suggested in the following materials on Columbus, Ohio.

PERFORMANCE OBJECTIVES

Students will

1. discover ways in which their community is linked to other parts of the world.
2. recognize that ties to other parts of the planet involve a wide variety of activities.
3. demonstrate greater awareness of global interdependence.
4. make inferences about how global links influence people's lives.
5. gain practice in group work on a research assignment.

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* Reprinted from INTERCOM #78, *Teaching Interdependence: Exploring Global Challenges Through Data*, by William Nesbitt and Andrea Karls, Center for War/Peace Studies, June 1975.

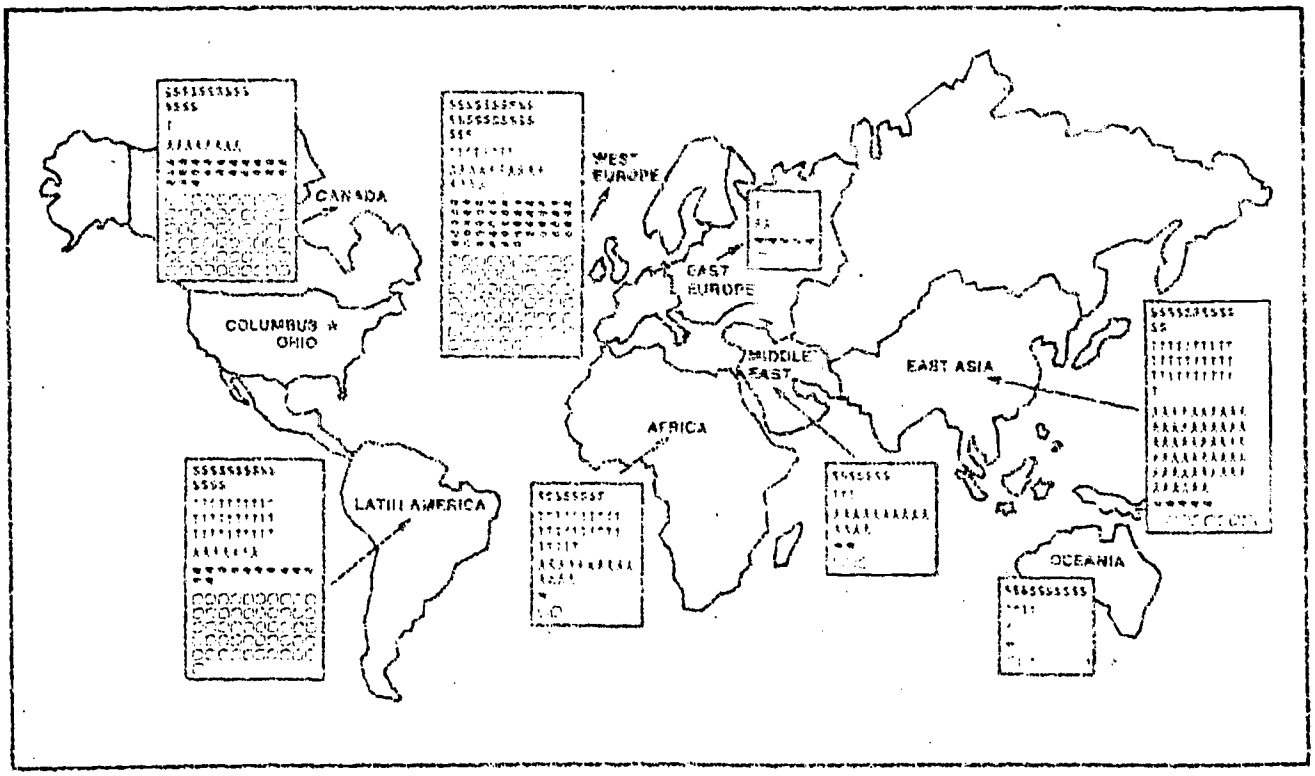
ONE CITY'S LINKS WITH THE WORLD:
A Case Study of Columbus, Ohio

Is your home town directly tied with other cities and peoples around the globe? This question was asked in Columbus, Ohio and most people didn't think so. They didn't know that there is a US Customs House in Columbus and that there are over 125 university students from India alone in their city. Columbus businessmen made 1,190 trips to Africa, Asia, Canada, Europe, and Latin America—a total of 29,000 air tickets were bought for flights from Columbus to foreign cities—all in 1972. Why didn't they see these international activities in their own city?

A group of professors and graduate students at Ohio State University decided to learn the answer to this question—and also to find out how involved Columbus really was with the rest of the world. They hoped this project would make Columbus' citizens more aware of the interdependence of their community with the rest of the world—and lead them to take a greater interest in world affairs and problems.

The project has been substantial and is still underway. It focused on the metropolitan Columbus area, a region with a population of about a million people, and used a variety of techniques to collect data. Contacted first were those people in organizations with obvious international roles (the university, hosts of foreign visitors, chambers of commerce, etc.), and these led to others. Some 250 city links to the world were identified and studied; and 70 people highly involved in international activities were interviewed in person. A questionnaire was mailed to 4,100 individuals and organizations. Information was accumulated from newspapers, government reports, university theses, and annual reports of organizations. Much has been discovered but so far only the surface has been scratched.

The map and table below show a part of what they found. Do they show Columbus to be interdependent with the entire world? Are there any surprises in the data? Aspects you find particularly interesting? How do you think the quality of life in Columbus is altered by these international relationships?



Key

$ = 2 firms exporting to the region.

† = 2 religious ties (i.e., missionaries, hospitals, schools, student, and orphan support).

= 10 foreign students whose home country was in that region.

= 200 persons traveling to that region.

= 20 OSU faculty activities (i.e., research, teaching, study, tourist, meetings) occurring within the regions.

* The project, *Columbus in the World, The World in Columbus*, is sponsored by the Transnational Intellectual Cooperation Program of The Mershon Center, Ohio State University. For more information, write Chadwick F. Alger, director of the project. Artwork courtesy of The Mershon Center of the Ohio State University and The Charles F. Kettering Foundation.

Comparative International Figures for Columbus Business Firms, Religious Groups and Voluntary Organizations

	Religious	Voluntary	Business
Total Number of Visitors from Abroad	3,123	214	2,170
Total Days by Visitors from Abroad[1]	74,952	1,498	5,971
Total Number of Trips Abroad	812	667	1,205
Total Days of Travel Abroad[2]	17,052	4,669	16,190
People Spending 160 Hours per Month on Int'l Activities	0	0	160
People Spending 120 Hours per Month on Int'l Activities	0	0	147
People Spending 50 Hours per Month on Int'l Activities	98	89	362
People Spending 20-30 Hours per Month on Int'l Activities	57	131[3]	0
People Spending 1-19 Hours per Month on Int'l Activities	0	1,205	0
Total Hours per Month Spent on Int'l Activities[4]	12,264	21,085	61,340
Number of Organizations with Daily Int'l Communication	4	1	63
Number of Organizations with Monthly Int'l Communication[5]	65	8	40
Dollar Value of Money Sent Abroad	83,306	22,031	86,671,925
Dollar Value of Money Received from Abroad	618	204	135,825,018

[1] This is computed by multiplying the number of visitors per year by the average length of stay.

[2] This is computed by multiplying the number of trips abroad by the average length of stay. The average length of stay for business is 13 days, for religious groups 21 days, and for voluntary organizations 7 days.

[3] The voluntary organization questionnaire used 20–49 hours per month instead of 20–30.

[4] This was computed by multiplying the number in each category by 160, 120, 50, 35, and 10 respectively and summing these to obtain the total hours per month spent on international activities.

[5] These figures don't include those in daily contact.

How do your own community's links with others around the world compare with those of Columbus? You might make a similar survey in your town. Students could work in groups on separate aspects and then pool their findings to get a composite picture. Of course, you might not be able to be as thorough as the Columbus survey, but you might turn up some interesting results. One group could start with the travel bureaus to see what they can tell you about people going abroad. Another group could survey the town's churches to learn about their international activities. A third could try the voluntary and service organizations, such as Lions Clubs, Rotary, etc. Is there a college or university in town? How many foreign students attend? How many of its students go abroad? Are there industries or banks engaged in international trade? How much money comes from sales abroad? Is spent on imported products? How many jobs depend on international trade? Both management and labor may have people going to foreign countries and people from outside the US coming to see them. Agricultural organizations can tell you about their relationships with other parts of the world. And are there organized ethnic groups where you live? Could they help you? What about sports? Do teams leave the country? Are there foreign teams that come to play? In the arts there are many international contacts. Does your town have exchanges of performing musicians or art shows? What about foreign films? Don't neglect exchange programs by schools.

These are suggestions which you can start with. You will undoubtedly find many other areas to investigate. When you have enough data, you might try making some tables like the one above, to show how people where you live are linked with people in other parts of the world.

If you decide not to make a town or city-wide survey of international movements, perhaps you might study your own class and school. For example, how many in the class are foreign-born or have parents and other relatives who are? What contacts do they still have with that other country? How much mail is sent and received from abroad? What products do you use that come from a foreign country? (Obvious examples may be cars, television sets, and radios. And even though such products may be labeled "Made in USA," they probably contain a considerable amount of imported raw materials, or components assembled in other countries. There also may be unlabeled products, like clothing and jewelry. What about food? Coffee and tea, for example.) Are your parents or other people you know involved in international business? If they are, you might interview them to determine the nature and extent of their foreign contacts. Are your parents or other people you know members of organizations with contacts outside the US? And so on.

After concluding your project, think: What difference have these connections with people in other lands made in the life you lead in your community? What would your community be like without these contacts?