DOCUMENT RESUME

ED 130 009 08 CE 008 125

AUTHOR	Peterson, Marla; And Others
TITLE	Career Education Guide: (3-4).
INSTITUTION	Eastern Illinois Univ., Charleston. Center for Educational Studies.
SPONS AGENCY	Bureau of Adult, Vocational, and Technical Education (DHEW/OE), Washington, D.C.
PUB DATE	75
CONTRACT	OEC-0-72-4626
NOTE	523p.; For related documents see CE 008 124-126
EDRS PRICE	MF-$1.00 HC-$27.45 Plus Postage.
DESCRIPTORS	*Career Education; Curriculum; Curriculum Guides; Elementary Education; Elementary School Mathematics; Elementary School Science; *Fused Curriculum; Grade 3; Grade 4; Language Arts; *Lesson Plans; Occupational Information; Occupations; Social Studies; Teaching Guides; *Units of Study (Subject Fields); *Vocational Development

ABSTRACT

One of a series of guides developed under the K-6 Teacher and Counselor Competencies in Career Education Program, this guide contains a section for each of the Grades 3-4 levels (Third Experience Level and Fourth Experience Level), each encompassing the two career education components: Subject Matter Areas (to reinforce science, language arts, math, and social studies concepts) and Career Development Areas (with both developmental and interacting dimensions). Each experience level section contains eight infusion strategies (teaching units which fuse career development and subject matter concepts) based on the career developmental dimensions: Coping behaviors (two strategies), decision making (two strategies), lifestyle (one strategy), and self development (three strategies). (Separate teaching units are not included for the interacting dimensions; they are integrated into the suggested activities for the developmental dimensions). Each infusion strategy contains career development concepts, teacher goals, vocabulary, performance objectives, listings of subject matter concepts used, preplanning suggestions, student activities, student pages, references to related materials, and job descriptions of the occupations presented. Cross indexing is provided so that infusion strategies may be located by occupational theme, subject matter topic, or career development area. (JT)

CAREER EDUCATION GUIDE
(3-4)

by

Marla Peterson
Ann Jackson
Carl Tausig
Janet Sutherland
Judith Barford

June 1974

Published pursuant to a grant by the Bureau of Adult, Vocational and Technical Education, U.S. Office of Education, Department of Health, Education, and Welfare. The opinions expressed herein do not necessarily reflect the position or policy of the Office of Education and no official endorsement by the Office of Education should be inferred.

Contract # OEC-0-72-4626

This guide
is one of a series
of three K-6 guides:

Career Education Guide (K-2)
Career Education Guide (3-4)
Career Education Guide (5-6)

Cover design
by
Buzzard Laboratory School
First Grade Students:

Scott Jordan
Becky Paris
Karla Weidner

Art by Marky Turrell Hinson
and Phillip Settle

Project Monitor, Elizabeth Simpson
United States Office of Education

CONTENTS

NATIONAL ADVISORY COMMITTEE

FRANK BURTNETT, Director, National Career Information Center, American Personnel and Guidance Association, Washington, D.C.

DONNA CHILES, Past President, American Personnel and Guidance Association, Washington, D.C.

RUPERT EVANS, Professor of Vocational and Technical Education, University of Illinois, Urbana, Illinois

WINIFRED FRENCH, DuSable Career Education Project, Chicago Public Schools, Chicago, Illinois

JOHN JAROLIMEK, Past President, National Council for the Social Studies, University of Washington, Seattle, Washington

RONALD McCAGE, Coordinator, Research and Development Unit, Illinois Division of Vocational and Technical Education, Springfield, Illinois

FERMAN B. MOODY, Pennsylvania Department of Education, Harrisburg, Pennsylvania

ROMAN PUCINSKI, Author of The Courage to Change and Alderman, Chicago, Illinois

VALIDATION TASK FORCE

LARRY BLASCH, IBM Corporation, Springfield, Illinois

SANDY BOLL, Classroom Teacher, Sullivan Public Schools, Sullivan, Illinois

FRANCES FALEN, Classroom Teacher, Buzzard Laboratory School, Eastern Illinois University, Charleston, Illinois

MARLYS HANSON, Career Education Project Director, Soccorro Public Schools, Soccorro, New Mexico

ROBERT JERVIS, Career Education Project Director, Anne Arundel County Schools, Annapolis, Maryland

DOROTHY LAWSON, Career Education Project Director, Cumberland County Schools, Greenup, Illinois

WILLIAM REYNOLDS, Coordinator, Professional and Curriculum Development Unit, Illinois Division of Vocational and Technical Education, Springfield, Illinois

JOEL SMITH, Director, Cobb County Occupational and Development Program, Marietta, Georgia

MICHAEL ZOCKLE, Director, Career Education Project, Warren Public Schools, Warren, Ohio

PREFACE

Materials of the project stress parallels between the lives of children and the lives of all other humans. The process of decision making is learned through making decisions whether one is a child in school or an adult in a specific occupation. So too are other career development concepts learned. One learns coping behaviors by being able to cope with situations in the here and now. Children at school are involved in an occupation, that of "school child" just as an adult may be in the occupation of tailor or chemist.

Visits were made to career education project sites, career education curriculum guides and career development theory were reviewed, commercial materials were examined, and people in various occupations were interviewed. Out of all these activities emerged the eleven career development major concepts and the seventy-six subconcepts around which the Enrichment of Teacher and Counselor Competencies in Career Education materials are built. Certainly more career development concepts exist. However, some priorities had to be established. With the help of a validation task force the staff was able to reduce the concepts to a manageable number.

Five textbook series were reviewed and concepts commonly presented at each experience level were identified for language arts, mathematics, science, and social studies. Once both career development and subject matter concepts were identified, teaching strategies were developed which infused the two types of concepts.

Teaching-learning activities have to have a "jumping-off" point. The project staff has chosen to use occupations selected from the fifteen USOE clusters of occupations as the agent to bring together career development and subject matter concepts. It is the philosophy of the project staff that at the K-6 level, in general, it does not matter which occupations are chosen. In fact, occupations do not have to be used. However, occupations are highly motivational in nature and serve as an excellent means to help students acquire career development and subject matter processes and content.

An honest attempt has been made to avoid sex and minority group stereotyping. Illustrations and text were reviewed by minority group members and representatives of women's groups. Some illustrations were redrawn and some text was rewritten. The authors invite all users who find any illustrations or wording that contain stereotyping to modify the materials. It was impossible for the staff to determine whether publications listed in the bibliographies contained stereotyping. The user should be alert to this possibility and review all materials listed in the bibliographies.

Throughout the development of this guide, students and teachers at Buzzard Laboratory School offered suggestions for improvement of the materials. Many children's suggestions are incorporated into this publication.

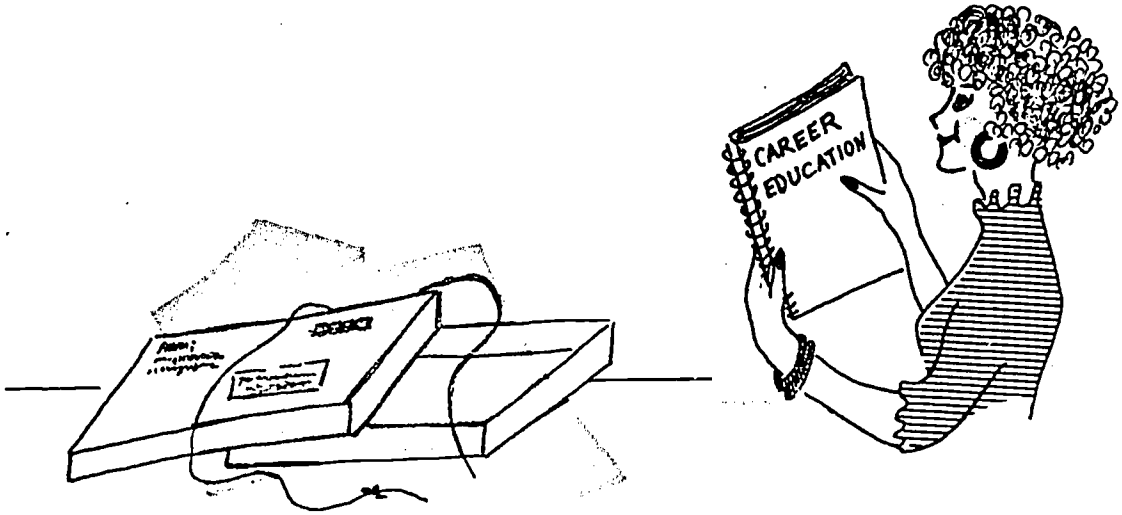
The vastness of the population for whom this publication is intended made it difficult to produce a document that would fit the needs of the entire population. Therefore, the staff expects that many adaptations will occur. This may be highly desirable because the professional classroom teacher is very adept at adapting.

--The Project Staff

ORIENTATION TO THE GUIDE

Dear Teacher,

You are about to be introduced to a promising innovation in K-6 curriculum--career education.



Put aside any pat ideas you may have.

Career education isn't just learning about jobs.

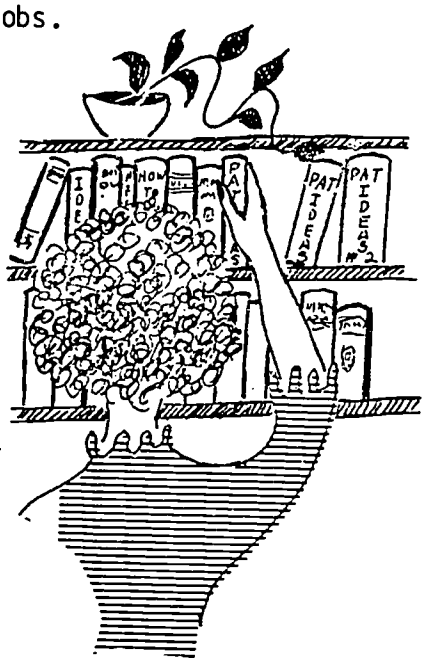
Career education isn't steering children into certain careers.

Career education doesn't force children to ask, "What do I want to be?"

You don't have to add a new class period called career education.

You don't have to buy new materials.

You don't have to change useful teaching methods.



INFUSION is the Master of Ceremonies for career education.

Career education has two components.

I. The Subject Matter Areas

These are the building blocks of every K-6 curriculum. The activities in this guide will reinforce Science, Language Arts, Mathematics, and Social Studies concepts.

II. The Career Development Areas

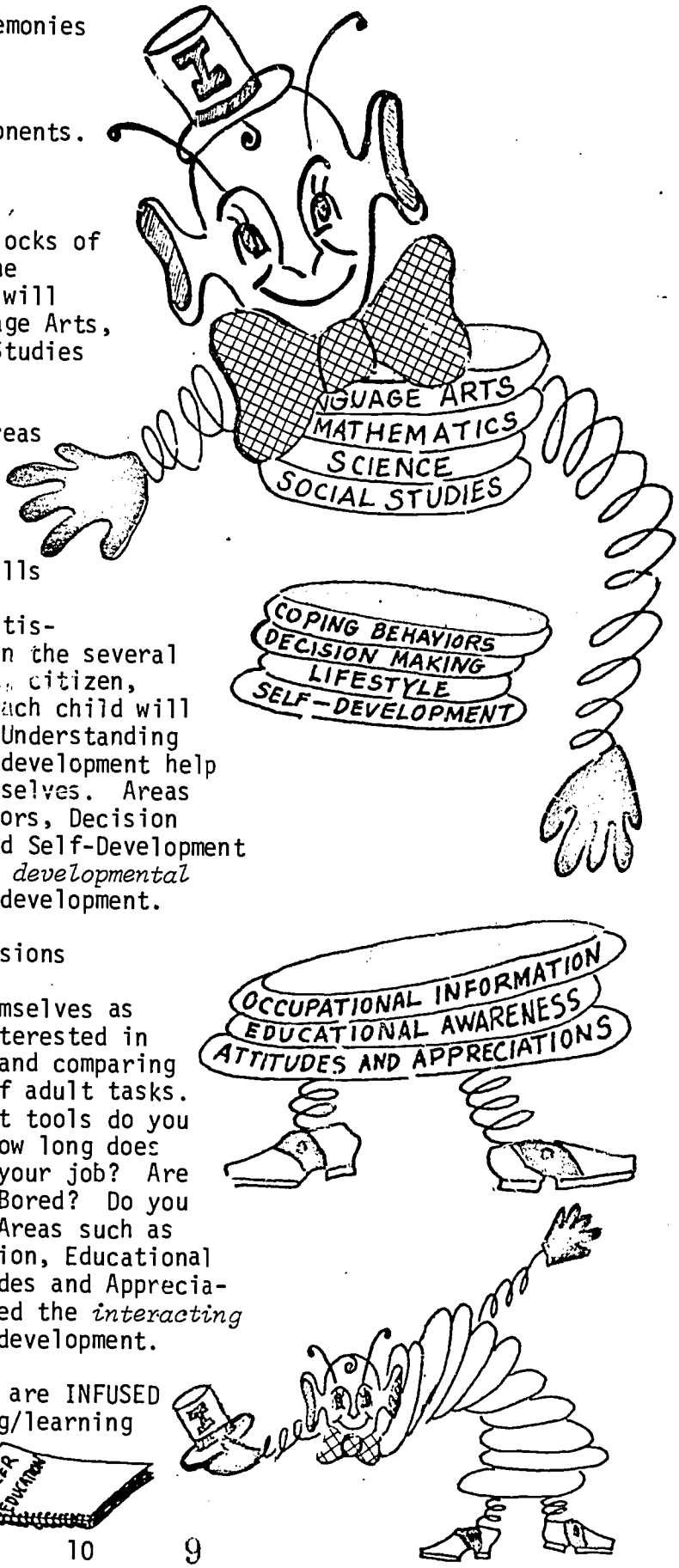
A. The Developmental Dimensions

Understanding and skills in career development guarantee personal satisfaction and success in the several adult careers (parent, citizen, worker, etc.) which each child will assume as an adult. Understanding and skills in career development help children to know themselves. Areas such as Coping Behaviors, Decision Making, Lifestyle, and Self-Development have been labeled the *developmental* dimensions of career development.

B. The Interacting Dimensions

Children think of themselves as workers. They are interested in knowing, trying out, and comparing the characteristics of adult tasks. Children wonder, "What tools do you use? Can I do it? How long does it take you to learn your job? Are you ever in danger? Bored? Do you make enough money?" Areas such as Occupational Information, Educational Awareness, and Attitudes and Appreciations have been labeled the *interacting* dimensions of career development.

When these components are INFUSED into a single teaching/learning activity, career education happens.



Concepts

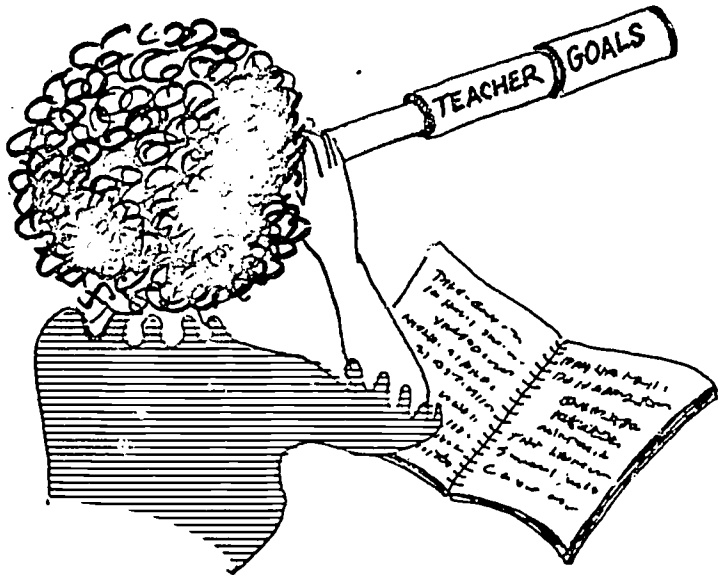
Subject matter concepts for the activities in this book were adapted from major textbook series.

Concepts for the developmental dimensions of career development are identified by one to three major concepts. Each major concept has K-6 subconcepts sequenced by increasing detail and difficulty according to experience level.

Concepts for the interacting dimensions of career development are more general and are the same at each experience level in this series.

Teacher Goals

The career concepts lend themselves to a spectrum of teaching activities beyond the scope of those offered in this book. Teacher goals are provided so that you may preview and scan the teachability of a concept. The teacher goals will alert you to many ways to reinforce career concepts throughout the school day.



Objectives

You are correct if you assume that each career education activity has more than one objective. The activities have objectives from the two career education components--subject matter and career development.

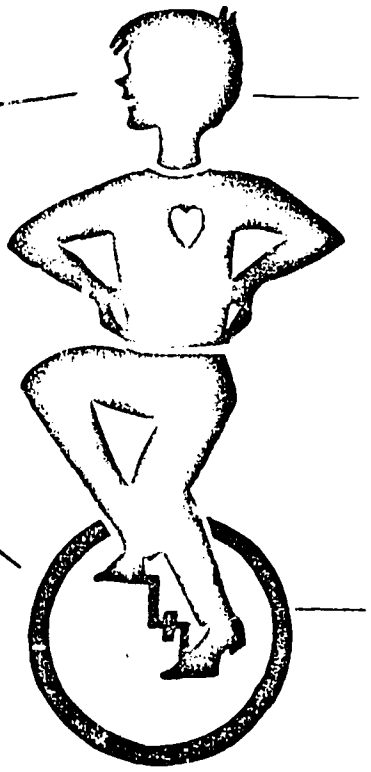
There is a reasonable balance between

the cognitive,

affective,

and psychomotor

objectives.



Objectives appear in the discussion of an activity like this. PPO means Pupil Performance Objective.

Lifestyles within a community differ. **Lifestyle**	. . . *compile a list of ways to find out names and addresses of local nurseries.* PPO Use the yellow pages of the telephone directory as one source for locating nurseries in the immediate area.

The career concept toward which the objective was written is beside it in the left hand column.

Evaluation

The evaluation of pupil achievement after an infusion strategy (teaching unit) has been completed must depend primarily upon the sensitivity and judgment of the classroom teacher. The intelligent selection of means of evaluation has a direct relationship to the actual learners involved and the local conditions. For example, the classroom teacher is the best qualified person to decide whether a certain child should demonstrate a given knowledge "orally" or "in writing." The same consideration may be applied to the amount of knowledge or skill required.

Rather than prescribe a posttest, the present materials suggest that the pupil performance objectives for the infusion strategy activities be used as bases for the individual teacher's evaluation of pupil achievement. With these objectives and their corresponding activities as starting points, the teacher may decide to designate:

A CERTAIN NUMBER OF REQUIRED ACTIVITIES TO BE PERFORMED BY ALL PUPILS;

or, A CERTAIN NUMBER OF ACTIVITIES WHICH MAY BE TREATED AS ELECTIVES BY THE CHILDREN;

or, A COMBINATION OF REQUIRED AND ELECTIVE ACTIVITIES;

or, A WRITTEN, ORAL, OR PERFORMANCE TEST CONSTRUCTED ACCORDING TO THE CONTENT AND ACTIVITIES ACTUALLY EXPERIENCED BY THE CHILDREN.

ORGANIZATION OF THE GUIDE

You are probably very familiar with the content of the subject matter areas--mathematics, science, social studies, and language arts. However, career development content may be new to you and you may need to become familiar with career development concepts. For this reason, within each grade or experience level the guide is organized around the developmental dimensions--Coping Behaviors, Decision Making, Lifestyle, and Self-Development. Infusion strategies (teaching units) have been prepared which focus on a career development concept.

In case you are wondering what happened to the other three dimensions of career development, you will recall that they were called the interacting dimensions and they do just that--interact with the four developmental dimensions listed above. Separate teaching units have not been written for the interacting dimensions concepts. Interacting dimensions concepts have been integrated into the suggested activities for the developmental dimensions.

Each experience level has been tabbed so that you can quickly find the experience level(s) that are appropriate for your students. Within each experience level you will find eight infusion strategies. The infusion strategies follow the same pattern for experience levels:

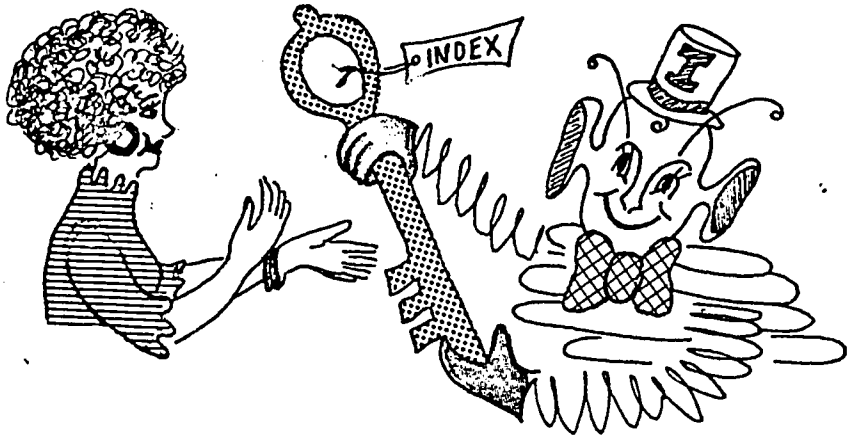
Coping Behaviors - 2 infusion strategies

Decision Making - 2 infusion strategies

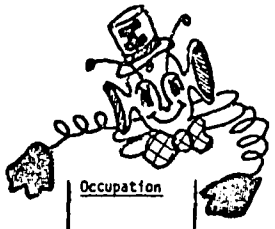
Lifestyle - 1 infusion strategy

Self-Development - 3 infusion strategies

This book is organized so that you can use it in different ways. The INDEX is your key.

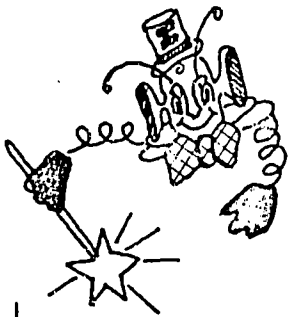


Suppose you wanted to teach about an occupation because it was of high interest in your geographic area or of special interest to the children. Choose an infusion strategy by occupational theme.



Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
CB	Going Below	Diver	Why Dive?	Describe, find similarities and differences	____
LS	Coming Attractions	Theater Manager	Alike and Different	Describe, find similarities and differences	____
SD	At Your Service	Deliveryman	Try This One	Categorizations	____

Perhaps you wish to transform a math period into career education. Select your specific math topic and use that activity.



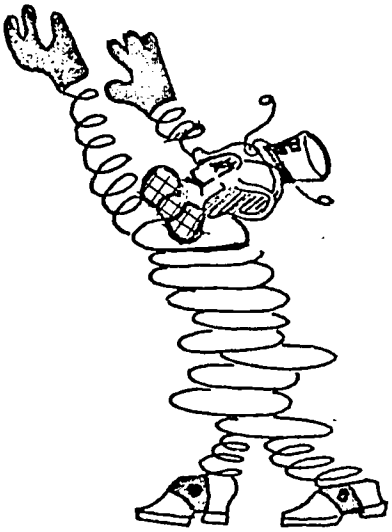
MATHEMATICS

(Facts and Operations)

CB	I Protect You	Policeman	It Has to Be Written	Counting	____
CB	I Protect You	Policeman	Help Me Find It	Cardinal numbers	____
DM	Things Look Different	Pilot	Listen to Ground Control	Cardinals to 100	____

Or maybe you feel your children need work in one of the career development areas. Choose activities from that section and teach them.

CB	What's the Number?	Telephone Operator	Long Distance Calling	One-step problems	____
DM	Try It This Way	Home Service Representative	More or Less	One-step problems	____
LS	That's Living	Nurseryman	People or Plants	One-step problems	____
LS	That's Living	Nurseryman	Gardens	One-step problems	____
SD	Made to Measure	Upholsterer	Measured to Fit	Solve number stories	____

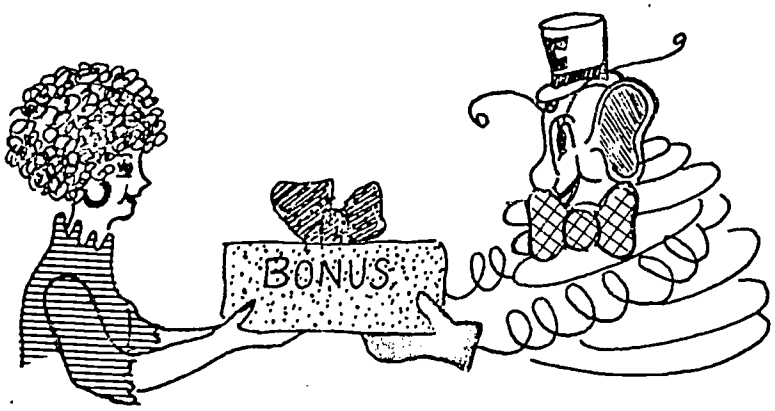


In this guide you will find teaching materials in the form of teaching units called infusion strategies. Each strategy contains the following:

1. Career development concepts
2. Teacher goals
3. Vocabulary
4. Performance objectives
5. Listings of subject matter concepts used
6. Preplanning suggestions
7. Student activities
8. Student pages (REACT pages)
9. References to related materials
10. Job descriptions of the occupations presented

Within each infusion strategy there are 3-5 teaching activities. Be selective. Choose those that fit you and your students.

REACT Pages



Student materials are offered for each activity in the form of Reinforcement Activity (REACT) pages. The REACT page is an activity supplement to be used at the discretion of the teacher. Directions for using the REACT pages are at the end of each activity.

Maybe it's time to start--

You may now feel that you are ready to start using this guide. If so, you need not read the material below. However, if you need additional preview of guide contents and additional suggestions for getting started,

LET'S TAKE A WALK THROUGH THE GUIDES.

IMAGINE YOU ARE A FIRST GRADE TEACHER who has decided to correlate some social studies concepts and career development concepts. The steps described below will assist you.

IT IS IMPORTANT THAT YOU FOLLOW EACH STEP EXACTLY AND TURN TO EACH PAGE NUMBER GIVEN WHEN YOU ARE INSTRUCTED TO DO SO.

Using the Master Index of Infusion Strategy Content

Step 1 Turn to the master index at the back of this guide. Note the code at the top. Look for the heading titled First Experience Level.

Master Index

Step 2 Under this level, note the titles of each column, then look to the column titled "Subject Matter." Moving down the column, go through all four areas, language arts, mathematics, science, and social studies. Match the concepts which you see here with the subject matter concepts you are now teaching. You may find that there are many concepts listed which you are now using or have used in your classroom.

Column in the Master Index

Step 3 Let's say you have been working with the social studies concept "dependence upon others" and you find several strategies which deal with that concept such as "I Protect You" - Policeman, "Going Below" - Diver, "All the World" - Actor, etc. Further suppose that there has been a current event focusing the attention of the children in your class on the policeman. Therefore, you decide to teach the "I Protect You" infusion strategy which presents the occupation of the policeman. You are now ready to find that strategy so that you can become familiar enough with it to begin your planning. The strategy begins on p. ___ in the Coping Dimension Guide. You can determine in which guide the strategy is located by looking at the "Dimension" column.

Concept to be taught

Using the Introductory Material in an Infusion Strategy, Using the Job Description, and Using the References to Related Materials

A Word About Infusion Strategies--

Infusion strategies are samples of how to infuse career development concepts and subject matter concepts. Occupations serve as the vehicle to accomplish the infusion process. In all cases there is no attempt to steer children into specific occupational emphases. The intention, rather, is to provide a survey of a wide range of occupational areas from which an individual could begin to consider his own potentialities and to capitalize upon the excellent motivation that occupations can provide. Each infusion strategy contains three-five teaching activities.

Infusion Strategy Information

Step 4 Examine the introductory page of the infusion strategy (page ___). Note that the career development dimension is Coping Behaviors. (Perhaps you feel that you need more information about the Coping Behaviors Dimension. If so, turn to the beginning of the Coping Behaviors section (pages ___ through ___) and look over this material for background information.) Be sure to read the subconcept and major concept which are also found on this introductory page. Note that the occupation dealt with is the policeman and the occupational cluster is Public Services. If at this time, you want to know more about what a policeman does, turn to the end of the infusion strategy (page ___) and read the job description, Police Officers.

Infusion strategy introductory page

Job description

Step 5 As you turn to the next page (page ___), you will find Teacher Goals and a listing of the titles of the four activities presented in this infusion strategy. The next page shows the vocabulary list. Simply familiarize yourself with the information on these pages.

Teacher goals

Vocabulary

Step 6 If you were in the process of preparing to teach this infusion strategy, now would be a good time to look over the list of related materials found near the end of the strategy (page ___) so that plans could be made for obtaining them.

Related materials

Using the Activities Which Involve the Children

Step 7 Turn to the first activity in the infusion strategy which is titled "Watch Out" (page ___). Here you find the performance objectives which are for the career development concepts.

Performance objectives

A word about performance objectives--

Care has been taken to provide objectives at different levels of difficulty within cognitive, affective, and psychomotor domains.

Performance objectives information

Step 8 Look at the listing of subject matter concepts used in this activity and the preplanning suggestions for the teacher (page ___).

Subject matter concepts
Preplanning suggestions

Step 9 The next few pages ___ through ___ contain the activities which involve the students. Each page is divided into two columns. In the left column, you find the dimension sub-concepts and the names of the dimensions which are being used in these particular activities. (For more information about the three Interacting Dimensions, turn to pages ___ through ___.) The right column gives a description of the activities which involve the children. The pupil performance objectives (PPO) are in italics and are followed by suggestions for infusing the dimension concept with class activities and the child's life.

Student activities

Using The REACT Pages

Step 10 In the right column on page ___ (at the end of the student activities), you find the teacher directions for using the REACT pages. Following the directions you find a code and the REACT page title. The code used to identify the REACT page includes the initials of the career development dimension, experience level, and the number of the REACT page as it appears in sequence. For example:

Teacher directions for REACT pages

CB/Level 1/1
"Safety First"

REACT page code

Coping Behaviors/Level 1/REACT page 1

The same code also appears on the REACT pages (pages ___ and ___).

A word about REACT pages--

The REACT pages are not intended for passive enjoyment. REACT pages ask children to do things that are based on a child's own individual interests and needs.

REACT page information

Examining Other Activities

Step 11 Now turn to page ___. You will find a second activity titled "It Had To Be Written." This activity is the second of four activities written for this infusion strategy. You may examine this activity and the two following it in the same manner as you examined the first (Steps 8 through 11).

Other activities

Using Other Strategies

Step 12 Having looked at all four activities in the infusion strategy, you have completed your examination of an entire strategy. Once you understand the steps involved in using one strategy, you will find it easy to use any of the others.

Examination completed

It's time to start--

The infusion strategies are by no means an exhaustive list of the ways that career education concepts can be infused with all subject matter concepts. Sample infusion strategies have been prepared to show how career concepts can be integrated with concepts in mathematics, language arts, social studies, and science. However, *the door is open for you to devise additional infusion strategies* for subject matter concepts that are not included in the sample strategies. You'll understand how to develop some infusion strategies once you have tried several of the samples.

The community is at your doorstep. *Use it!*

Parents are available to assist. *Invite them in!*

Hands-on materials can be obtained. *Get them or make them!*

Infusion strategies remain to be devised. *Create some!*

MASTER INDEX OF INFUSION STRATEGY CONTENTS

CB - COPING BEHAVIORS	LS - LIFESTYLE
DM - DECISION MAKING	SD - SELF-DEVELOPMENT

Third Experience Level

LANGUAGE ARTS

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(Grammar and Usage)					
CB	Couple, Cut, and Cooperate	Brakeman	Riddles with Railroad Words	Uses of language Nouns and verbs Labeling and classifying	34
CB	Couple, Cut, and Cooperate	Brakeman	Member of the Model Freight Train Crew	Uses of language	41
CB	Places, Prices, and People	Grain Elevator Operator	Prices Go Up and Down	Symbols	75
SD	Coffee, Tea, or Milk?	Waiter/Waitress	Writing Orders	Abbreviations	238
(Listening and Speaking)					
CB	Couple, Cut, and Cooperate	Brakeman	Member of the Model Freight Train Crew	Giving and taking directions	41
CB	Couple, Cut, and Cooperate	Brakeman	Anytime and Often Away	Stress and feeling in speech Skits	50
CB	Places, Prices, and People	Grain Elevator Operator	Large or Small, Always Tall	Show and tell activities	88
DM	Change for Fun with Recreation	Recreation Worker	Let's Go Fly a Kite	Noting and remembering details Giving and taking directions	111
DM	Change for Fun with Recreation	Recreation Worker	Tell Me a Story	Acting out stories Stress and feeling in speech	122
DM	Growing Great Green Goals	Forester	Identifying Trees	Giving and taking directions	141
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Don't Lack a Good Back	Acting out stories Giving and taking directions	174
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Mass Producing Bean Bags	Acting out stories	179
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	How Do You Do It?	Developing discussion skills Interviewing	196
SD	Life with Libraries	Librarian	Owning the Library	Developing discussion skills Interviewing	208
SD	Life with Libraries	Librarian	Library Order	Developing discussion skills	214
SD	Coffee, Tea, or Milk?	Waiter/Waitress	Doing for Others	Developing discussion skills	250
(Reading)					
CB	Couple, Cut, and Cooperate	Brakeman	Two Centuries of Railroading	Reading for information	55
CB	Places, Prices, and People	Grain Elevator Operator	Large or Small Always Tall	Reading for information	88
DM	Change for Fun with Recreation	Recreation Worker	Let's Go Fly a Kite	Sequence	111
DM	Growing Great Green Goals	Forester	Planting a Tree	Sequence	134
DM	Growing Great Green Goals	Forester	The Forest Community	Recognizing qualifying words	154
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Unions	Figurative language	191
SD	Life with Libraries	Librarian	Library Order	Finding information Library skills	214
SD	Life with Libraries	Librarian	Picking and Choosing	Library skills	227
(Writing Skills)					
CB	Couple, Cut, and Cooperate	Brakeman	Riddles with Railroad Words	Vocabulary building	34
CB	Couple, Cut, and Cooperate	Brakeman	Member of the Model Freight Train Crew	Using codes	41
CB	Places, Prices, and People	Grain Elevator Operator	A Buying-Selling Grain Chain	Vocabulary building	80

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(Writing Skills Cont'd)					
DM	Growing Great Green Goals	Forester	The Forest Community	Paragraphing	154
SD	Faster, Slower, Higher, Lower	Day Care Worker	Rest Time	Composition of short poems	274

Third Experience Level

MATHEMATICS

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(Facts and Operations)					
CB	Couple, Cut, and Cooperate	Brakeman	Two Centuries of Railroading	Products	55
CB	Places, Prices, and People	Grain Elevator Operator	Round-About Weighing	Subtraction facts Regrouping in subtraction Products	68
DM	Change for Fun with Recreation	Recreation Worker	Swings and Things	Addition and subtraction of money	106
SD	Life with Libraries	Librarian	Library Order	Ordinals	214
SD	Coffee, Tea, or Milk?	Waiter/Waitress	Tipping	Addition and division of money Understanding of 1/5	245
(Figural)					
SD	Faster, Slower, Higher, Lower	Day Care Worker	Numbers Are Needed	Reading simple charts	266
(Measurement)					
CB	Couple, Cut, and Cooperate	Brakeman	Two Centuries of Railroading	Map scale	55
CB	Places, Prices, and People	Grain Elevator Operator	Round-About Weighing	Weight	68
SD	Faster, Slower, Higher, Lower	Day Care Worker	Numbers Are Needed	Time Quantity Temperature	266
(Problem Solving)					
CB	Places, Prices, and People	Grain Elevator Operator	Prices Go Up and Down	Estimating Outcomes	75
DM	Change for Fun with Recreation	Recreation Worker	Swings and Things	Use of money concepts	106
SD	How Useful Is Sewing?	Industrial Sewing Machine Operator	Mass Producing [illegible]	Multiplication and division situations	179

Third Experience Level

SCIENCE

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(Biology)					
DM	Growing Great Green Goals	Forester	[illegible]	Man can control the environment of living things.	138
DM	Growing Great Green Goals	Forester	[illegible] and Implementing Forest Conservation	Living things depend on their environment.	149
DM	Growing Great Green Goals	Forester	[illegible] of Forester	Man can control the environment of living things.	163
SD	How Useful Is Sewing?	Industrial Sewing Machine Operator	[illegible]	Systems of the human body: Skeletal muscle	178
SD	Faster, Slower, Higher, Lower	Day Care Worker	Numbers Are Needed	Living things change as they grow. Animals differ in size.	266
SD	Faster, Slower, Higher, Lower	Day Care Worker	Rest Time	Different environments support different forms of life.	[illegible]
(Earth and Space)					
DM	Growing Great Green Goals	Forester	Planning and Implementing Forest Conservation	The surface of the earth changes constantly.	149
(Physical)					
CB	Places, Prices, and People	Grain Elevator Operator	Large or Small, Always Tall	Forces move things. Machines	[illegible]

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(Physics Cont'd)					
DM	Change for Fun with Recreation	Recreation Worker	Safe Cycling	Machines move things.	116
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Don't Lack a Good Back	Forces move things.	734
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	How Do you Do It?	Machines move things. Simple machines	196
(Scientific Method)					
CB	Couple, Cut, and Cooperate	Brakeman	Two Centuries of Railroading	Famous scientists have made historic discoveries.	55
DM	Growing Great Green Goals	Forester	Planting a Tree	Scientific knowledge accumulates	134
DM	Growing Great Green Goals	Forester	Identifying Trees	Describe, find similarities, differences	141
DM	Growing Great Green Goals	Forester	Hardwoods and Softwoods	Describe, find similarities, differences	158

Third Experience Level

SOCIAL STUDIES

(Economics)					
CB	Couple, Cut, and Cooperate	Brakeman	Member of the Model Freight Train Crew	Division of labor	41
CB	Places, Prices, and People	Grain Elevator Operator	Prices Go Up and Down	Supply and demand	75
CB	Places, Prices, and People	Grain Elevator Operator	A Buying-Selling Grain Chain	Interdependence of city and rural	80
CB	Places, Prices, and People	Grain Elevator Operator	Sing A Song of Soybeans	Production of goods Natural resources as bases	84
DM	Growing Great Green Goals	Forester	Planting a Tree	Different uses of environment	134
DM	Growing Great Green Goals	Forester	Planning and Implementing Forest Conservation	Different uses of environment	148
DM	Growing Great Green Goals	Forester	Famous People of Forests	Different uses of environment	163
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Mass Producing Bean Bags	Division of labor Earning money	179
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Garments for Good Will	Needs and wants	187
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	How Do You Do It?	Production of goods	196
SO	Coffee, Tea, or Milk?	Waiter/Waitress	Tipping	Earning money	245
(Geography)					
CB	Couple, Cut and Cooperate	Brakeman	Two Centuries of Railroading	Scale of miles	55
CB	Places, Prices, and People	Grain Elevator Operator	Large or Small, Always Tall	Towns and cities	88
DM	Change for Fun with Recreation	Recreation Worker	Safe Cycling	Special purpose maps	116
DM	Growing Great Green Goals	Forester	Planting a Tree	Interaction of people and environment influences the way needs are met.	134
DM	Growing Great Green Goals	Forester	Planning and Implementing Forest Conservation	Interaction between people and environment	148
DM	Growing Great Green Goals	Forester	Hardwoods and Softwoods	Special purpose maps	158

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(History)					
CB	Couple, Cut, and Cooperate	Brakeman	Two Centuries of Railroading	Great Americans in history Before and after relationships	55
DM	Growing Great Green Goals	Forester	Famous People of Forests	Great Americans in history	163
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Mass Producing Bean Bags	Great Americans in history	179
SD	Life with Libraries	Librarian	Library Order	Great Americans in history	214
(Political Science)					
DM	Change for Fun with Recreation	Recreation Worker	Swings and Things	Governments help people meet some needs.	106
DM	Change for Fun with Recreation	Recreation Worker	Safe Cycling	Laws regulate behavior.	116
DM	Change for Fun with Recreation	Recreation Worker	Tell Me a Story	Public services	122
SD	Life with Libraries	Librarian	Owning the Library	Public services Schools (libraries) supported by taxes	208
SD	Life with Libraries	Librarian	Library Order	Rules regulate behavior.	214
(Sociology-Anthropology)					
CB	Couple, Cut, and Cooperate	Brakeman	Member of the Model Freight Train Crew	Dependence upon others	41
CB	Couple, Cut, and Cooperate	Brakeman	Anytime and Often Away	Values and purposes in behavior	50
CB	Places, Prices, and People	Grain Elevator Operator	A Buying-Selling Grain Chain	Community wants and needs Values and purposes in behavior	80
CB	Places, Prices, and People	Grain Elevator Operator	Sing a Song of Soybeans	Technology produces changes in ways of living.	84
DM	Change for Fun with Recreation	Recreation Worker	Everybody Come!	Community wants and needs Membership in a group Responsibility Values and purposes in behavior	98
DM	Change for Fun with Recreation	Recreation Worker	Let's Go Fly a Kite	Dependence on others	111
DM	Growing Great Green Goals	Forester	The Forest Community	Community wants and needs	154
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Mass Producing Bean Bags	Technology produces changes in ways of living.	179
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Garments for Good Will	Community needs a variety of services.	197
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	Unions	Groups within the community Labor unions	141
LS	How Social Is Sewing?	Industrial Sewing Machine Operator	How Do You Do It?	Technology produces changes in ways of living.	196
SD	Life with Libraries	Librarian	Owning the Library	Community needs variety of services. Community reflects values.	208
SD	Life with Libraries	Librarian	Picking and Choosing	Individual characteristics Values and purposes in behavior	227
SD	Coffee, Tea, or Milk?	Waiter/waitress	Waiting Order	Dependence on others	238
SD	Coffee, Tea, or Milk?	Waiter/waitress	Going for Others	Groups within the community Cultural diversity	250
SD	Faster, Slower, Higher, Lower	Day Care worker	Numbers Are Needed	Community's wants and needs Dependence on others Individual characteristics	266
SD	Faster, Slower, Higher, Lower	Day Care worker	Rest Time	Dependence on others Individual characteristics	274
SD	Faster, Slower, Higher, Lower	Day Care worker	Everything in Its Place	Values and purposes in behavior Individual characteristics Conflict with others is needed.	281

COUPLE, CUT, AND COOPERATE

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

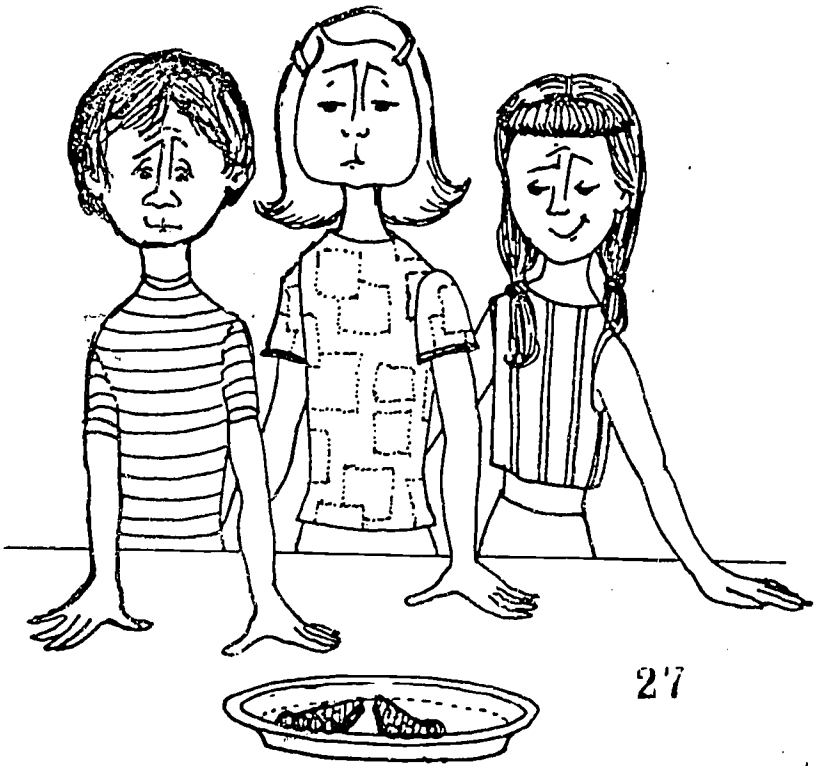
CAREER DEVELOPMENT FOCUS: A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

OCCUPATIONAL FOCUS: Brakeman

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Riddles with Railroad Words
2. Member of the Model Freight Train Crew
3. Anytime and Often Away--Railroad Working Conditions
4. Two Centuries of Railroading



Teacher Goals

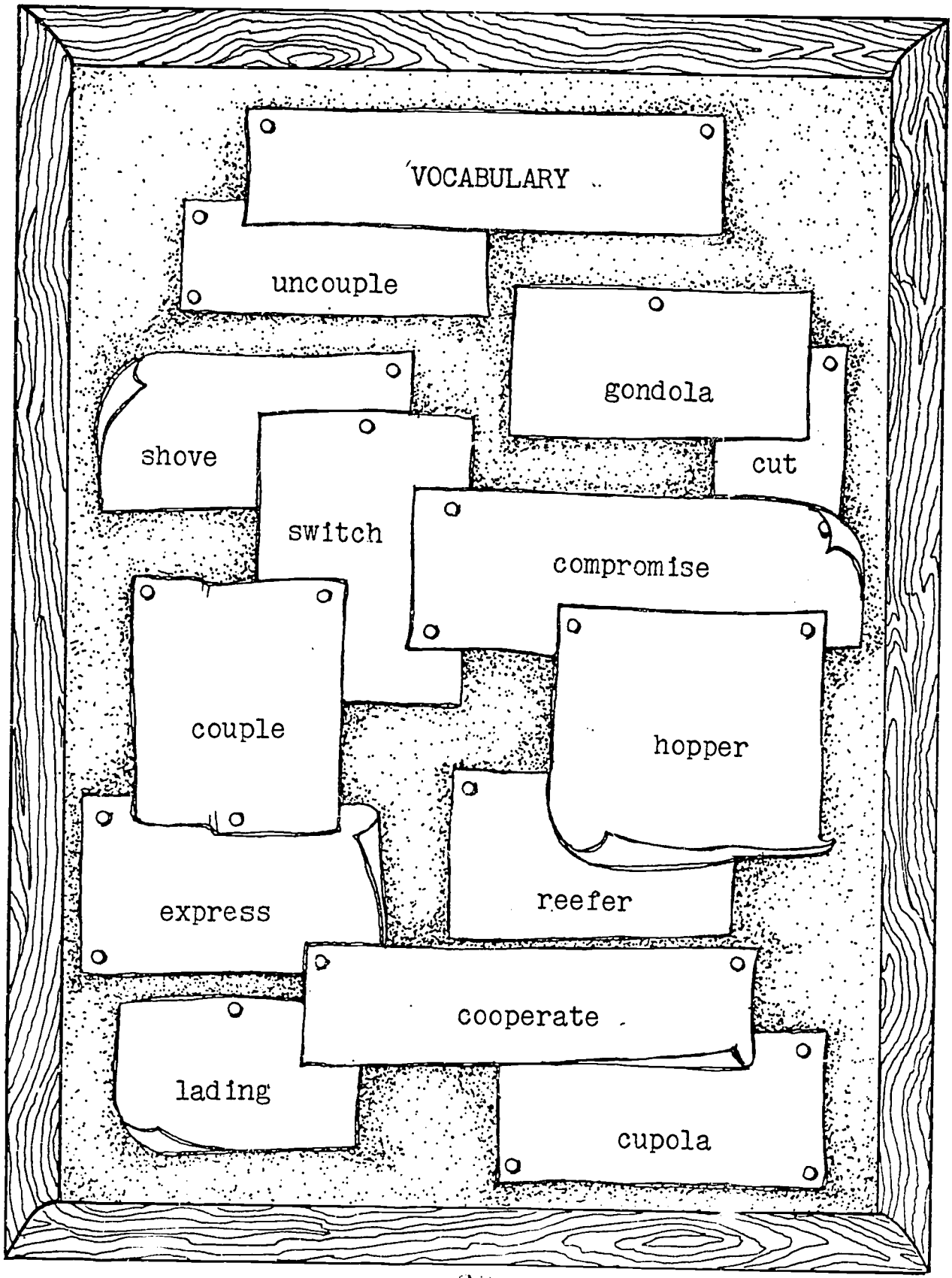
Teacher goals of this strategy combine a Coping Behaviors Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Railroad Brakeman. In this perspective the teacher's goals are to:

Increase pupil information about how the brakeman contributes to the efforts of the train crew.

Develop activities in which the children can learn how an occupational vocabulary helps a team of workers.

Guide pupils in comparing ways the railroad men have cooperated and compromised with their personal coping behaviors.

Structure these learning experiences so that they will be opportunities for pupils to experience positive results from individual and group cooperation.


VOCABULARY
uncouple
gondola
shove
switch
cut
compromise
couple
hopper
express
reefer
cooperate
lading
cupola

RIDDLES WITH RAILROAD WORDS

'Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *tell why groups of workers in an occupation need special words.*

. . . *tell why agreement on words helps group efforts.*

Attitudes and Appreciations Dimension

. . . *tell what a brakeman does in his work.*

Career Information Dimension

. . . *define at least eight words from the vocabulary of a railroad brakeman.*

. . . *describe the work setting of the brakeman.*

Educational Awareness Dimension

. . . *identify learning the railroad vocabulary as an occupational skill of the railroad brakeman.*

Subject Matter Concepts

Language Arts
- Grammar and Usage
  - Uses of language
  - Nouns and verbs
  - Labeling and classifying
- Writing Skills
  - Vocabulary building

Preplanning Suggestions

Materials for vocabulary word cards
Chart for vocabulary terms
Dictionary
Encyclopedia
Library books about railroads

RIDDLES WITH RAILROAD WORDS

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

Coping Behaviors

. . . tell why groups of workers in an occupation need special words. PPO

For a few minutes engage the class in a riddle exchange using words from occupational vocabularies. Pupils who know an occupational word can define it, describe it, and see whether classmates can guess the word. Give a few examples such as:

Word Riddles	Answer Words
I am a farmer. I do this after plowing. Starts with d.	disc
I am a dentist. I do this to dig out tooth decay.	drill
I play baseball. If I hit the ball and get to first base, my hit is called a ___	single
I am a dry cleaner. I do this after I clean the clothes.	press

To conclude the introductory activity, ask the class why people often use special words in their jobs and how these words help them. Once Harpo Marx, who didn't know about card playing, was asked to cut the cards for the dealer. Harpo pulled out an ax and chopped the deck in half. What did Harpo need to know about cutting cards?

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . identify learning the railroad vocabulary as an occupational skill of the railroad brakeman. PPO

Occupations have their own vocabularies.

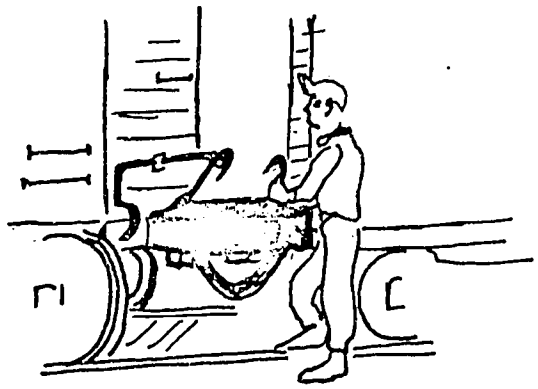
Career Information

Most occupations include common expectations such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

Occupations have their own work settings.

Career Information



. . . *define at least eight words from the vocabulary of a railroad brakeman.* PPO

switch	set out
siding	lading
cut	hopper
shove	air brake hose

Display these words on colorful cards. Tell the children that they are used in a mystery occupation and challenge them to guess the occupation. Guesses can be written on slips of paper and dropped in a box for the teacher to examine at a set time. If no one discovers that the words would be those used by a brakeman, add these words to the display list:

coupling
yard
gondola
cupola

Children who think to go to the dictionary for help should be able to guess railroad worker if not specifically brakeman.

. . . *tell what a brakeman does in his work.* PPO

. . . *describe the work setting of the brakeman.* PPO

Explain that a railroad crew is one example of an occupational group which uses their own special words. The brakeman is the crew member who couples, cuts, rides in the cupola of the caboose, inspects lading and air brake hose and couplings, etc. By discussion or by pupil research, ask the pupils to find definitions for the railroads vocabulary words. Use encyclopedias under railroads, library books, or call a railroad man and ask him.

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

Coping Behaviors

Ask the children to make definition cards to go with the word cards. A matching game could be played using the two card sets. Ask the children how much word meanings help in understanding the work setting of the brakeman. What more is needed? The research should bring up several other railroad words which the children may want to add to their card sets.

. . . tell why agreement on words helps group efforts. PPO

Invite children to tell about times when they have heard groups using strange words. Examples might be by learning to understand baby talk, hearing a discussion in a parent's office, or hearing a foreign language.

The REACT page is an opportunity to visually define several aspects of a brakeman's work. Children could draw additional picture definitions and use these along with the REACT page as a third card set.

Identifications for the REACT page are:

1. switch
2. tanker
3. reefer
4. cupola
5. flatcar
6. gondola
7. hopper
8. coupling
9. air brake hose
10. yard

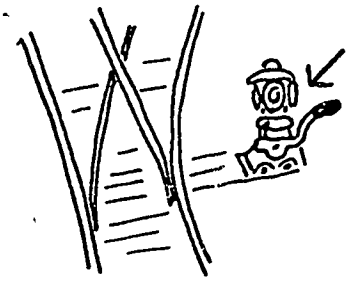
CB/Level 3/1

"Brakeman's Work"

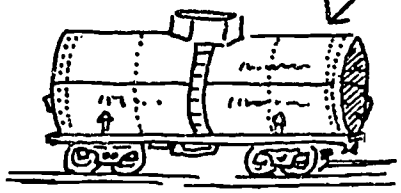
BRAKEMAN'S WORK

Directions: Look in railroad books to find the special names for what you see in these pictures.

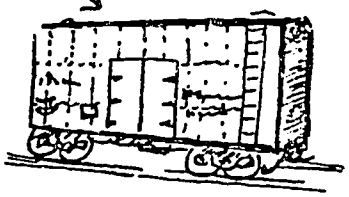
1.



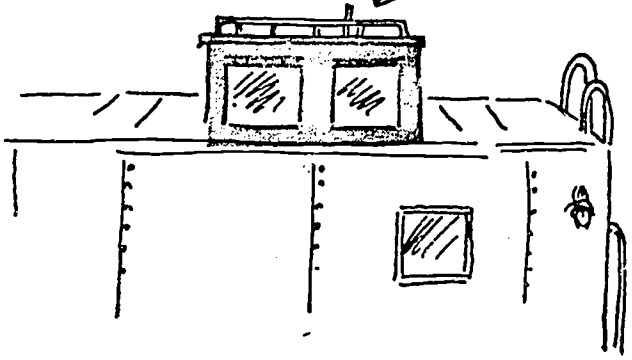
2.



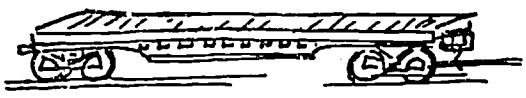
3.



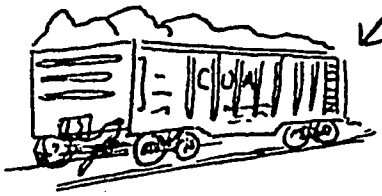
4.



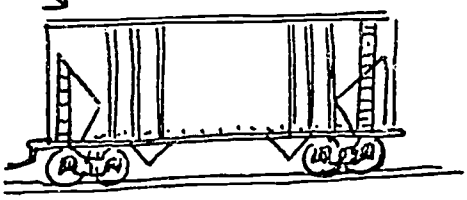
5.



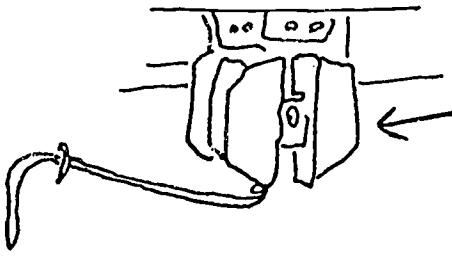
6.



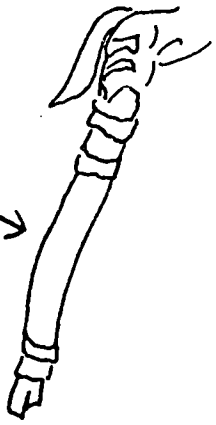
7.



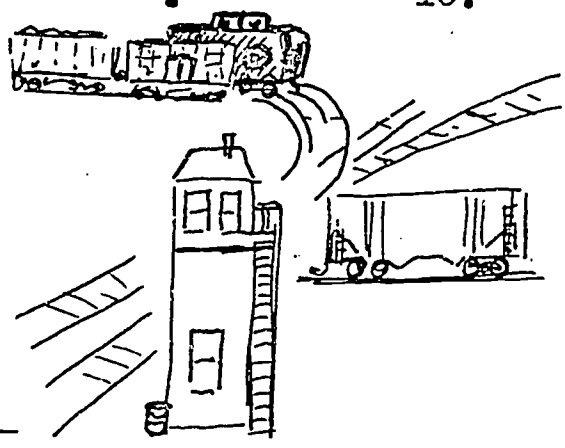
8.



9.



10.



MEMBER OF THE MODEL FREIGHT TRAIN CREW

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *identify a personal compromise made in order to help build and operate a model railroad.*

. . . *identify inspection of cars, loads, brakes, and couplings as a way the train crew cooperates with its machinery.*

Attitudes and Appreciations Dimension

. . . *name four ways the brakeman cooperates with the train crew.*

. . . *volunteer to help with the construction and/or operation of a model railroad.*

Career Information Dimension

. . . *tell how couplings, air brakes, and switches meet the railroad's needs.*

Educational Awareness Dimension

. . . *identify knowledge of railroad signals as necessary for the brakeman's work.*

Subject Matter Concepts

Social Studies
- Economics
  - Division of labor
- Sociology-Anthropology
  - Dependence upon others

Language Arts
- Listening and Speaking
  - Giving and taking directions
- Writing Skills
  - Using codes
- Grammar and Usage
  - Uses of language

Preplanning Suggestions

Model railroad or materials for making one (Small juice cans and string could be used.)
Two pinch clothespins for each child
Thumbtacks, paper clips, tape
Tracks or long strips of paper for model railroad
Sticks for signal post
Whistle

MEMBER OF THE MODEL FREIGHT TRAIN CREW

Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

. . . *name four ways the brakeman cooperates with the train crew.* PPO

The brakeman is a member of the train crew. He cooperates with the conductor, the engineer, other brakemen, and the yard master. The brakeman originally was the one to operate hand brakes on railroad cars. On today's trains he has many duties. In summary these are:

coupling and uncoupling (cutting) cars

connecting and releasing air brake hose between cars

spotting cars for loading and unloading

throwing hand switches

securing cars set out, setting hand brakes

inspecting lading to see that loads are secure

inspecting brakes

inspecting train under way from cupola of caboose

The brakeman learns his work on student trips. He obeys the railroad Book of Rules, follows orders of the conductor, and usually belongs to a railroad union. Review this information with the children.

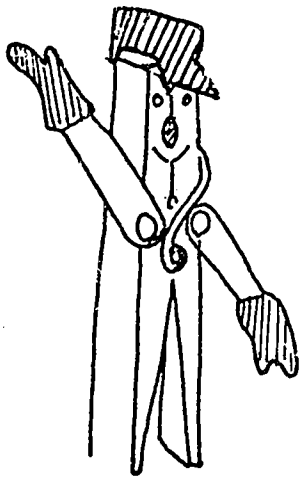
Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *volunteer to help with the construction and/or operation of a model railroad.* PPO

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

Coping Behaviors



Occupations require the use of specific materials and equipment.

Career Information

. . . *identify a personal compromise made in order to help build and operate a model railroad.* PPO

Interest the children in setting up a model railroad so that they can simulate the work of the brakeman. If a working model is not available, forget about moving wheels and make your own string of cars out of frozen juice cans, cardboard, balsa blocks, etc. Don't forget the caboose because this is where the brakeman rides.

Have two or three stations with side tracks for picking up or setting out cars. Map out a simple railroad yard in cities at either end of the run.

Suggest that the children make at least two model brakemen out of pinch clothespins. Put on a railroad hat, face, and thumbtack a cardboard arm for giving hand signals to the engineer. Often the brakeman has a white switch list in his hand.

Children could volunteer as individuals or small groups for making or operating the cars, attaching the make-believe couplings and air brake hoses, mapping the track, making the brakemen. Throughout the activity emphasize contributions and compromises the pupils make for the sake of the class goal. Before beginning alert the children to the idea of compromise as a way to cooperate, not insisting upon one's own way.

. . . *tell how couplings, air brakes, and switches meet the railroad's needs.* PPO

During the operation of the model freight, have the brakeman signal the engineer for assembling the train. The cars are to be arranged in order according to the station at which they are to be delivered. Make these arrangements using switches and side tracks.

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

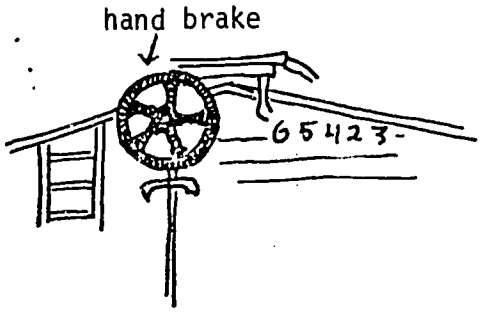
Coping Behaviors

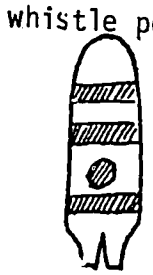
. . . identify inspection of cars, loads, brakes, and couplings as a way the train crew cooperates with its machinery. PPO

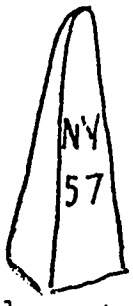
The brakeman will check the couplings, loads, and air brake hose on each car before starting. This is called "rolling the train." During the run he will inspect the train for "hot boxes" from his post in the cupola of the caboose. If blue smoke comes from the "box" containing the ends of axles, the bearing may be worn, or the oil gone, and the car will have to be removed from the train until it can be repaired.

Devise a simple system for coupling. Sturdy tabs at the ends of cars with a tack stuck through the tabs or paper clips would work. A string taped under each car with a tiny piece of masking tape at each end to attach it to the next car can be a make-believe air hose. Put a model hand brake wheel on each car.

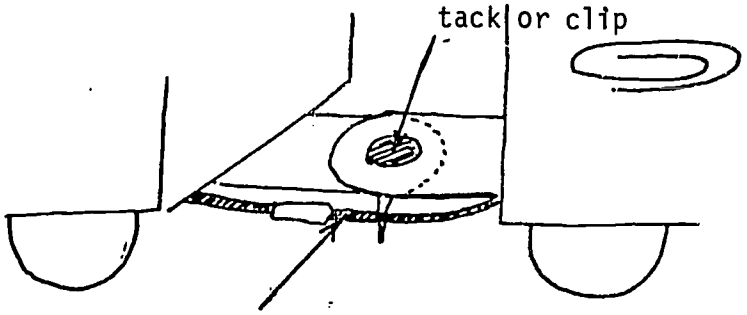
Children can map the track on long papers along an imaginary 100-200 mile run. This is the standard size of a railroad district. On the track paper, mile posts should be drawn with numbers indicating the distance from the point of origin. Whistle posts can be drawn along the track before grade crossings.







mile post



string for air brake hose

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

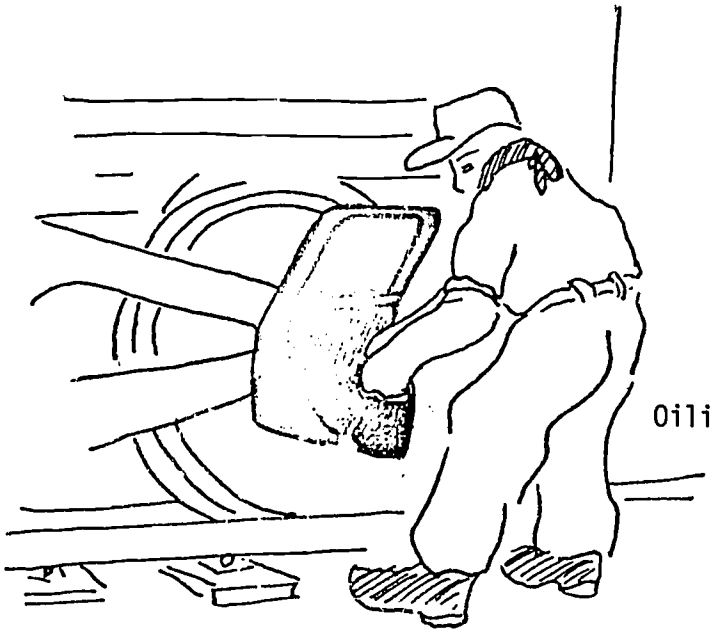
At stations the brakeman will switch and uncouple (cut) boxcars and signal the engineer during the setting out of cars to be delivered at that station.

. . . *identify knowledge of railroad signals as necessary for the brakeman's work.* PPO

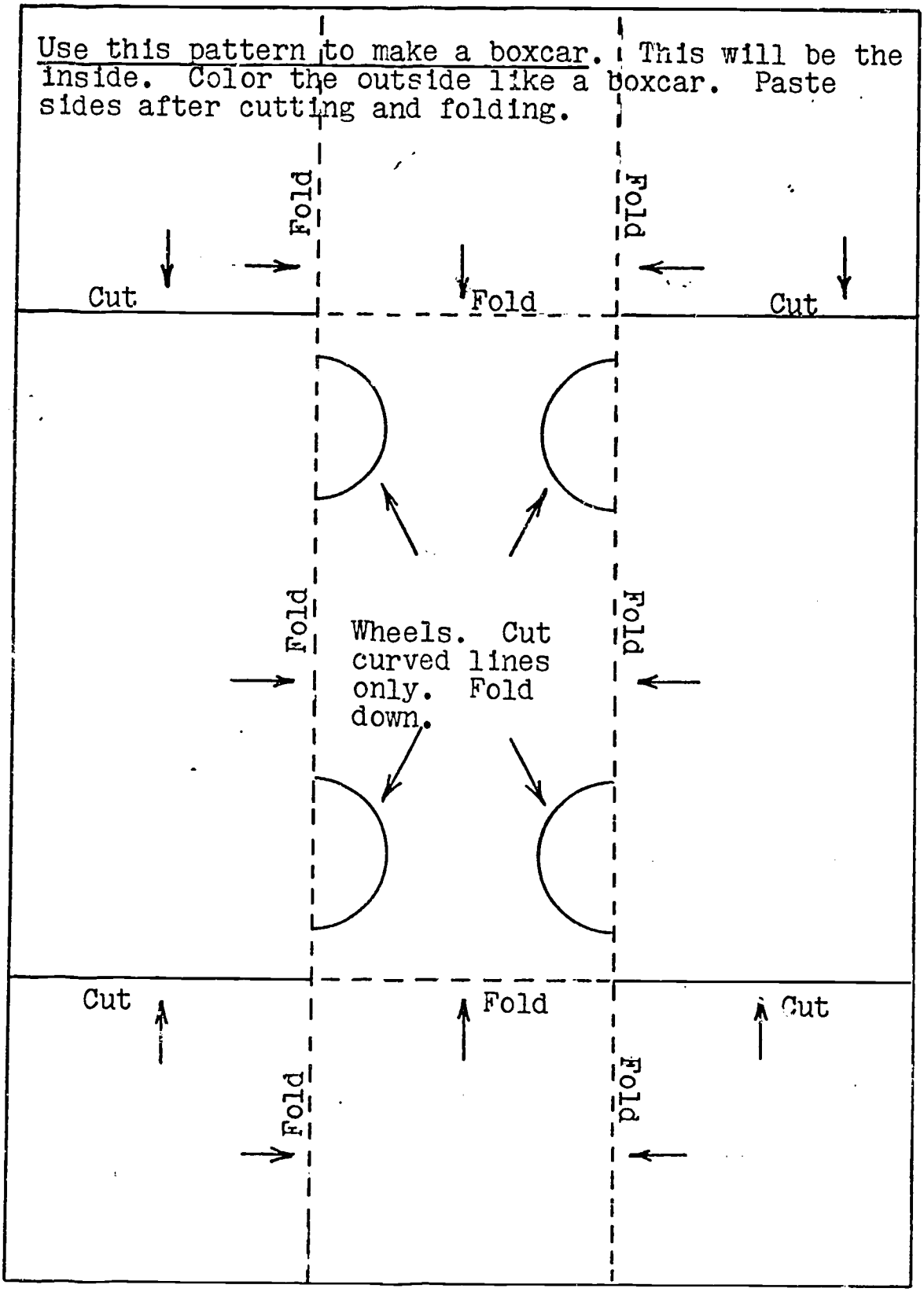
The REACT page teaches railroad signals. Introduce difficult vocabulary on the page.

CB/Level 3/2

"Railroad Signals"



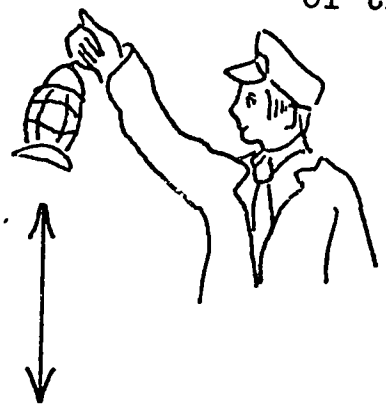
Oiling the journal box


Use this pattern to make a boxcar. This will be the inside. Color the outside like a boxcar. Paste sides after cutting and folding.
Fold
Fold
Cut
Fold
Cut
Fold
Fold
Wheels. Cut curved lines only. Fold down.
Cut
Fold
Cut
Fold
Fold

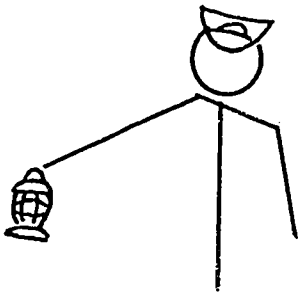
RAILROAD SIGNALS

Directions: Make a clothespin brakeman or use your own hand to learn to use these signals.

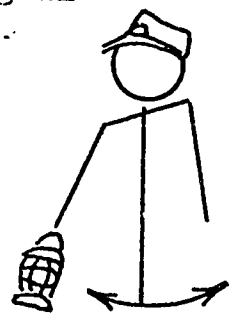
HAND, FLAG, AND LAMP SIGNALS--Like "traffic cops," members of the train crew can signal to the engineer.



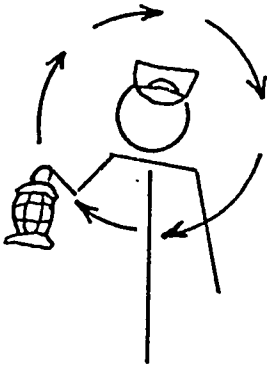
go ahead



slow down



stop



back

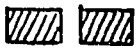
put on air brakes

take off air brakes

(over)

Directions: Use a toy whistle or your own voice to learn these signals the engineer gives from the diesel horn.

WHISTLE SIGNALS--Each ● means a short toot from the engine horn or whistle. Each ▬ means a long toot.

	Put on brakes. Stop.
	Take off brakes. Go ahead.
	Flagman go back and protect end of train.
	Flagman come back from west or south.
	Flagman come back from east or north.
	Protect front of train.
	Answer to any signal without a code answer.
	When standing, back up. When running, stop at next passenger station.
	Call for signals.
	Coming to highway grade crossing.
	Coming to station, junction, or railroad crossing.
	Coming to a meeting or waiting point for trains.
	A number of short toots is an alarm for persons or animals on the track.

ANYTIME AND OFTEN AWAY; RAILROAD WORKING CONDITIONS

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *name two personal compromises the brakeman must often make.*

. . . *plan and participate in a skit showing cooperation and compromise.*

Attitudes and Appreciations Dimension

. . . *tell how the family of a brakeman might adjust to his work.*

Career Information Dimension

. . . *describe the work setting of the brakeman.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Values and purposes in behavior

Language Arts
- Listening and Speaking
  - Stress and feeling in speech
  - Skits

Preplanning Suggestions

Book of rules of behavior for railroadmen or a similar book of rules for school behavior

ANYTIME AND OFTEN AWAY
RAILROAD WORKING CONDITIONS

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

Coping Behaviors

. . . *name two personal compromises the brakeman must often make.* PPO

A brakeman must be on call 24 hours a day, seven days a week regardless of weather or holidays. He can never forget that he is a member of the train crew. The brakeman must be on call because businesses and industries ship freight in different amounts at different times, depending upon needs, orders, etc. Sometimes an extra crew is necessary, sometimes not. Brakemen spend several years serving on "extra board." Extra board men are called first when additional crews are needed. Ask children to think about whether being on call would be troublesome. How would the brakeman contribute to the railroad's goals by always being ready to work? What other workers must be ready for duty at all times? How would this affect their families?

Occupations have their own work settings.

Career Information

. . . *describe the work setting of the brakeman.* PPO

Being away from home three or four nights a week is another sacrifice the brakeman makes in support of railroading. Within their 100-200 mile districts, train crews spend several nights a week at the away-from-home terminal. Ask the children why a brakeman needs to make this compromise. What other workers are often away because of travel?

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . *tell how the family of a brakeman might adjust to his work.* PPO

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

Coping Behaviors

Ask children whose parents may be away frequently because of work how the family has adjusted to the schedule.

The brakeman cooperates with the train crew by obeying the railroad Book of Rules and superior officers and by joining a railroad union. If you like, discuss these with the class in greater detail.

. . . *plan and participate in a skit showing cooperation and compromise.* PPO

Remind the children that they too get along with others and with groups. Stimulate groups of children to plan little skits to show good ways to cooperate. They might be motivated with some of these ideas:

WHAT-DO-YOU-DO-IF SKITS

Your mother wants your new baby to share your room--

The referee calls a foul and you think he doesn't like you--

They are building a house on the lot where you always played ball--

You are at a friend's house for dinner and the food tastes awful--

A little kid standing behind you can't see the parade--

Your parents ask you to stay alone for a long time--

The street lights and railroad crossing lights go out in a storm--

Your club wants to take a trip that costs too much--

The REACT page tells stories about how the railroads have cooperated and compromised. Children are asked to fill in the page in pictures or words telling ways they usually cooperate. Opening suggestions would be waiting a turn, not interrupting, or obeying rules. Ideas for what-do-you-do-if skits could be gathered from the REACT pages.

After children have given the REACT page some thought, encourage them to discuss together how cooperation makes them feel. Negative answers are often justified.

CB/Level 3/3

"Cooperate and Compromise"

COOPERATE AND COMPROMISE

compromise /'käm-prə-mīz/ to give up your own way to please someone or get something done together

cooperate /kō-'äp-(ə)-rāt/ to work well with others

WAYS THE RAILROADS COOPERATED AND COMPROMISED

Trains and trucks work together to carry things. Truck trailers ride "piggyback" on flat cars.

When people needed to sleep on trains, the railroads built sleeping cars.

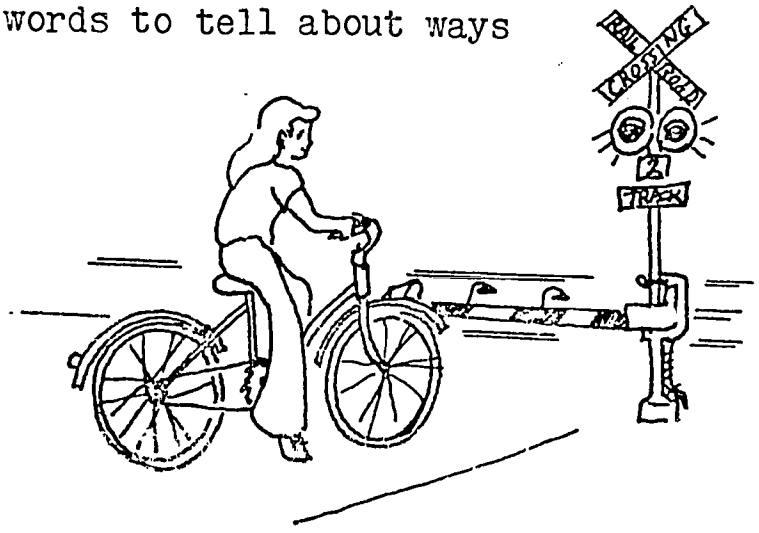
When people needed to eat on trains, the railroads built dining cars.

When mail needed to be sorted on trains, the railroads built post office cars.

When speed was needed, railroads planned express trains.

WAYS I COOPERATE AND COMPROMISE

Draw pictures or use words to tell about ways you get along with others. Use another paper if you need more room.



TWO CENTURIES OF RAILROADING

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *tell how automatic couplers helped the brakeman.*

. . . *tell why the number of brakemen has declined in recent years.*

Educational Awareness Dimension

. . . *tell how trains helped America grow.*

Subject Matter Concepts

Social Studies
- History
  - Before and after relationships
  - Great Americans in history
- Geography
  - Scale of miles

Language Arts
- Reading
  - Reading for information

Science
- Scientific Method
  - Famous scientists have made historic discoveries.

Mathematics
- Facts and Operations
  - Products
- Measurement
  - Map scale

Preplanning Suggestions

Library books about trains
Pictures of trains
Encyclopedia
Materials for making a time line
Globe or map of the world

Learning is a lifelong process.

Educational Awareness

. . . tell how trains helped America grow. PPO

Provide the children with encyclopedias and library books with information about the history of railroading. Interest class members in cooperating to make a time line by drawing pictures of model engines, train cars, events, maps of track, inventions in railroading, etc., on the United States outline provided. Put the date of the event illustrated on the bottom of the outline. The United States pattern is to emphasize the great work of railroads in U. S. history. Railroads were the first machines to tie the vast American wilderness together in a single transportation system. Arrange the drawings in a time line around your classroom walls. Here are some occasions to include. Find others.

1804 - Oliver Evans of Philadelphia builds the first American railroad.

1830 - First steam locomotive, the Best Friend, put in service.

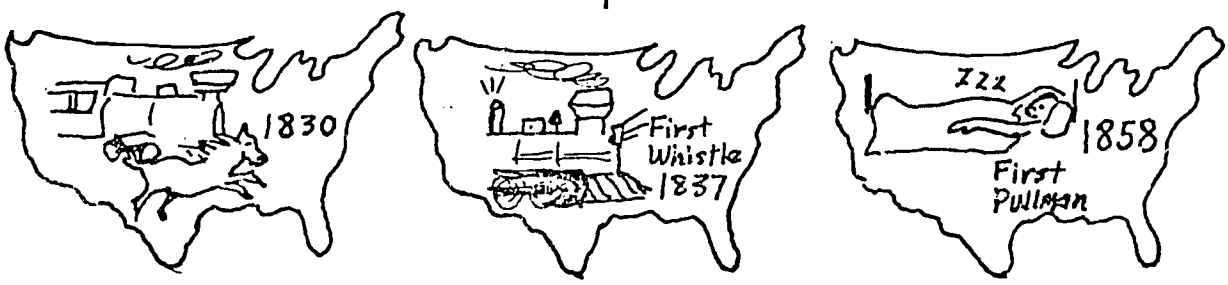
1830 - The Tom Thumb races a horse.

1837 - First steam engine whistle

1852 - First train reaches Chicago from the East.

1858 - First pullman sleeping cars

1869 - Driving of the Golden Spike First transcontinental track



1869 - Westinghouse air brakes patented.

1885 - Janney automatic coupler approved.

1900 - Casey Jones goes to the Promised Land.

1934 - First streamlined diesel train

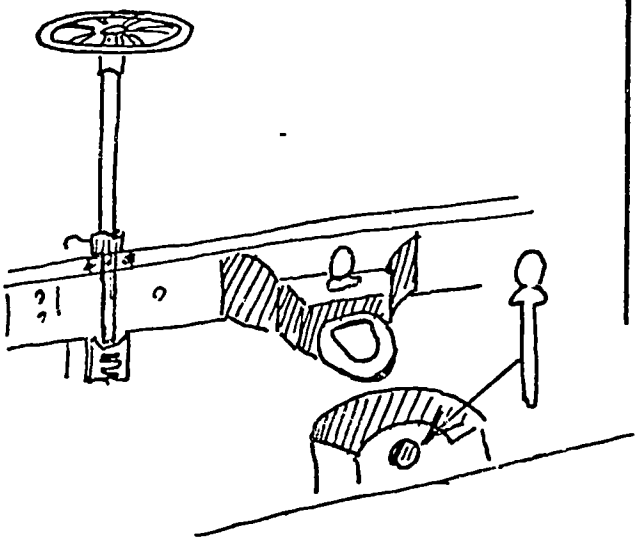
1969 - Metroliner between New York and Washington, D. C. reaches 150 mph.

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

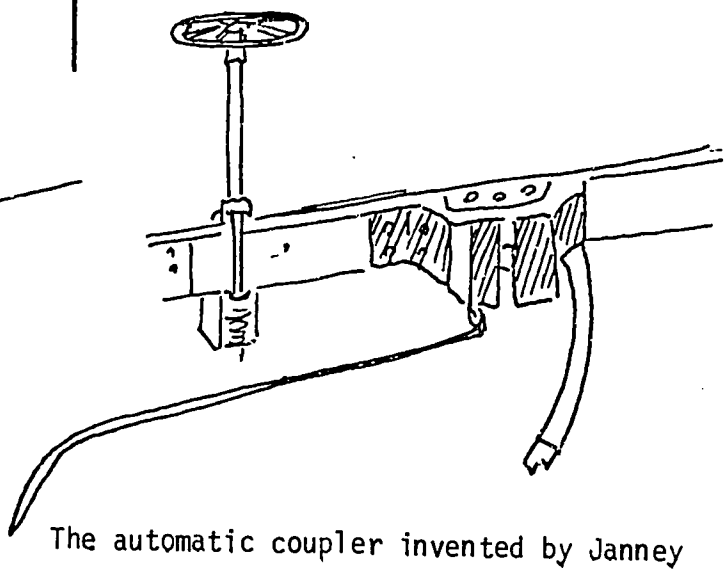
Coping Behaviors

. . . *tell how automatic couplers helped the brakeman.* PPO

Explain the significance of the invention of the Janney automatic coupler for the brakeman. In the early days of railroading, brakemen had to go between boxcars to pull the coupling pin. Fingers, hands, and arms were mutilated or torn off, unless brakemen and engineers were very careful. With Janney's invention, brakemen could set or release the coupling pin by standing beside, not between, the cars.



The link-and-pin coupler



The automatic coupler invented by Janney

A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.

Coping Behaviors

Many other important discoveries improved the safety and efficiency of railroading. Children who have read about railroads will be able to report on some of these.

Include folklore in your time line. Railroad history is told in lots of great stories and songs, such as "The Wabash Cannonball," "Casey Jones," "The Wreck of the Old 97," and "John Henry."

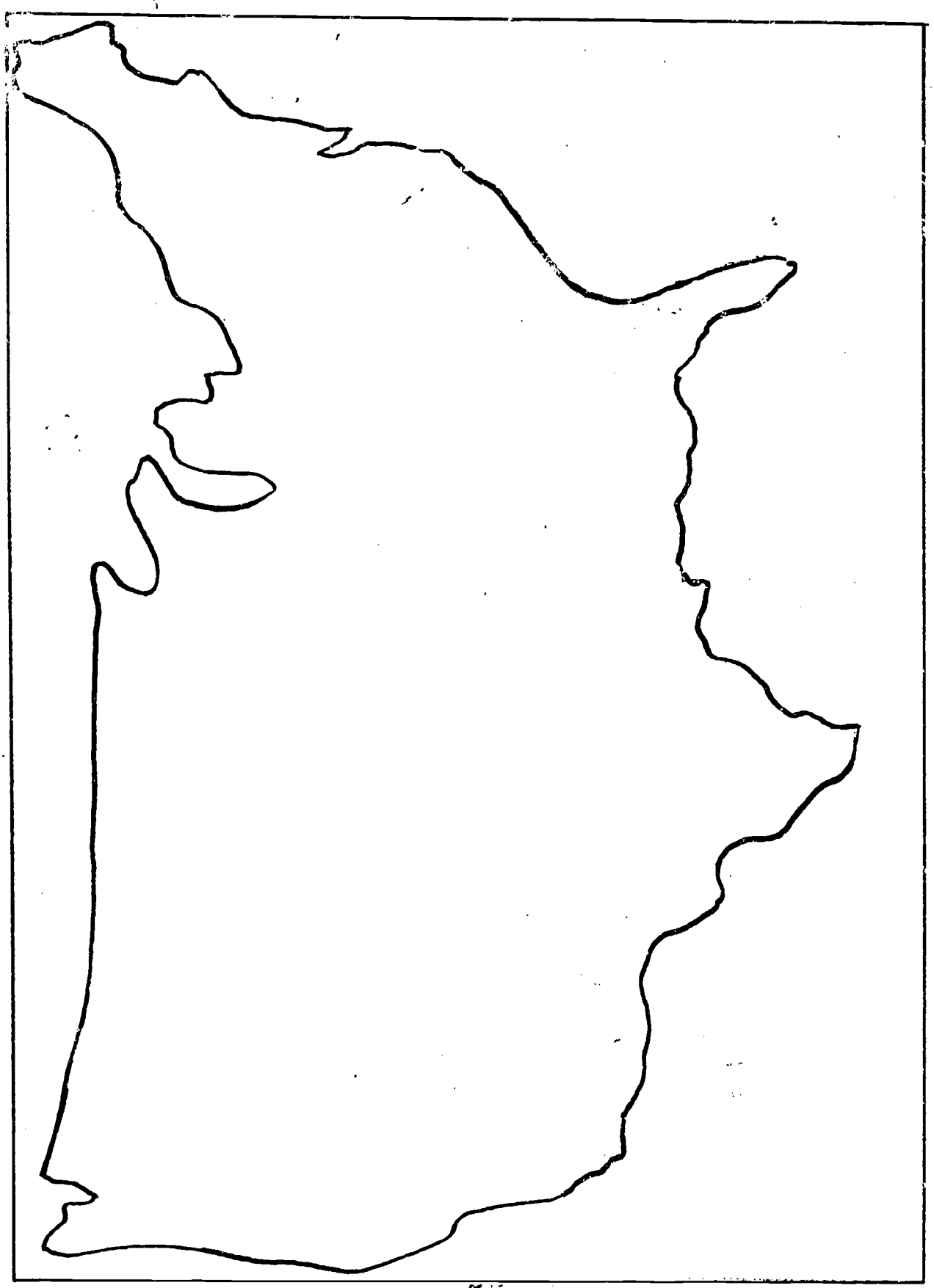
. . . *tell why the number of brakemen has declined in recent years.* PPO

In 1955 there were 103,000 brakemen employed in Class I line-haul railroads. In 1968 there were 74,000. Ask the children to think about reasons for this decline. In what other ways is freight transported in America today? How does the mechanization of railroad yards affect brakemen? Railroads compete with trucks, ships, planes, and pipelines. Their equipment is becoming more automatic. Do the children think railroads will continue to decline? What might cause railroad traffic to increase?

The REACT page shows the routes of famous trains of the U. S. and the world. The children are asked to look at these routes on a map or globe of the world and measure and multiply by the map scale to find their approximate lengths.

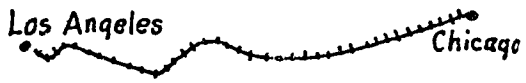
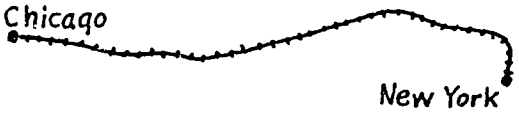
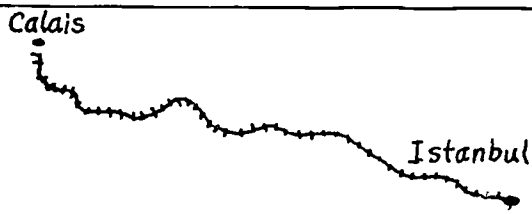
CB/Level 3/4

"Great Train Routes"



GREAT TRAIN ROUTES

Directions: Here are some famous trains and the routes they followed. Find the routes on a globe or map of the world. Use the scale of miles to find about how long the routes are.

Train	Country	Route	Miles Long
Santa Fe Super Chief	U.S.		
Trans-Siberian Railway	Russia		
Twentieth-Century Limited	U.S.		
Flying Scotsman	England Scotland		
The Orient Express	crosses Europe going southeast		

RELATED MATERIALS

About the Engineer of a Train (Book) S. Johnson. Childrens Press, Inc., 1224 W. Van Buren Street, Chicago, Illinois 60607, 1959.

Beginning Responsibility: Being a Good Sport (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 E. South Water Street, Chicago, Illinois 60601, 1969.

Beginning Responsibility: Being On Time (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 E. South Water Street, Chicago, Illinois 60601, 1969.

Beginning Responsibility: Rules at School (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 E. South Water Street, Chicago, Illinois 60601, 1964.

55 To Get Ready--Ripples Series (Video Tape, Color) Field Services, National Instructional Television, Box A, Bloomington, Indiana 47401.

Freight Train, The (Film, Color or Black and White, 11-min.) Encyclopaedia Britannica Educational Films, Inc. 425 North Michigan Avenue, Chicago, Illinois 60611, 1973

Getting Along With Others (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 E. South Water Street, Chicago, Illinois 60601, 1965.

Great Trains of the World (Book) Wyatt Blassingame. Random House, Inc., 457 Madison Avenue, New York, New York 10022, 1953.

How It Used To Be--Ripples Series (Video Tape, Color, 14½-min.) Field Services, National Instructional Television, 910 Elm Grove Road, Elm Grove, Wisconsin 53122.

Let's Ride in the Caboose (Book) David Robert Burleigh. Follett Publishing Company, 1010 W. Washington Boulevard, Chicago, Illinois 60607, 1969.

Passenger Train, The (Film, Color, 11-min.) Encyclopaedia Britannica Educational Films, Inc., 425 North Michigan Avenue, Chicago, Illinois 60611, 1973.

Popeye and Transportation Careers (Comic Book) King Features Syndicate, 235 E. 45th Street, New York, New York 10017, 1973.

Railroad in Transportation, The (Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Trains: A First Film (Film, Color, 11-min.) Bailey Film Associates Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404, 1971.

Values: Cooperation (Film, Color, 11-min.) Bailey Film Associates Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404.

Voices of Men at Work (Multi-Media) Sydney M. LeRue and William T. LaRue. Leswing Communications, Inc., 750 Adrian Way, San Rafael, California 94903, 1972.

BRAKEMEN

Brakemen work with the conductors as members of the train crews on freight and passenger trains and in railroad yards. One brakeman (or "flagman") generally is stationed in the rear of each freight and passenger train. His duties include seeing that the proper flags, warning lights, and other signals are displayed at the rear of the train to protect it while it is in motion and at stops. Most freight and passenger trains carry at least one other brakeman stationed in the front end of the train; his duties include setting out signals to protect the front of the train at unexpected stops.

Before a train leaves the station, the brakemen in road service check the air brake equipment on the cars and see that tools and other equipment are in their proper places. During a run, they make frequent visual inspections of their train from positions at both the head and rear end of the train, looking for smoke, sparks or other indications of sticking brakes, overheated car bearings, or other equipment malfunctions. At stops during the run, they make "walking inspections" of the cars in the train and, when necessary, couple and uncouple cars and air hose and assist the conductor in setting out and switching cars at industrial sidings. They are responsible for regulating the air conditioning, lighting, and heating equipment in passenger cars. Brakemen in passenger service (also known as "trainmen") sometimes assist the conductor by collecting tickets and generally looking after the needs of the passengers. Yard brakemen (frequently called "switchmen" or "helpers") assist in putting together and breaking up trains by throwing switches, coupling and uncoupling freight and passenger cars, and applying or releasing handbrakes on cars to control car movement.

Yard brakemen may advance to yard conductors; usually they stay in yard service throughout their railroad careers. On some roads, brakemen in road service may move from freight service to passenger work, usually considered more desirable because it is less strenuous than freight service and sometimes involves shorter working hours.

When they have acquired sufficient seniority, brakemen in road service may advance to conductors. Less frequently, they take positions as baggagemen. Conductor positions nearly always are filled by promoting brakemen who have qualified by passing written and oral examinations covering subjects such as signals, timetable, brake systems, and operating rules. Promotions are made according to seniority rules, and it may require 10 years or more for a brakeman to get his first assignment as a conductor.

Several thousand opportunities for new workers to obtain jobs as brakemen will develop through the 1970's, almost entirely as a result of retirements and deaths and because of promotions to conductor and transfers to other work.

The number of brakemen employed by Class I line-haul railroads declined from about 103,000 in 1955 to 74,000 in 1968. During the early 1970's work in railroad yards is expected to become increasingly mechanized, using automatic car retarders, automatic switching, and other devices. These

developments are expected to result in a further decline in the employment of brakemen during this period.

The number of cars in the train and the type of service in which he is employed determine the earnings of a freight brakeman.

In 1968, brakemen in yard service had a 5-day, 40-hour basic workweek, and for work beyond this they were paid 1½ times their regular hourly rates. In addition to their basic day's pay, brakemen in road, passenger, or freight service earned extra pay under certain conditions; for example, when they traveled more than 100 miles on a freight run or 150 miles on a passenger run.

Like other members of train and engine crews, brakemen often are scheduled to work nights, weekends, and holidays. Brakemen who are on the extra board and have been employed by the railroad for only a short time have less steady work and lower earnings than men having regular assignments; and they also may work more irregular hours. Yard and freight brakemen face greater accident risks than most other railroad workers.

Brakemen are represented by the United Transportation Union.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U. S. Department of Labor, Washington, D. C.
pp. 753-754

PLACES, PRICES, AND PEOPLE

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

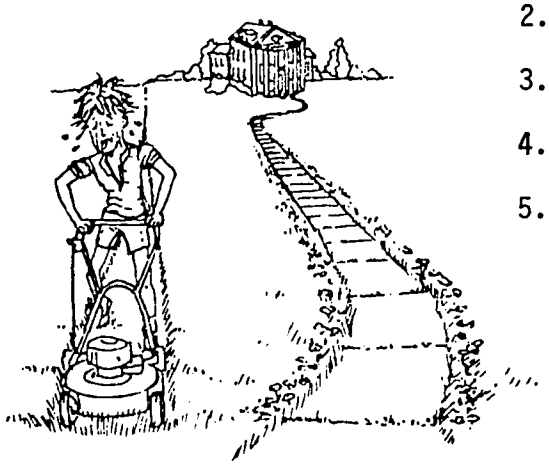
CAREER DEVELOPMENT FOCUS: Performance requirements for a job will vary with the work setting of the job.

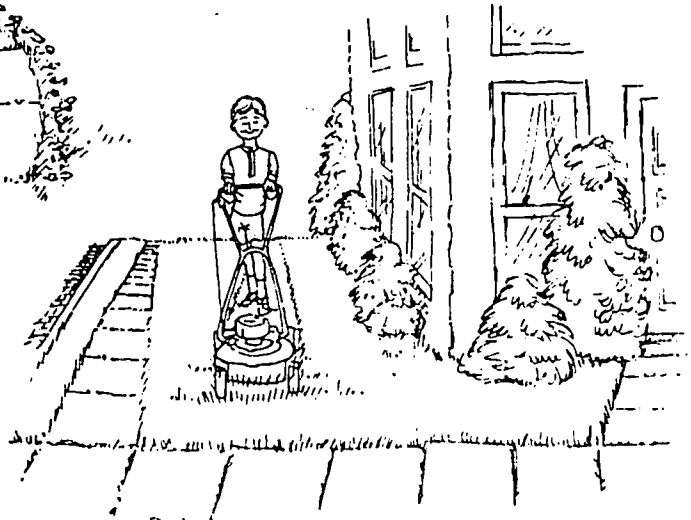
OCCUPATIONAL FOCUS: Grain Elevator Operator

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Round-About Weighing
2. Prices Go Up and Down
3. A Buying-Selling Grain Chain
4. Sing a Song of Soybeans
5. Large or Small, Always Tall





Teacher Goals

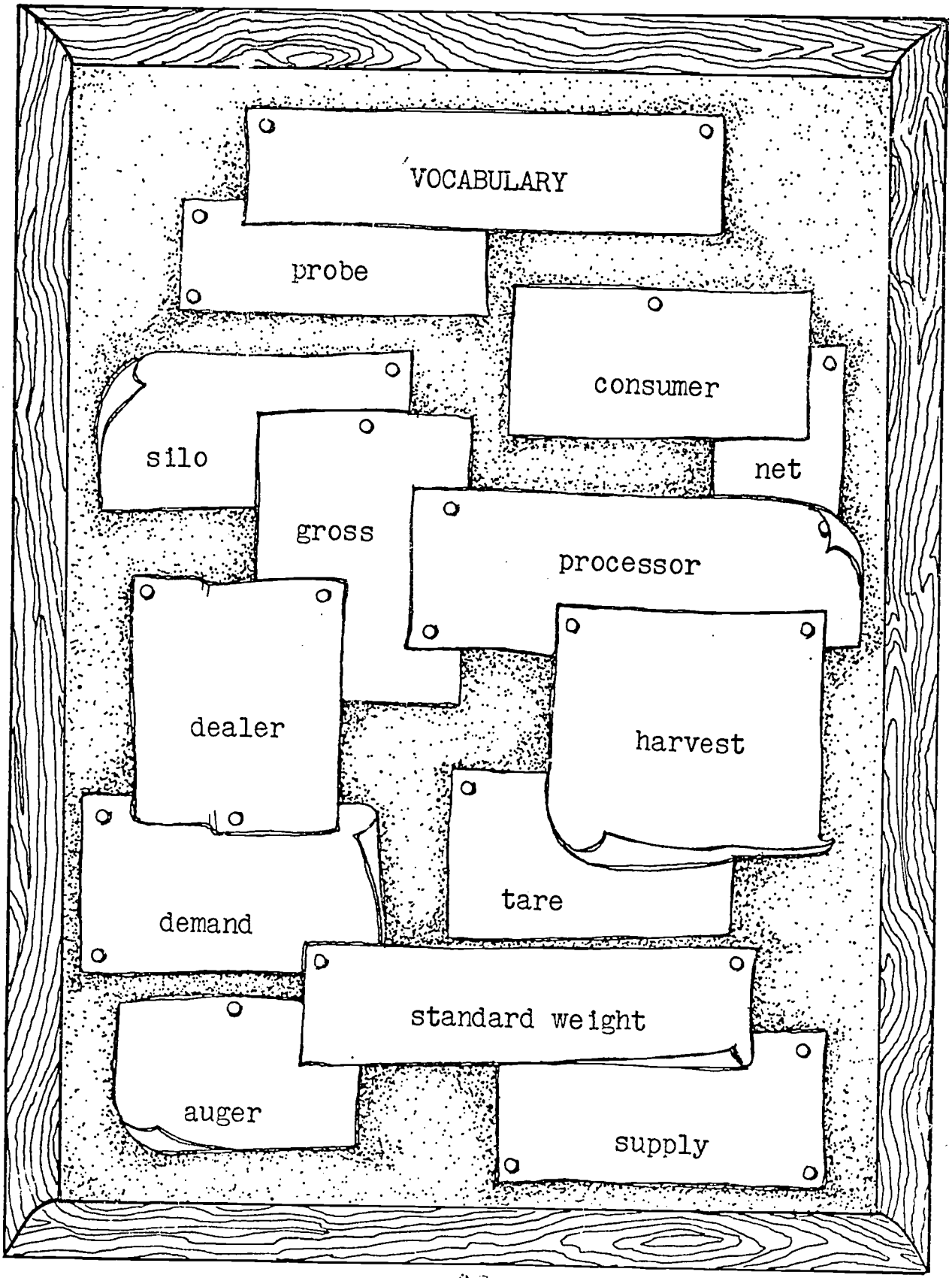
Teacher goals of this strategy combine a Coping Behaviors Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Grain Elevator Operator. In this perspective the teacher's goals are to:

Increase the pupils' information about the use of mathematics at the grain elevator.

Stimulate the pupils' interest in the influence of price changes upon the grain elevator operator.

Alert the pupils to workers other than the grain elevator operator who also deal in grain and grain products.

Offer opportunities for pupils to explore and experience ways performance requirements which they encounter change according to work setting.


VOCABULARY
probe
consumer
silo
net
gross
processor
dealer
harvest
demand
tare
standard weight
auger
supply

ROUND-ABOUT WEIGHING

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *identify weighing as a procedure necessary at grain elevators.*

. . . *tell why one grain elevator operator may take more probes than another.*

Attitudes and Appreciations Dimension

. . . *discuss what the farmer expects from the grain elevator operator and what he expects from the farmer.*

Career Information Dimension

. . . *identify a truck scale as standard equipment at a grain elevator.*

. . . *identify two work settings other than the grair elevator which use a scale.*

Educational Awareness Dimension

. . . *explain net weight.*

. . . *calculate net weights.*

Subject Matter Concepts

Mathematics
- Measurement
  - Weight
- Facts and Operations
  - Subtraction facts
  - Regrouping in subtraction
  - Products

64

Preplanning Suggestions

A scale--desk, bathroom, nurse's or any other kind which children can use
Empty containers for weighing
Objects to put in containers

Occupations require the use of specific materials and equipment.

Career Information

. . . *identify a truck scale as standard equipment at a grain elevator.* PPO

Every day farmers pull up and park their trucks on a large street level platform outside grain elevator offices. The platform is really a large scale. Inside, the weight of the truck loaded with grain is recorded on the scale's large dial.

Knowledge and skills in subject matter areas are helpful in occupational competence. EA

Educational Awareness

. . . *explain net weight.* PPO

Ask children how the grain elevator manager could find out the weight of the load of grain without weighing the grain itself. Ask questions to help the children conclude that the loaded truck is weighed, then the unloaded truck is weighed. Weight of the grain to be sold or stored at the elevator is found by subtracting. The scale stamps and subtracts the large weights mechanically.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *calculate net weights.* PPO

Borrow a home scale or one from the school nurse's office. Interest groups of children in finding net weights of loads of books, balls, etc., which they might bring to school in the morning. Desk contents could be sacked and weighed. Children may rotate in the role of "weigher." The weigher records the gross weight (person + load) on a paper and then the tare weight (person - load). He gives this to the person being weighed who may then subtract to find the net weight of his load. Vary this activity according to your needs and interests.

Performance requirements for a job will vary with the work setting of the job.

Coping Behaviors

. . . *identify weighing as a procedure necessary at grain elevators.* PPO

When the truck loaded with grain is on the scale, the elevator manager has a sample of the grain taken with a probe. From the sample he tests the grain for smut, garlic, moisture, or must.

Performance requirements for a job will vary with the work setting of the job.

Coping Behaviors

. . . *tell why one grain elevator operator may take more probes than another.* PPO

Ask the children to consider why the probe is needed. Remind them that the price and weight of grain is dependent upon its quality. Ask them to think about why one grain elevator manager may want to take several probes from each load, while another manager may be satisfied with one.

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *discuss what the farmer expects from the grain elevator operator and what he expects from the farmer.* PPO

Lead the children to conclude that the manager who knows and trusts his customers needs fewer probes. The class may like weighing mystery objects by the net weight method to demonstrate the need for probes.

Occupations have their own work settings.

Career Information

. . . *identify two work settings other than the grain elevator which use a scale.* PPO

Encourage groups of children to perform impromptu skits of scenes from other work settings in which scales are used. Doctors' offices, zoos, grocery stores, and railroad yards could be dramatized. The audience can guess the work setting.

The REACT pages are mathematics exercises. One REACT page is to find net weight in numbers typical of the grain elevator using many places in subtraction. Regrouping is not necessary for this exercise. The other REACT page leads to the idea of finding bushels per load by progressive multiplication. Call attention to division as the simple reciprocal.

CB/Level 3/5

"Gross, Net, Tare"

CB/Level 3/6

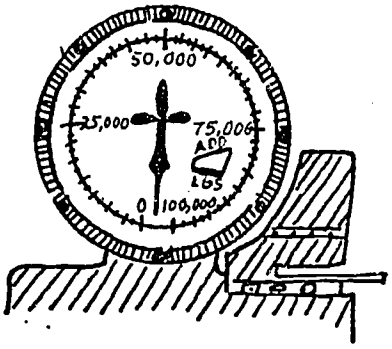
"How Many Bushels in a Truckload?"

GROSS, NET, TARE

Gross is the weight of the truck loaded with grain.

Tare is the weight of the empty truck.

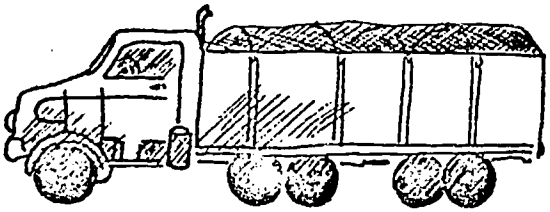
Subtract to find net weights of the loads of grain.



49380 lbs. GROSS	27580 lbs. GROSS	36240 lbs. GROSS
16200 lbs. TARE	10220 lbs. TARE	11110 lbs. TARE
lbs. NET	lbs. NET	lbs. NET
32965 lbs. GROSS	20490 lbs. GROSS	37860 lbs. GROSS
10600 lbs. TARE	10300 lbs. TARE	17600 lbs. TARE
lbs. NET	lbs. NET	lbs. NET
40590 lbs. GROSS	29770 lbs. GROSS	44600 lbs. GROSS
10480 lbs. TARE	12550 lbs. TARE	14500 lbs. TARE
lbs. NET	lbs. NET	lbs. NET
25960 lbs. GROSS	49560 lbs. GROSS	33790 lbs. GROSS
10830 lbs. TARE	18020 lbs. TARE	10450 lbs. TARE
lbs. NET	lbs. NET	lbs. NET

HOW MANY BUSHELS IN A TRUCKLOAD?

Standard weight of wheat is 60 pounds a bushel.



This truckload of grain weighs 3000 pounds.

To find out how many bushels are in the truckload think:

1 bushel weighs 60 pounds.

2 bushels weigh (2 x 60) or 120 pounds.

5 bushels weigh (5 x 60) or _____ pounds.

10 bushels weigh (10 x 60) or _____ pounds.

20 bushels weigh (20 x 60) or _____ pounds.

30 bushels weigh (30 x 60) or _____ pounds.

40 bushels weigh (40 x 60) or _____ pounds.

50 bushels weigh (50 x 60) or _____ pounds.

This truckload of grain weighs 3000 pounds.

How many bushels are in this truckload? _____

If the grain elevator operator pays the farmer $3.00 for each bushel, how much will the farmer earn with this truckload?

_____ x _____ = _____

PRICES GO UP AND DOWN

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *tell how the grain elevator operator's services would differ when prices were up.*

Attitudes and Appreciations Dimension

. . . *explain how the grain elevator operator is a buyer and a seller.*

. . . *construct a mechanical model of the law of supply and demand.*

Career Information Dimension

. . . *identify changing prices as a risk for the grain elevator operator.*

Educational Awareness Dimension

. . . *state the law of supply and demand.*

Subject Matter Concepts

Social Studies
- Economics
  - Supply and demand

Language Arts
- Grammar and Usage
  - Symbols

Mathematics
- Problem Solving
  - Estimating outcomes

Preplanning Suggestions

Newspapers several weeks apart to show changes in price of the same items

Pieces of cardboard for each child, string, scissors (See REACT page "The Law of Supply and Demand.")

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . explain how the grain elevator operator is a buyer and a seller. PPO

Ask the children to tell about changes in prices which they have experienced. Who knows about a price that has gone up? Who knows about a price that has come down? Do food prices go up and down? Ask the children whether they would expect the price of grain to go up and down. The grain elevator operator buys from farmers and sells to larger elevators or processors. Ask why he would need to know about price changes.

. . . state the law of supply and demand. PPO

Explain that there is a law about prices called the law of supply and demand. When people want to buy something, this is called demand. How many things there are to sell is called supply. When demand goes up, people buy and supply goes down. If there is a low supply, prices go up because people are willing to pay more for the item in demand.

When there is a big supply of an item and not many want to buy it, prices go down in hopes that the item will sell.

So the law of supply and demand is that when supply goes up prices go down, and when demand goes up prices go up, providing other conditions remain the same.

Discuss the law of supply and demand using examples pertaining to the grain elevator such as corn and wheat.

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *construct a mechanical model of the law of supply and demand.* PPO

Interest the children in constructing a mechanical model of the law of supply and demand. Each child will need the following:

Large piece of heavy poster paper or cardboard

Eight reinforcers

A slick piece of string six times the width of the paper

A sharp tool to push the string through the paper

Drawing supplies

Scissors

Use the REACT page as a model from which to plan. First ask the children to illustrate three background panels, one for demand, one for supply, and one for prices. The demand panel could show a lot of people. The supply panel could show grain products. The price panel could be a scale from bottom, $.10, to top, $2.00. Stitch the string behind at points shown. Mark stitching holes with reinforcers. Cut out a small plate, a loaf of bread, and a dollar sign. Tape these markers to the string in the center of the panels. Pulling the string at one end will show demand down, supply up, and prices down. Pulling the string at the other end will show demand up, supply down, and prices up.

The individual worker determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

. . . *identify changing prices as a risk for the grain elevator operator.* PPO

Performance requirements for a job will vary with the work setting of the job.

Coping Behaviors

. . . tell how the grain elevator operator's services would differ when prices were up.
PPO

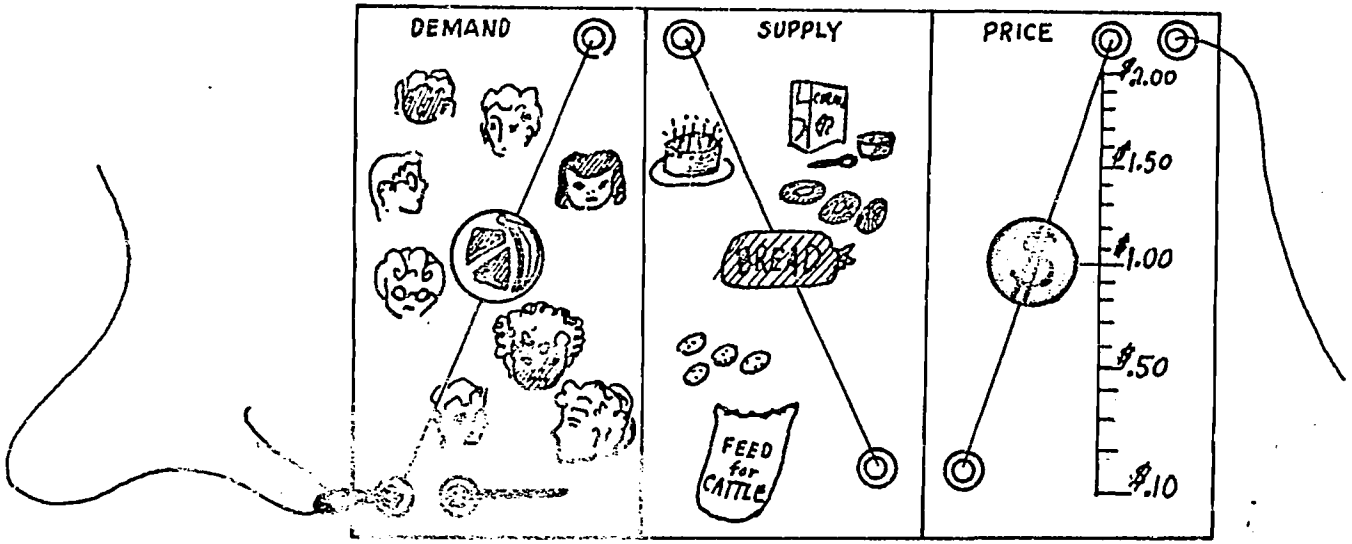
Using the grain elevator operator as an example, help the children to speculate about what he would do when grain prices were up. Would he buy? Sell? Store? Why?

CB/Level 3/7

"The Law of Supply and Demand"

THE LAW OF SUPPLY AND DEMAND

Use a piece of big strong paper to make this model. Put people in the demand column. Put grain products in the supply column. Put a money scale in the price column. Thread string as shown. Tape the dinner plate, the loaf of bread, and the $ sign to the string. Pull the ends of the string to see the model work.



Use the words UP or DOWN to answer these questions:

When demand goes down supply goes _____.

When demand goes down price goes _____.

When supply goes down price goes _____.

A BUYING-SELLING GRAIN CHAIN

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *report on the different skills needed in their respective jobs as described by two different grain dealers.*

. . . *draw a picture to show how the same job may change in a different work setting.*

Attitudes and Appreciations Dimension

. . . *tell where the grain elevator fits in the route of grain from the farmer's field to you.*

. . . *name two work settings in addition to the grain elevator where grain is bought and sold.*

Career Information Dimension

. . . *define terminal elevator, processor, and consumer.*

Subject Matter Concepts

Social Studies
- Economics
  - Interdependence of city and rural
- Sociology-Anthropology
  - Community wants and needs
  - Values and purposes in behavior

Language Arts
- Writing Skills
  - Vocabulary building

Preplanning Suggestions

Pictures of grain elevators
Samples of grains

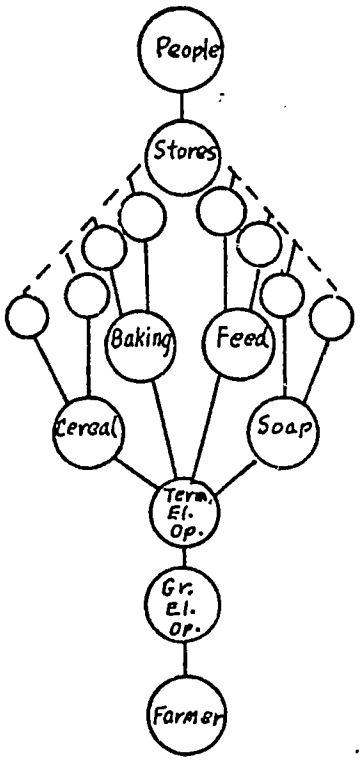
A Buying-Selling Grain Chain

Occupations have their own vocabularies.

Career Information

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations



This activity is meant to emphasize the long route of food from the field to our refrigerators and cupboards.

. . . define terminal elevator, processor, and consumer. PPO

. . . tell where the grain elevator fits in the route of grain from the farmer's field to you. PPO

Start by asking a pupil volunteer to be the farmer. Then ask whether anyone knows to whom the farmer sells his grain. Hopefully a pupil will think of the grain elevator operator. This pupil will get up and hold a hand of the "farmer." Proceed by asking whether anyone knows to whom the grain elevator operator sells his grain. If no one knows, explain the function of the large terminal grain elevator and let a pupil join the chain in this role. Several encyclopedias have pictures of the terminal elevators in their grain elevator articles. Who buys from the terminal grain elevator? A processor. These can be cereal companies, baking companies, feed companies, etc. Here many pupils could join the chain. Several children may fan out, keeping a hand on the terminal elevator operator. Next, ask who buys from the processors. Again many answers are possible. Grocery stores and lots of other retail businesses sell grain products. Children may want to name stores in your area which sell grain products. The final question will be, "Who buys from the stores?" Here the answer will be you and me and our friends and neighbors. Perhaps every pupil left can join the buying-selling grain chain at this point because we are all consumers. After a trial run, the children should be able to do a buying-selling grain chain without your help.

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Performance requirements for a job will vary with the work setting of the job.

Coping Behaviors

Performance requirements for a job will vary with the work setting of the job.

Coping Behaviors

. . . name two work settings in addition to the grain elevator where grain is bought and sold. PPO

. . . report on the different skills needed in their respective jobs as described by two different grain dealers. PPO

Define the grain elevator operator as a buyer and seller of grain. The children should be able to name other workers who are buyers and sellers, or dealers, in grain or grain products. Ask the children to write a short report telling how buying grain or grain products for a terminal elevator operator, a processor, a store owner, or a consumer is different from buying grain at a country elevator.

. . . draw a picture to show how the same job may change in a different work setting. PPO

The REACT page suggests drawing pictures to relate the subconcept to the child's life.

CB/Level 3/8

"How You Do It Depends . . ."

HOW YOU DO IT DEPENDS . . .

The way you do a job depends on many things.

Draw two pictures to show the same job being done in different places.

Here are some ideas. Choose one or make up your own.

Draw your pictures on big pieces of paper.

Job	Setting 1	Setting 2
Cleaning up after a meal		
Playing music	for yourself	for others
Harvesting food	in the garden	in the field
Writing	a note to a friend	school work

SING A SONG OF SOYBEANS

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *tell how soybeans help solve meat shortages.*

Attitudes and Appreciations Dimension

. . . *tell three different uses of soybeans.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Technology produces changes in ways of living.
- Economics
  - Production of goods
  - Natural resources as base

Preplanning Suggestions

Soybeans or pictures of soybeans
Labels of foodstuffs that list protein content, particularly soybeans

SING A SONG OF SOYBEANS

Performance requirements for a job will vary with the work setting of the job.

Coping Behaviors

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Many country grain elevator operators in America buy and sell a product which we rarely see in the grocery store, the soybean.

The soybean has tremendous food value. Pound for pound it has four times the protein of eggs, fifteen times the protein of milk, two times the protein of chicken, three times the protein of lamb, and two and one-half times the protein of beef. Bean meal is used for livestock feed. Bean oil is used in margarines, shortenings, paints, lacquers, soap, and ink.

. . . *tell how soybeans help solve meat shortages.* PPO

Because of the great protein value of soybeans, chemurgists have found ways to process soybeans into meat-like fibers. Find a picture of these or bring a package of texturized vegetable protein, TVP, from the store. Show the children how it has been made to look like meat. Explain that the soybean fibers are flavored to taste like meat and they are just as nutricious.

. . . . *tell three different uses of soybeans.* PPO

Teach the children this song according to the tune of "Farmer in the Dell." The song will emphasize the many uses of soybeans and that they are a major item in U. S. grain markets. For homework, children can check labels under "ingredients." They will find that many foods contain soybean meal or oil. If "vegetable" protein or "vegetable" oil is listed as an ingredient, we can assume a soybean product. Suggest that they start with cooking oil, margarine, or pet food.

Soybean Song

The soybeans in the silo.
The soybeans in the silo.
Hi ho the dairy-o
The soybeans in the silo.

The soybean sells for feed.
The soybean sells for feed.
Hi ho the dairy-o
The soybean sells for feed.

The soybean sells for oil.
The soybean sells for oil.
Hi ho the dairy-o
The soybean sells for oil.

You can add as many verses to the song as there are soybean products. Here is a partial list to choose from: soy flour--used in bread, pancakes, marshmallows, soups, and puddings; soybean meal--used for livestock feed, fertilizer, bug spray, linoleum backing, and medicines. There are dozens of soybean products.

To make the song into a game, start with a big circle which can represent the silo. Have several children wearing signs naming a use of soybeans stand inside the circle. As soon as their verse is sung, they are "sold" and must run out of the silo.

A way to experience the processing of grain is illustrated on the REACT page. It will be necessary to obtain some wheat kernels for the demonstration.

CB/Level 3/9

"Making Flour"

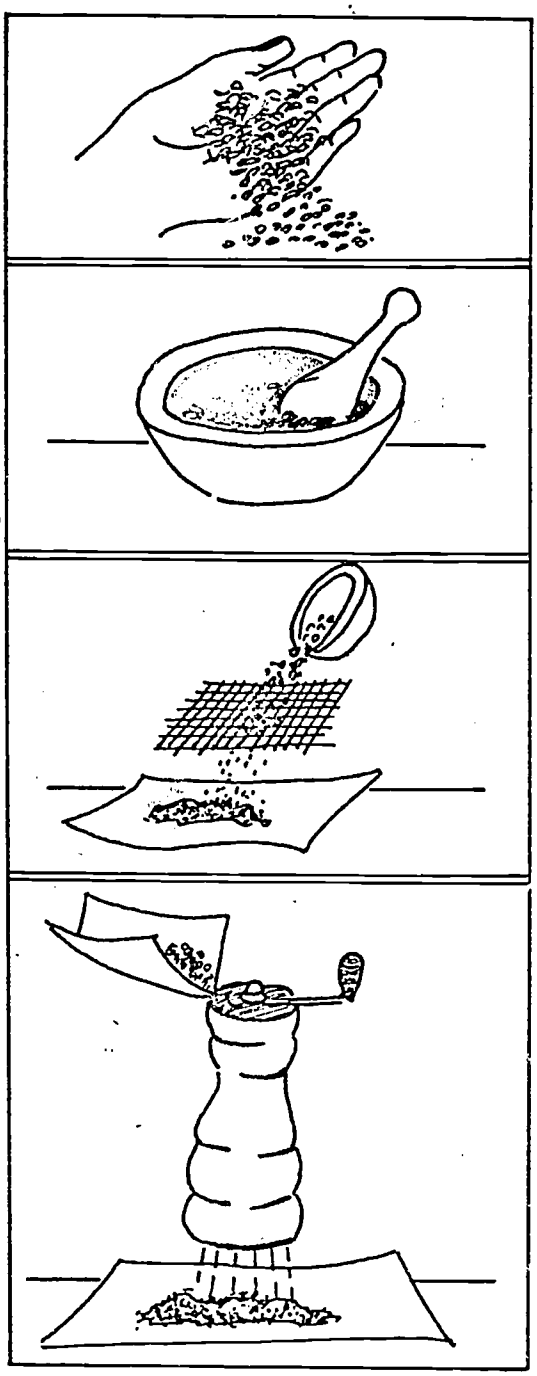
MAKING FLOUR

I. Get a handful of wheat kernels.

II. Use a mortar and pestle (or a board and a large smooth stone, Indian style) to crush the kernels into tiny pieces.

I Use a piece of screen to strain out the husks.

IV. Put the crushed wheat into a pepper mill. Grind it into flour.



LARGE OR SMALL, ALWAYS TALL

Third Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *tell how grain elevators are always the same regardless of location.*

Career Information Dimension

. . . *describe at least two ways in which grain elevators may differ from each other.*

. . . *demonstrate the use of an auger.*

Subject Matter Concepts

Social Studies
- Geography
  - Towns and cities

Language Arts
- Listening and Speaking
  - Show-and-tell activities
- Reading
  - Reading for information

Science
- Physics
  - Forces move things.
  - Machines

Preplanning Suggestions

Farm catalogs, encyclopedias, pictures of grain elevators in a variety of different locations

Occupations have their own work settings.

Career Information

. . . *describe at least two ways in which grain elevators may differ from each other.* PPO

Interest a group of children in finding pictures of different grain elevators. Farm magazines, encyclopedias, and trade books will show terminal elevators, elevators at processing companies, elevators by the sea, and elevators by railroad tracks.

Performance requirements for a job will vary with the work setting of the job.

Coping Behaviors

. . . *tell how grain elevators are always the same regardless of location.* PPO

Ask this group of children to report to the class with pictures or models to answer the following questions:

How are grain elevators different?

How are they the same?

Do differences depend on location?

How might the grain elevator operator's job change according to the location of the elevator?

Occupations require the use of specific materials and equipment.

Career Information

. . . *demonstrate the use of an auger.* PPO

The REACT page focuses upon a special type of grain elevator machine. Inside the big "pipes," which you see at the elevators, are giant screws called augers. They turn to move grain through the pipes. Silos at the elevators can be loaded and emptied by

means of augers. If you have the opportunity, visit a grain elevator with the children. The elevator operator will point out the augers and many other types of machinery such as the elevator itself, blowers, fans, and temperature controls necessary for maintaining high quality of the grain stored at the elevator.

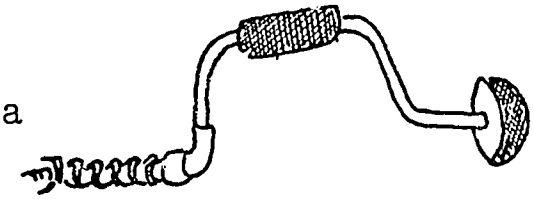
CB/Level 3/10

"Getting out the Grain"

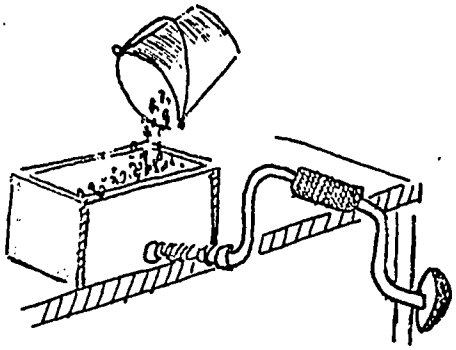
GETTING OUT THE GRAIN

Big screws called augers move grain at grain elevators. You can make an auger work.

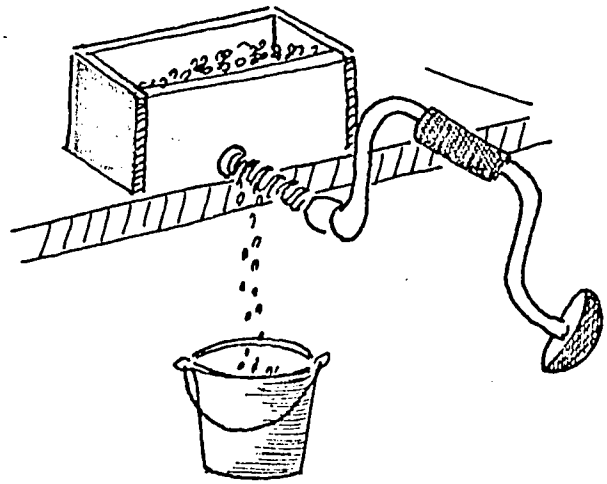
Borrow a hand drill with a large bit.



Put rice into an empty chalk box. Set the box at the edge of a table. Drill a hole low in the side of the box.



Put a bucket on the floor under the hole. Hold the drill in place. Turn it <u>backwards</u> to get out the grain.



RELATED MATERIALS

Bread (Film, Color or B/W, 11-min.) Encyclopaedia Britannica Educational Films, Inc., 425 North Michigan Avenue, Chicago, Illinois 60611.

Building Work Habits Series (Sound Filmstrip) Learning Arts, P. O. Box 917, Wichita, Kansas 67201, 1972.

Community Series: Agriculture and Industry (Sound Filmstrips) McGraw-Hill Films, 330 West 42nd Street, New York, New York 10036, 1970.

Elementary Economics: An Inquiry into Concepts and Choices (Filmstrip Series) Bailey Film Associates, 2211 Michigan Avenue, Santa Monica, California 90404, 1972.

Finding Information (Film, Color, 11-min.) Churchill Films, 622 North Robertson Boulevard, Los Angeles, California 90069, 1963.

Food for the City: Wheat and Flour (Film, Color, 11-min.) Bailey Film Associates, 2211 Michigan Avenue, Santa Monica, California 90404, 1972.

How to Solve a Problem (Film, Color, 12½-min.) Bailey Film Associates, 2211 Michigan Avenue, Santa Monica, California 90404, 1972.

Story of Wheat (Filmstrip) EMC Corporation, Educational Materials Division, 180 East Sixth Street, St. Paul, Minnesota 55101, 1970.

GRAIN ELEVATOR OPERATORS

The grain elevator is as common in rural America as are church steeples in rural France. It is a building, usually over 100 feet tall, surrounded by several silos and equipped to load, unload, clean, mix, and store all kinds of grains. The "elevator," specifically, is the machine that lifts grain up and out of the trucks, railroad cars, or ships and into the storage bins.

The country elevator operator buys grain from area farmers. He supervises grading, cleaning, and conditioning the grain, and, finally, arranges for its shipment to a terminal elevator. The capacity of country elevators may vary from 25,000 bushels to 100,000 bushels or more. Elevator operators may be independent businessmen, employees of farm cooperatives, or large grain companies.

Large grain markets have huge terminal elevators capable of storing over a million bushels of grain. The Wichita, Kansas, elevator has a 43 million bushel capacity.

The country elevator operator may employ a secretary to help with the large amount of bookkeeping and correspondence necessary in the grain business. He may employ two or three men to handle the mechanics of loading, unloading, and cleaning the grain. He may take on a few additional employees during the harvest season.

The elevator operation depends upon large machinery which must be inspected and repaired from time to time.

Much of the grain elevator operator's time is spent watching the markets. His office probably has a ticker tape machine from a commodity exchange such as the Chicago Board of Trade to give him up-to-the-minute reports on grain prices. Prices can change suddenly and greatly depending on such variables as wet or dry weather, disease in crops, government statements, export limitations, and foreign sales. The board of trade is an organization of buyers and sellers which regulates trade, gathers and gives out price information, inspects grain samples, supervises warehouses, and operates a transportation rate bureau. Trading grains at large boards of trade takes place either in cash or in futures.

Larger grain elevator operators will employ traders to represent them on the floor of the board of trade. Some grain dealers are represented by highly specialized traders who bargain only in one commodity such as corn or soybean oil. The grain elevator operator's profits depend on shrewd watching of prices, knowing when to buy and when to sell. Additional employees of the grain elevator operator may be an auditor, from time to time, and truckers or railroads whom he may contract for hauling.

Storing grain for farmers is an additional income for the grain elevator operator. Almost all elevators have facilities for storing grain for farmers before they sell it. Some grain elevator operators manage a side business such as grinding grain into feed and sacking it for local sales.

Many grain dealers inherit their business through their families. College training is not necessary for those who grow up in the business. Large grain companies take college graduates from almost any major field and place them in their own specialized training programs. The Chicago Board of Trade offers a special program for grain dealers. The country elevator operator needs an aptitude for mathematics and a disposition for meeting people, especially as he must contract with farmers in building up his business. Most important, the grain dealer needs to develop skill in understanding and outguessing the markets. Young people interested in becoming grain dealers can usually find part-time jobs at their local elevators and work their way up. Experience is the best teacher in the grain business.

CHANGE FOR FUN WITH RECREATION

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

CAREER DEVELOPMENT FOCUS: People change and these changes influence the choices and decisions one makes.

OCCUPATIONAL FOCUS: Recreation Worker

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Everybody Come! Planning a Playground Program
2. Swings and Things--Ordering Recreation Equipment
3. Let's Go Fly a Kite
4. Safe Cycling
5. Tell Me a Story

Teacher Goals

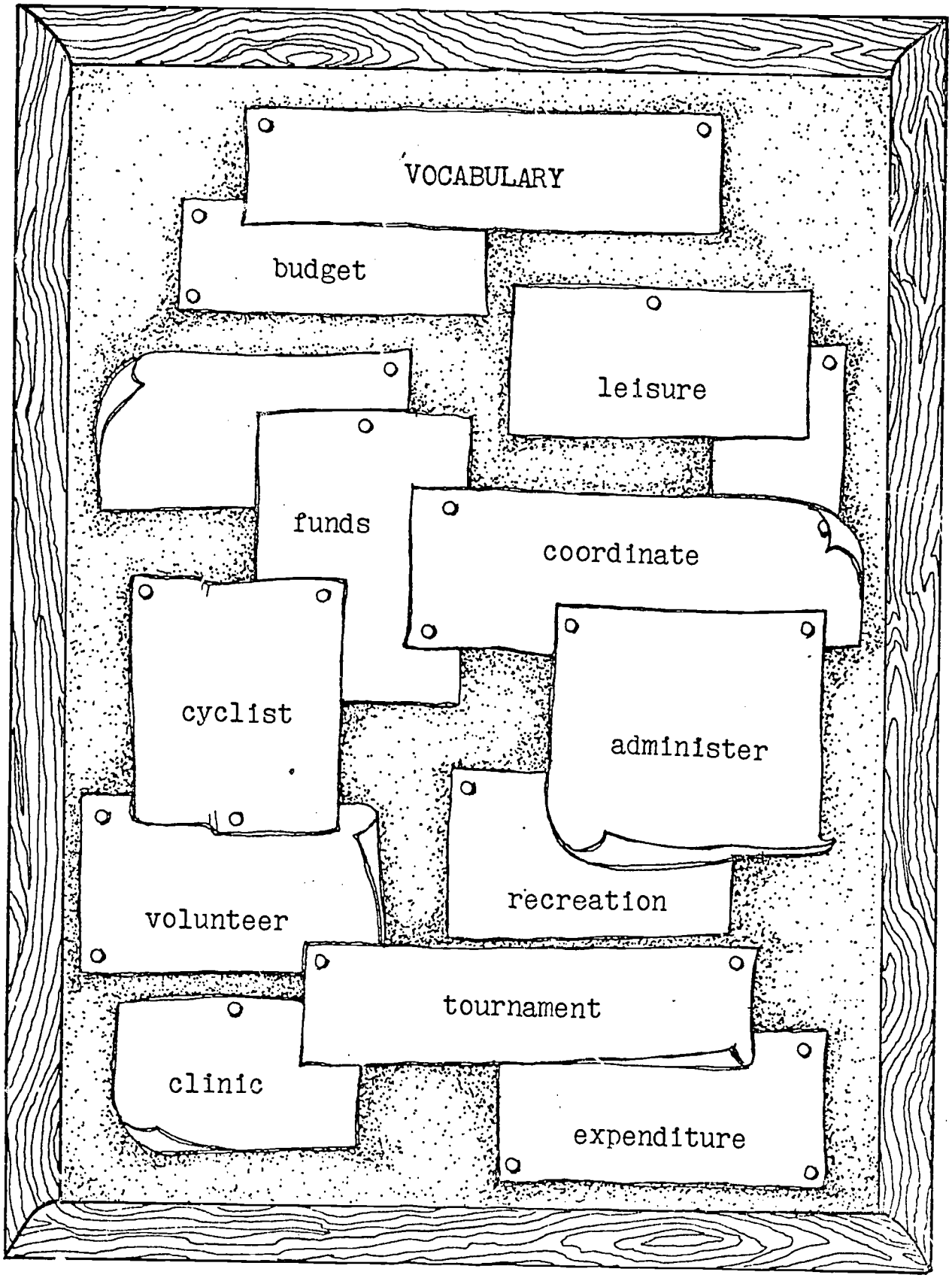
Teacher goals of this strategy combine a Decision Making Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of the Recreation Worker. In this perspective the teacher's goals are to:

Help children recognize different kinds of changes in themselves and others.

Offer pupils opportunities to practice making decisions influenced by changes in people.

Provide opportunities for pupils to simulate the experiences and decisions of recreation workers, especially those which take into account the ways people change.

Enable pupils to apply social studies concepts in order to increase their awareness of the social contribution made by recreation workers.


VOCABULARY
budget
leisure
funds
coordinate
cyclist
administer
volunteer
recreation
tournament
clinic
expenditure

EVERYBODY COME! PLANNING A PLAYGROUND PROGRAM

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *describe three ways people change and how these changes may affect the decisions of recreation workers.*

. . . *predict one change that recreation could effect in the persons who participate.*

Attitudes and Appreciations Dimension

. . . *name three responsibilities of recreation workers.*

. . . *cooperate in organizing and executing a recreation program.*

. . . *summarize the contributions made to society by recreation workers.*

Career Information Dimension

. . . *tell what aspects of recreation work would be pleasant or unpleasant to him.*

Educational Awareness Dimension

. . . *name an occupational skill which the recreation worker may have learned outside of school.*

. . . *tell how success in recreation activities depends upon a person's effort and ability.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Community wants and needs
  - Membership in a group
  - Responsibility
  - Values and purposes in behavior

Preplanning Suggestions

Accumulate a list of organizations which have recreation directors: park service, church groups, senior citizens, etc.
Materials to prepare lists of recreational areas in the immediate vicinity

A change everyone likes to make is from working to resting or from working to playing. The time that a person spends doing what he likes is called leisure time. Activities which we choose during leisure time because we enjoy them are our recreation.

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *name three responsibilities of recreation workers.* PPO

Recreation workers help all kinds of people enjoy their leisure time activities. Recreation directors are hired by cities, schools, hospitals, business, industries, and park services as administrators. They plan programs, hire other recreation workers, budget funds, and purchase equipment. Discuss with the children what their own favorite recreation activities are. Has a recreation worker ever helped them in their leisure time activities? Do they often change their free time activities?

People change and these changes influence the choices and decisions one makes.

Decision Making

. . . *describe three ways people change and how these changes may affect the decisions of recreation workers.* PPO

City recreation workers often plan summer park and playground programs for children. Recreation workers make many decisions about the kinds of fun people will most enjoy. What they decide is always influenced by ways people change, such as gaining new skills or interests, growing bigger, joining and quitting an activity.

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . cooperate in organizing and executing a recreation program. PPO

Help children organize themselves into a recreation staff which will conduct a playground program at their school. Choose a recess, noon hour, or Saturday time when younger children could be invited to participate in the planned activities.

People change and these changes influence the choices and decisions one makes.

Decision Making

. . . predict one change that recreation could effect in the persons who participate. PPO

Ask the recreation staff to think about their plans in terms of changes the program could cause in those who participate. They might change from bored to occupied. They might learn a new craft or game. They might find new friends. Their interests may change. Discuss how learning during recreation differs from learning during school.

Career-oriented learning may take place in school or out of school.

Educational Awareness

. . . name an occupational skill which the recreation worker may have learned outside of school. PPO

The recreation staff needs to decide:

1. What activities to offer
2. Who to invite
3. What staff jobs will be
4. Times for program activities
5. What equipment and materials will be needed and how to get them
6. Whether volunteer recreation workers such as parents or older children skilled in a certain activity should be asked to help

The pupils should have dozens of ideas. Help them make value judgments, eliminating what is expensive, dangerous, or overly competitive. Hobby shows; decorating or washing wagons, tricycles, or bikes; a pet parade; cheerleading or junior judo lessons; craft corners; and game tables might fire their enthusiasm.

Learning achievement depends upon effort and ability.

Educational Awareness

. . . tell how success in recreation activities depends on a person's effort and ability. PPO

If the program can run for three or more sessions, children would have a valuable opportunity to assess it. Does the attendance increase or decrease from week to week? How does this influence the decisions of the recreation staff? Which activities would they drop or add to their program? How have the participants changed?

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . summarize the contributions made to society by recreation workers. PPO

The individual worker determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

. . . tell what aspects of recreation work would be pleasant or unpleasant to him. PPO

What does the recreation staff think about recreation work at this point? Have any of their ideas changed because of their experience with the playground program? Discuss with the class what the work of recreation people contributes to others. Maybe some children have had the problem of not being able to find anything to do. How do they usually solve it?

The REACT page provides pupils with an opportunity to identify personal changes which have occurred in the past two years.

DM/Level 3/1

"Identification Cards"

IDENTIFICATION CARDS

Two years ago you were not like the way you are today. Think back. Fill in the identification card below.

Two Years Ago

Name: _____

Address: _____

City: _____ State: _____

Members of Family: _____

_____

Height: _____

Weight: _____

Shoe Size: _____

Favorite Food: _____

Best Friend: _____

Favorite Story or TV Show: _____

Recreation Activities: _____

Home Jobs: _____

Usual Clothes: _____

Number of Teeth Out: _____

IDENTIFICATION CARDS

You have completed the identification card for the way you were two years ago, Now complete the card for the way you are today. How many answers are different? How have you changed?

Today

Name: _____

Address: _____

City: _____ State: _____

Members of Family: _____

_____

Height: _____

Weight: _____

Shoe Size: _____

Favorite Food: _____

Best Friend: _____

Favorite Story or TV Show: _____

Recreation Activities: _____

Home Jobs: _____

Usual Clothes: _____

Number of Teeth Out: _____

On the back draw a picture or write a story telling how you expect to be two years from now.

SWINGS AND THINGS, ORDERING RECREATION EQUIPMENT

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *explain one way the people in local government could influence recreation workers.*

Attitudes and Appreciations Dimension

. . . *name three responsibilities of recreation workers.*

Career Information Dimension

. . . *compare two different work settings in which recreation workers may be employed.*

Educational Awareness Dimension

. . . *identify three skills used by recreation workers.*

Subject Matter Concepts

Mathematics
- Facts and Operations
  - Addition and subtraction of money
- Problem Solving
  - Use of money concepts

Social Studies
- Political Science
  - Governments help people meet some needs.

Preplanning Suggestions

Prepare a list of city recreation personnel available for interviews.
Determine what the city recreation budget is or how it is determined.
Catalogs with prices of play or recreation equipment

SWINGS AND THINGS
ORDERING RECREATION EQUIPMENT

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

Occupations have their own work settings.

Career Information

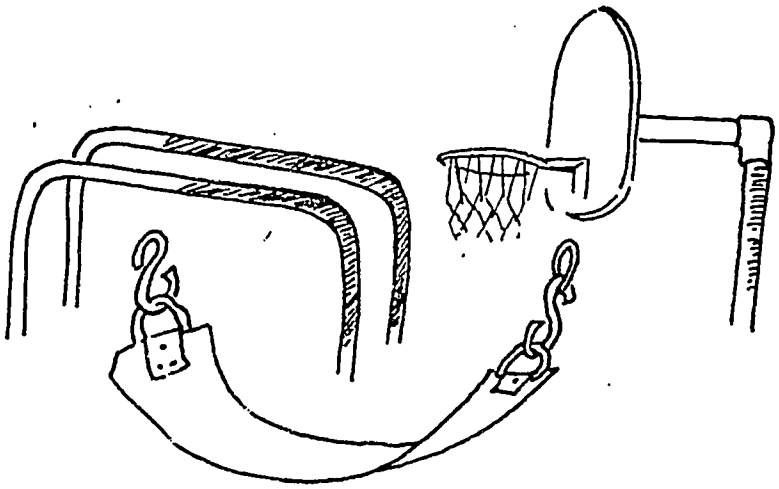
Most city recreation offices operate with funds acquired from city taxes. Some major expenses in the recreation budget are staff salaries, office expenses, materials, and equipment.

. . . *identify three skills used by recreation workers.* PPO

. . . *name three responsibilities of recreation workers.* PPO

. . . *compare two different work settings in which recreation workers may be employed.* PPO

Interest the children in helping the recreation director plan play equipment for a new park. Remind them of his work setting, both outside and in his office. Imagine that the park is a block square, grassy, with shade trees here and there; or, design your own surface and landscaping. The recreation director has $1500.00 to spend for whatever sort of playground equipment he thinks would most benefit the children. Borrow several playground equipment catalogs from your school gym teacher or principal. Suggest that small groups of children each take a catalog and decide upon equipment purchases. Ask them to make a price list and total their expenditures. Are they within the $1500.00 budget? Ask them to make a sketch showing what the equipment would look like once installed in the park.



People change and these changes influence the choices and decisions one makes.

Decision Making

. . . explain one way the people in local government could influence recreation workers. PPO

Perhaps the children will see a play apparatus that exceeds the budget range. Encourage them to try to influence the city officials to change their decision and give more money for the equipment. If a small group of children could pretend to be the city officials, arguments could be tried out. What good arguments could be used? Perhaps the officials will change their minds. Ask the children about times when they may have had to adjust because someone else would not change his mind.

A family budget is considered on the REACT page.

DM/Level 3/2

"Budgets"

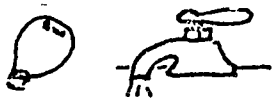
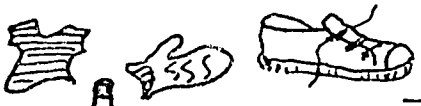
BUDGETS

A recreation office gets money from the city. The plan for spending money is the budget. Money for play equipment is part of the recreation budget.

A family gets money from the jobs of the mother and father. Money for food is a planned part of the family budget.

If a family earns $100.00 each week their budget could look like this. Add all the payments to find out how much the family spent.

A Weekly Budget

 Food	$25.00
 Rent	$25.00
 Car and Gas	$10.00
 Savings	$ 3.00
 Utilities--Gas, Water, Light	$ 9.00
 Payment on Washing Machine	$ 3.00
 Clothes	$ 8.00
 Doctor Bills and Medicine	$ 5.00
 Taxes	$ 5.00

Total Money Spent = _____

How much money is left over? $100 - [ ] = [ ]

What would be a good way to use the money that is left over? _____

_____

How could more money change the family's budget? _____

_____

_____

How could less money change the family's budget? _____

_____

_____

Do you think a budget or plan for spending is a good idea? _____. Why? _____

_____

_____

LET'S GO FLY A KITE

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *describe three ways people change and how these changes may affect the decisions of recreation workers.*

. . . *revise a set of instructions to meet the needs of a younger child.*

Educational Awareness Dimension

. . . *name an occupational skill which the recreation worker may have learned outside of school.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Dependence on others

Language Arts
- Listening and Speaking
  - Noting and remembering details
  - Giving and taking directions
- Reading
  - Sequence

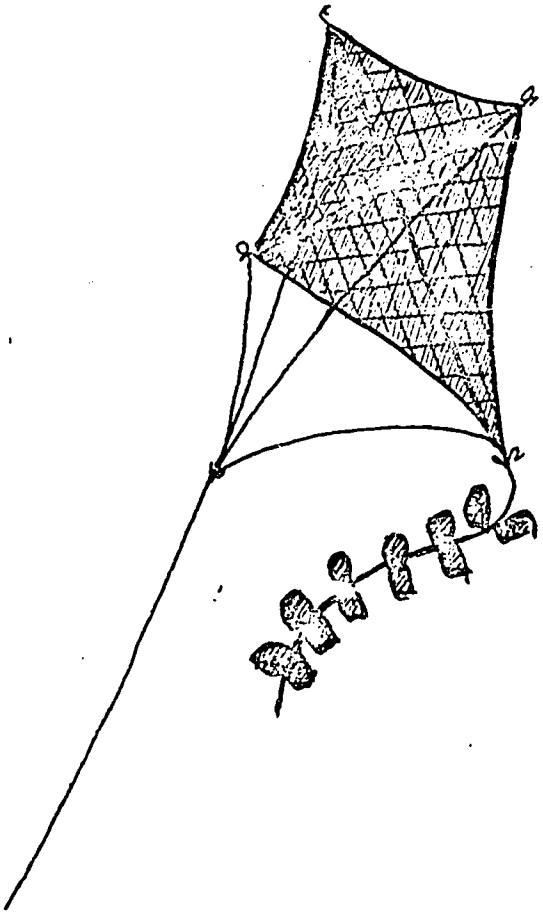
Preplanning Suggestions

Look in the activity for suggested materials for making a kite (knife, scissors, ruler, string, etc.)
Look for assembly directions for equipment that is ordered to be assembled at home (shelves, toys, etc.)

LET'S GO FLY A KITE

Career-oriented learning may take place in school or out of school.

Educational Awareness



Many recreation workers give instructions. These may be in crafts, games, or other skills. Because growing up and learning are important ways people change, recreation workers must adapt their instructions to the age group with which they are working. Guide the children in considering the instructions a recreation worker might give to 8-year-olds for making a Sky Sailor Kite.

> . . . *name an occupational skill which the recreation worker may have learned outside of school.* PPO

Give the children the following headings. They may be able to contribute most of the other suggestions.

For making a Sky Sailor Kite:

Tools: Sharp knife
Scissors
Ruler or yardstick
Small saw
Pencil

Materials: Two 1/2" softwood strips, one 36" in length, one 30"
Ball of strong light string
1 square yard of strong light paper
Glue
Rags for the tail

Construction: Make a pencil mark at the center of the 30" cross stick. Lay it at right angles across the 36" upright stick about 9" down from the top. Glue and lash the sticks together. Make saw cuts crosswise in ends of all sticks. Run string around from tip to tip to make a frame and tie the string.

Lay this frame on top of the paper covering. Cut the covering to fit the frame, leaving margins of at least two inches all around. Fold the margins of the covering over the frame strings and glue down. Make the bridle and the tail. Fly your kite.

Could 8-year-olds do these things for themselves with tools, materials, and a good recreation worker teacher?

People change and these changes influence the choices and decisions one makes.

Decision Making

. . . *describe three ways people change and how these changes may affect the decisions of recreation workers.* PPO

. . . *revise a set of instructions to meet the needs of a younger child.* PPO

Discuss with the children how these directions would need to be simplified for 6-year-olds. Stress that good instructions call for speaking clearly and simply and demonstrating something step-by-step. What would the recreation worker need to do for the younger children? What tools would they be able to use? How much would they be able to do for themselves?

Encourage the children to try out the kite-making activity with younger children. The REACT page offers a set of illustrated directions which the pupils could use to help younger children to make a kite.

DM/Level 3/3

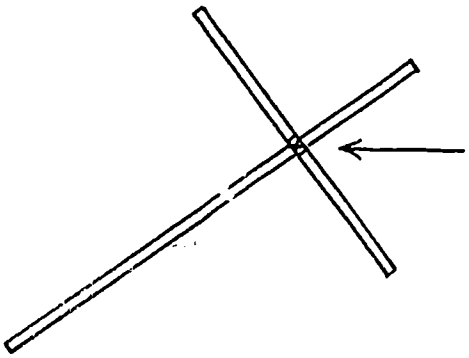
"Making a Sky Sailor"

MAKING A SKY SAILOR

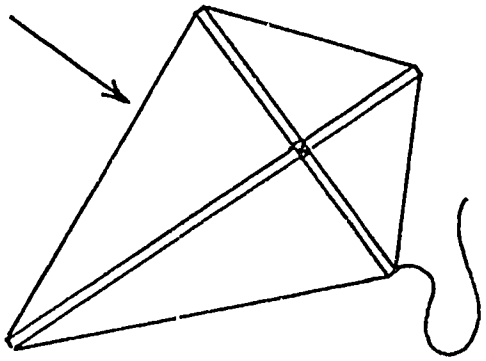
You can make a card set with directions for making a Sky Sailor Kite. Write one of these directions on each card. Cut the cards out. Use your set to help someone make a kite.

Directions: Tie the cross sticks together.
Make a frame with string.
Cut out paper to fit the frame.
Glue the pattern to the frame.
Tie on bridle strings.
Make a tail.

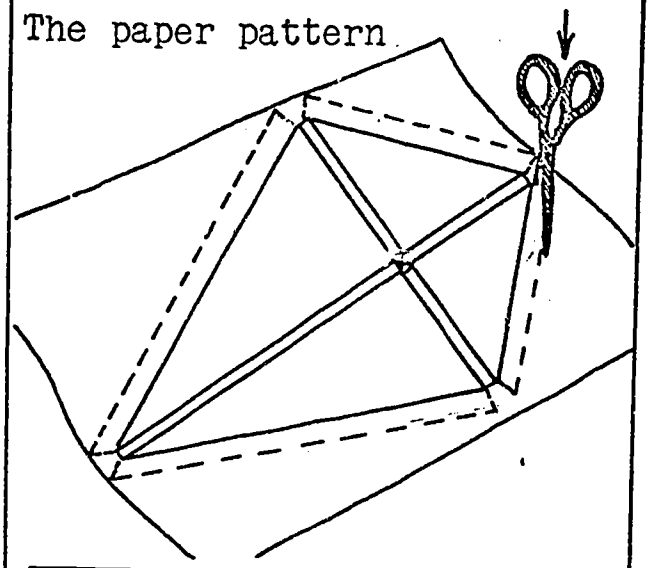
The sticks



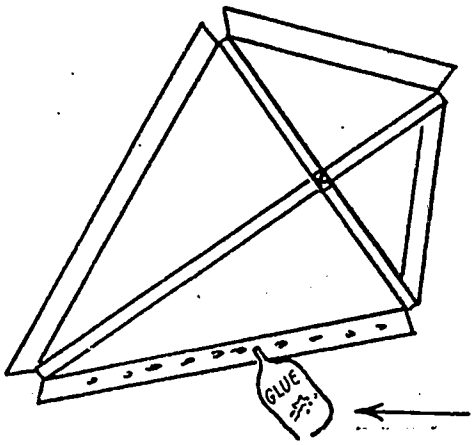
The framing string



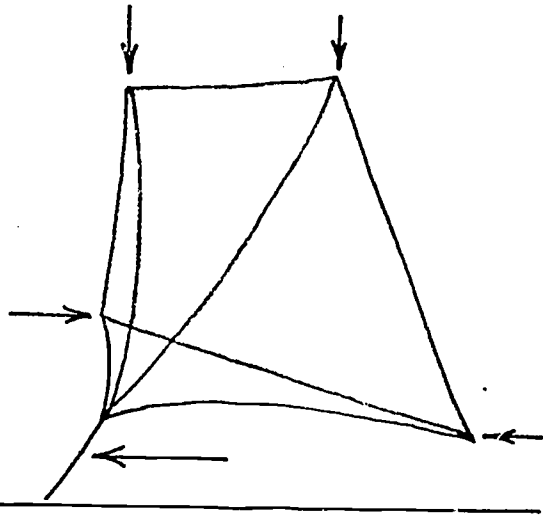
The paper pattern



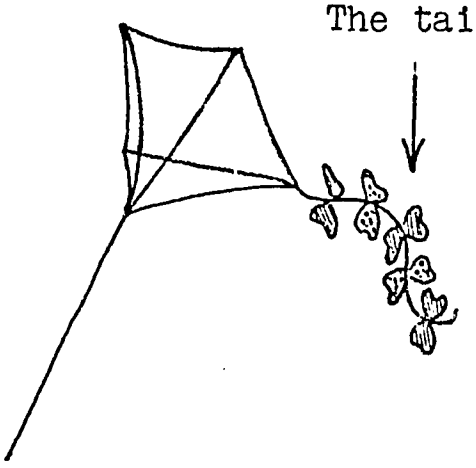
Gluing



The bridle



The tail



SAFE CYCLING

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *describe three ways people change and how these changes may affect the decisions of recreation workers.*

. . . *predict one change recreation could effect in the persons who participate.*

Educational Awareness Dimension

. . . *name an occupational skill which the recreation worker may have learned outside of school.*

. . . *tell how success in recreation activities depends on a person's effort and ability.*

Subject Matter Concepts

Social Studies
- Political Science
  - Laws regulate behavior.
- Geography
  - Special purpose maps

Science
- Physics
  - Machines move things.

Preplanning Suggestions

Codes for bicycles to be used in the community
Plan for an interview with a policeman to discuss bicycle safety.

People change and these changes influence the choices and decisions one makes.

Decision Making

. . . describe three ways people change and how these changes may affect the decisions of recreation workers. PPO

As children grow they change the way they travel. Many will remember a sequence like crawling, walking, running, riding a tricycle, and then a bicycle. Besides being a mode of transportation, bike riding is good exercise and a favorite recreation activity. Good riders know how to keep themselves and their bikes in top condition for riding safely and within the law.

People change and these changes influence the choices and decisions one makes.

Decision Making

. . . predict one change recreation could effect in the persons who participate. PPO

Discuss with the class some ways they can improve their bike riding. Ideas might be to: (1) Learn how to adjust and care for the parts of the bike. (2) Learn signals, signs, and pavement markings. (3) Learn safety rules and traffic laws. (4) Practice riding on a safety obstacle course. Obtain a list or booklet of your state's rules of the road for cyclists.

Career-oriented learning may take place in school or out of school.

Educational Awareness

. . . name an occupational skill which the recreation worker may have learned outside of school. PPO

For a few hours turn your classroom or playground into a recreation center in which the recreation workers are holding a Bicycle Safety Clinic. Pupil volunteers who want to participate as recreation workers can prepare materials and man stations in the four areas listed above. Invite younger cyclists to come to the Clinic.

Learning achievement depends upon effort and ability.

Educational Awareness

. . . tell how success in recreation activities depends on a person's effort and ability. PPO

Make up a questionnaire for the people who attend the Bike Safety Clinic. Find out whether they changed because of what they learned there. What kinds of activities would a recreation worker be able to plan for persons who had attended a bicycle safety clinic and had become more expert riders?

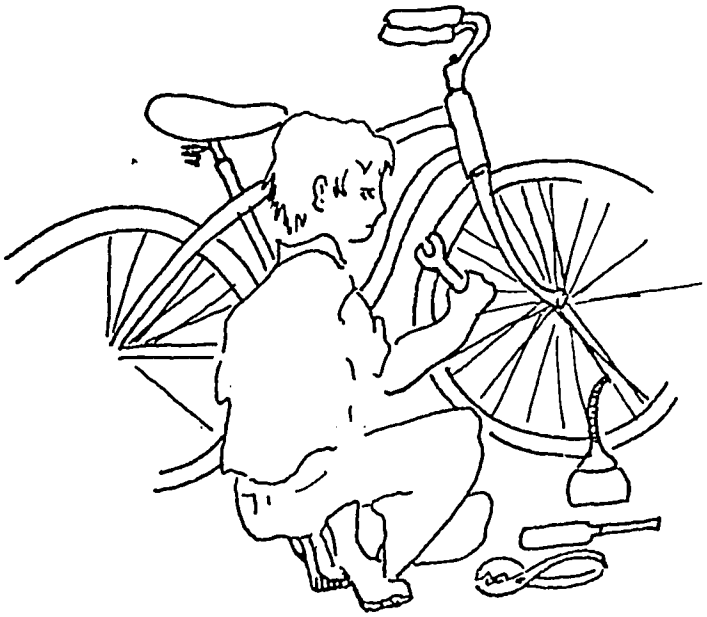
One REACT page is a lesson in identifying bicycle parts. Help children read the words. Stress that perfect spelling is not necessary to complete the activity. The other is a planning aid for a safety obstacle course.

DM/Level 3/4

"Ride a Safe Bike"

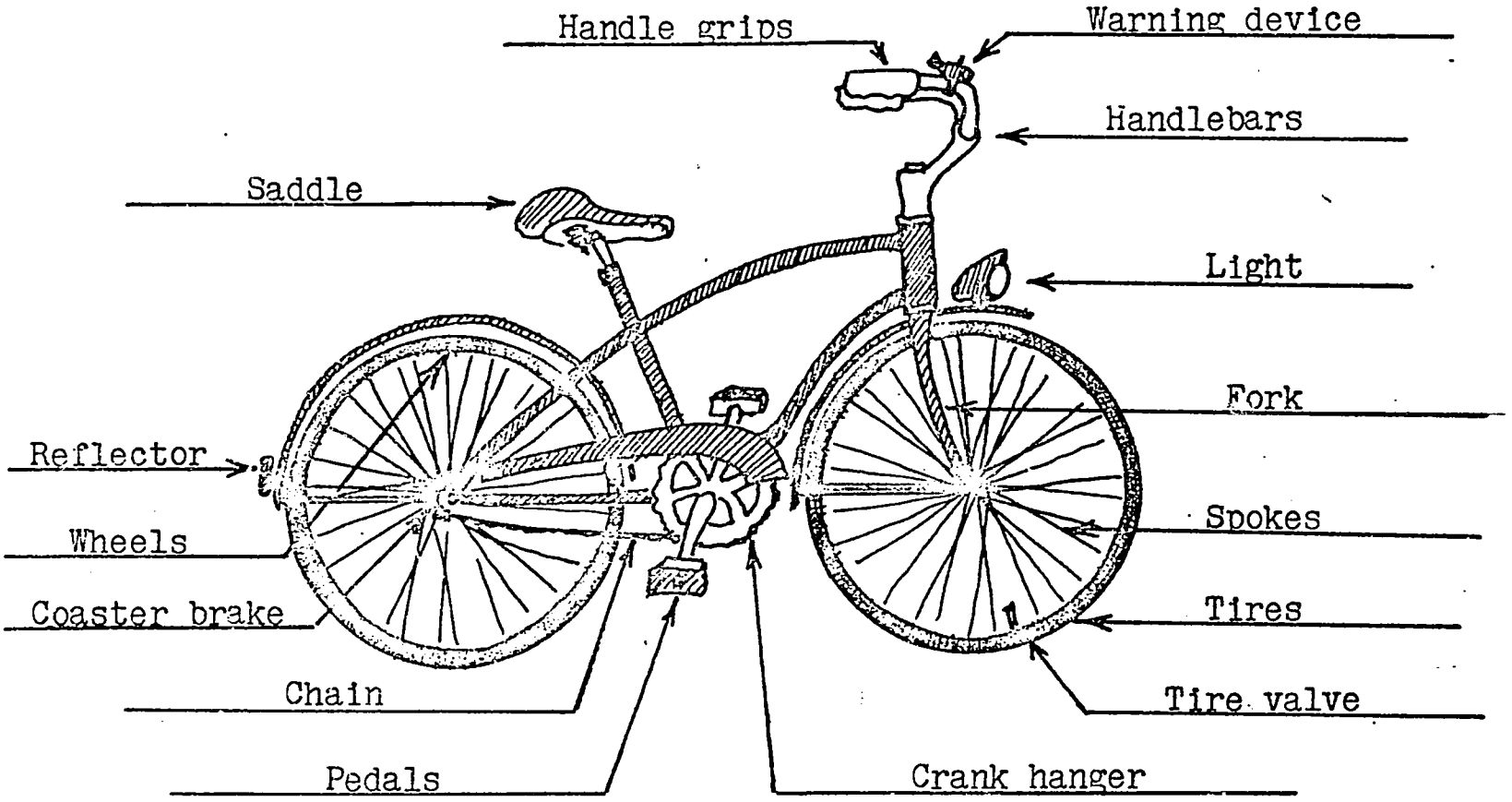
DM/Level 3/5

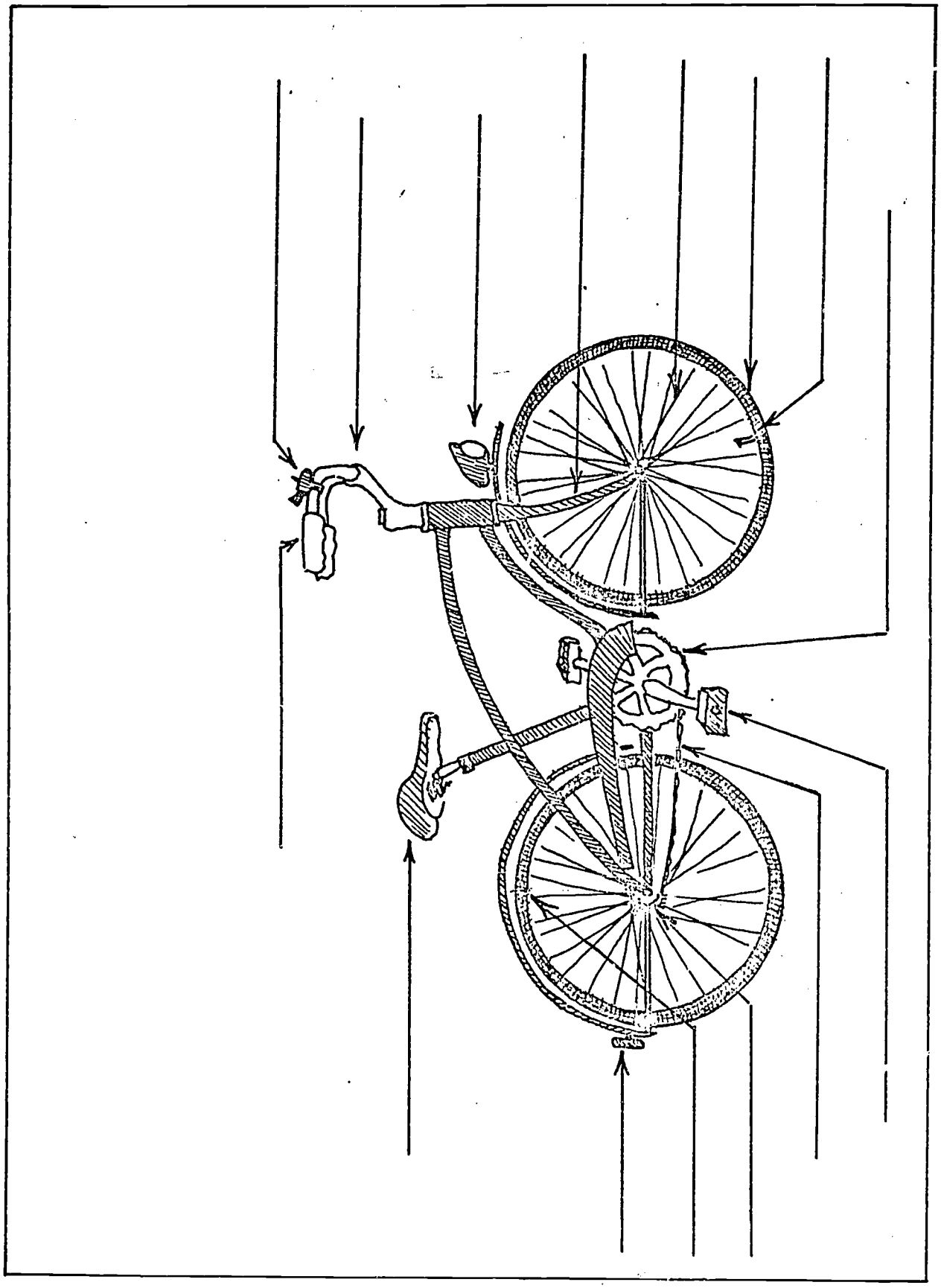
"A Bicycle Safety Course"



RIDE A SAFE BIKE

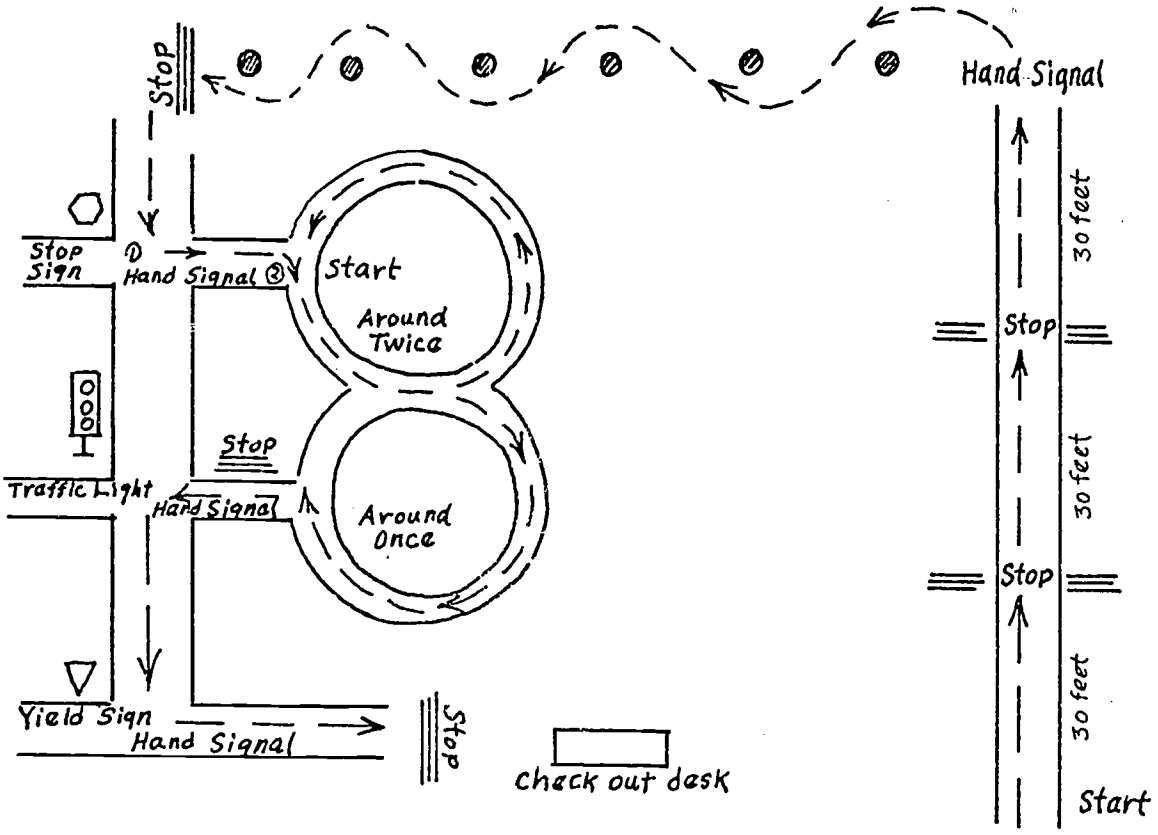
A good bike rider takes care of his bike. To do this he must know its different parts. Learn the names of the parts given here. Then turn the page over. Fill in the blanks without looking back for help.





A BICYCLE SAFETY COURSE

Here is a map of a bicycle safety course. It tests a bike rider in hand signals, traffic rules, and riding skill. Arrows show the rider's path. You could plan, measure, and mark a safety course on your playground. Ask a policeman to inspect the riders.



How many stops must riders make? _____

How many hand signals must riders use? _____

How many traffic signs are on this course? _____

TELL ME A STORY

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *predict one change that recreation could effect in the persons who participate.*

. . . *describe one's personal feelings when another's mood has changed.*

Career Information Dimension

. . . *compare two different work settings in which recreation workers may be employed.*

Educational Awareness Dimension

. . . *identify three skills used by recreation workers.*

Subject Matter Concepts

Language Arts
- Listening and Speaking
  - Acting out stories
  - Stress and feeling in speech

Social Studies
- Political Science
  - Public services

Preplanning Suggestions

Make arrangements for a storyteller to visit the class to tell a story.

Discuss different versions of the same story (the variety of endings to "Little Red Riding Hood"). Accumulate books with folktales that have variety in the same story.

TELL ME A STORY

Storytelling is a very ancient art. Long ago, before television and radio, even before books, people loved to gather around the fire to have a storyteller take them on imaginary adventures. The oldest stories were first told and only later written down. That is why we have many different versions of the oldest stories. Storytellers changed the stories to please different audiences.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *identify three skills used by recreation workers.* PPO

People still love to listen to a story well told. Recreation directors often hire someone skilled in storytelling to visit the city parks and playgrounds and even hospitals to entertain with stories. Invite children to assume the role of storyteller. Ask them to pretend they have been assigned to visit a playground for young children during a morning rest time and a children's hospital for an afternoon entertainment time.

Occupations have their own work settings.

Career Information

. . . *compare two different work settings in which recreation workers may be employed.* PPO

The storytellers need to pick out a story appropriate for both places, the playground and the hospital. Will they need props? What can be used on the playground? In the hospital? Will they need disguises? Noise makers?

People change and these changes influence the choices and decisions one makes.

Decision Making

. . . *predict one change that recreation could effect in the persons who participate.* PPO

People change and these changes influence the choices and decisions one makes.

Decision Making

Should any parts of the story be changed or adapted because of the differences between sick people and well people? What changes would the storytellers like to cause in their listeners?

. . . *describe one's personal feelings when another's mood has changed.* PPO

Practice storytelling in front of classmates. Can the storytellers keep the audience's attention? Can they change the audience's moods and reactions by keeping the story lively? Will they want to make any changes in how they tell the story?

Perhaps another class would like these storytellers to visit.

The REACT pages contain an idea for a puzzle to illustrate that our feelings cause changes in our faces.

DM/Level 3/6

"Feelings Change Faces"

FEELINGS CHANGE FACES

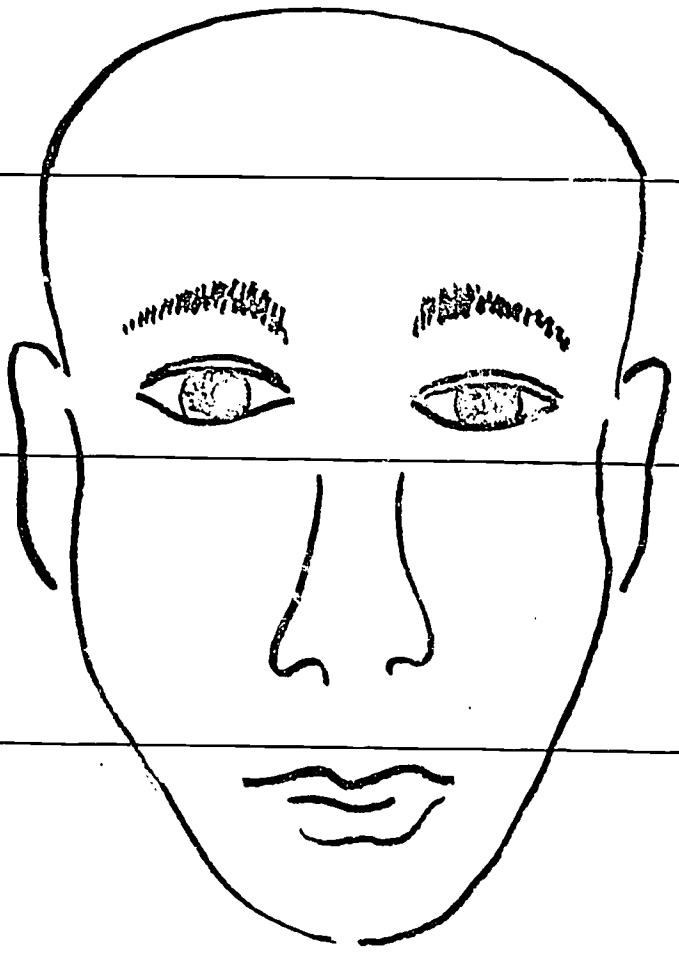
Storytellers change their faces to show us how the people in the story feel. Cut 1½" paper strips. Draw hair and hat on some of the strips. Use others for eyes, nose, and mouth. Have fun changing them around to make new faces. Do your faces show different feelings?

HAIR AND HAT

EYES

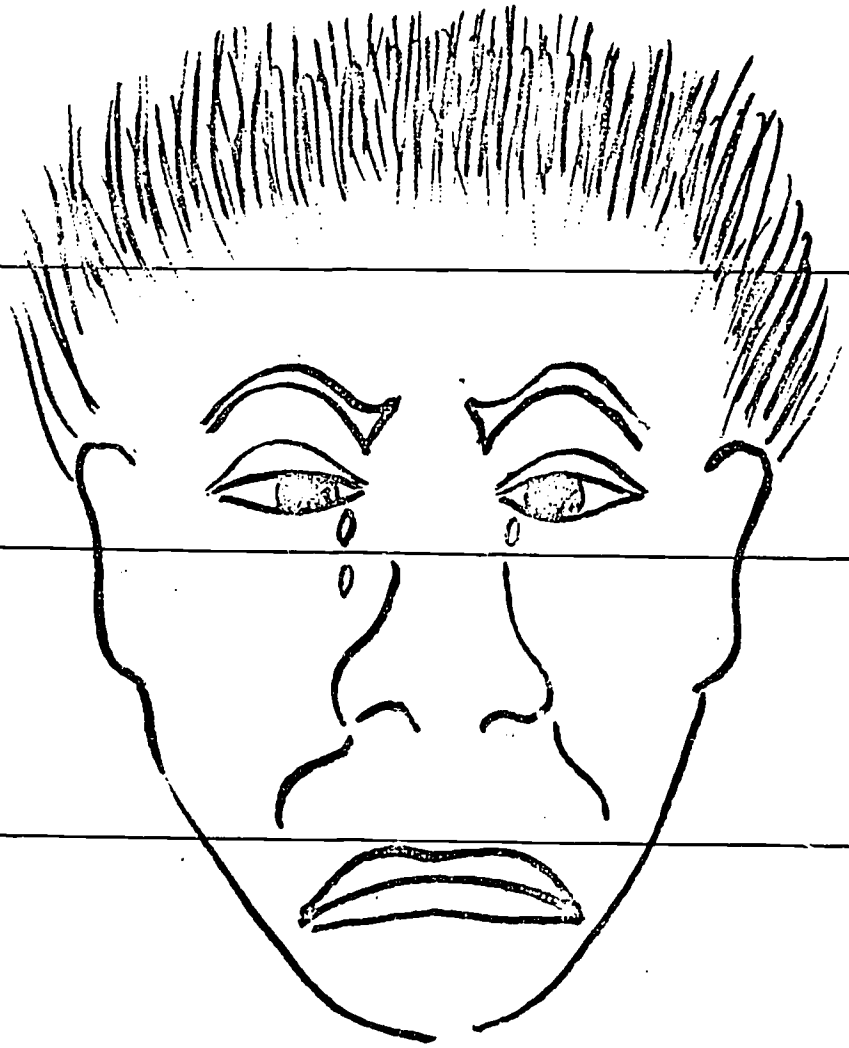
NOSE

MOUTH



FEELINGS CHANGE FACES

Storytellers change their faces to show us how the people in the story feel. Cut 1½" paper strips. Draw hair and hat on some of the strips. Use others for eyes, nose, and mouth. Have fun changing them around to make new faces. Do your faces show different feelings?

HAIR AND HAT	
EYES	
NOSE	
MOUTH	

RELATED MATERIALS

Child's World of Choices, The (Teacher Guide and Student Activity Book) Joint Council on Economic Education, Washington, D. C.

Community Helpers Series (Sound Filmstrip) McGraw-Hill Book Company, 1221 Avenue of the Americas, New York, New York 10020, 1970.

Everything Changes! (Book) Morris Philipson. Pantheon Books, Inc., Division of Random House, 201 East 50th Street, New York, New York 10022, 1972.

Fun and Recreation in Big City (Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Ideas, Images, and I (Book) Franco, et.al. American Book Company, 300 Pike Street, Cincinnati, Ohio 45202, 1970.

Inner City Recreation (Sound Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Manners on the Playground (Sound Filmstrip) Society for Visual Education, Inc., 1345 Diversey Parkway, Chicago, Illinois 60614, 1972.

Pat the Playground Leader (Book) Elizabeth Garber. Albert Whitman and Company, Chicago, Illinois, 60606, 1961.

Recreation, Park, and Playground Workers (Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Your Face is a Picture (Book) Eth and David Clifford. E. C. Seale and Company, Inc., Indianapolis, Indiana.

RECREATION WORKER

Leisure used to be considered the companion of idleness, silently stealing the time needed to produce the necessities of life. In recent years, however, new machines and technology have raised the standard of living of most people and have provided them with leisure hours unheard of a generation ago. How people spend their nonworking hours is now a major concern. Recreation workers help people to enjoy and use their leisure time constructively by organizing individual and group activities and by administering physical, social, and cultural programs for all age groups at camps, playgrounds, community centers, and hospitals. They also operate recreational facilities and study the recreation needs of individuals and communities.

Recreation workers employed by local government and voluntary agencies direct activities at neighborhood playgrounds and indoor recreation centers. They provide instruction in the arts and crafts and in sports such as tennis and basketball. They may supervise recreational activities at correctional institutions and work closely with social workers in organizing programs of recreation for the young and the aged at community centers and social welfare agencies.

Many personnel work in industrial, hospital, military, or school recreation. Recreation workers in industry plan the recreation programs of company employees and organize bowling leagues, softball teams, and similar activities. Sometimes, they plan fund drives and company social functions. Hospital recreation workers plan recreation programs for the ill and the handicapped in hospitals, convalescent homes, and other institutions. Working under medical direction, they organize and direct sports, dramatics, and arts and crafts for persons suffering from mental problems and physical disabilities. School recreation workers organize the leisure-time activities of school-age children during schooldays, weekends, and vacation periods.

Some part-time recreation workers and volunteers assist full-time workers throughout the year but mostly during the summer months. Part-time workers are largely college students and teachers. They work primarily as recreation leaders and camp counselors, organizing and leading games and other activities at camps and playgrounds.

About 40,000 professional recreation workers were employed full time in 1968; most of them worked full time. The majority worked for local governments and voluntary agencies. Most of the remainder were employed by religious organizations or by the Federal Government in national parks, the Armed Forces, the Veterans Administration, and correctional institutions. Some recreational workers were employed by industry, and a few were teachers in colleges and universities.

Recreation workers are employed in all parts of the country; however, a large proportion are employed in California, Massachusetts, New Jersey, New York, Ohio, Pennsylvania, and Texas. About one-third of all recreation workers are women.

Most employers prefer persons who have a bachelor's degree and a major in recreation, social science, or physical education for work in the recreation field. However, fewer than one-half of the recreation workers currently employed have this educational background.

Training leading to a bachelor's degree with a major in recreation was available in over 130 schools in 1968. About 70 offered a master's degree and about 30 offered a doctorate in recreation.

Good health, emotional maturity, and a warm personality are essential qualities for recreation workers. To increase their leadership skills and their understanding of people, interested students should try to obtain related work experience in high school and college. They may do volunteer, part-time, and summer work in recreation departments, camps, youth-serving organizations, institutions, and community centers.

The majority of college graduates entering the recreation field begin as either recreation leaders or specialists, although each year a small number of college graduates enter trainee programs that lead directly to recreation administration. These programs, offered by a few large cities and organizations, generally last 1 year.

Recreation leaders work directly with groups and individuals, organizing or teaching diversified activities such as athletics, dancing, storytelling groups, and social recreation in indoor and outdoor centers. They also may supervise the work of nonprofessional workers and assist in the administration of recreation programs. Recreation specialists are responsible for the organization and development of one activity, such as swimming and archery, or of several closely related activities. Like recreation leaders, they sometimes oversee the work of nonprofessional workers.

After a few years' experience, recreation leaders and specialists may become recreation directors; those having graduate training, however, may start at this level. Directors are responsible for the operation of the facilities, staff supervision, and the development and execution of programs at a particular recreation center, as well as the preparation of budgets and the analysis of recreation programs.

Employment of recreation workers is expected to increase very rapidly through the 1970's. Several thousand recreation workers will be needed annually for growth and to replace personnel who leave the field because of retirements, deaths, or transfers to other occupations. In recent years, the number of college graduates having a major in recreation has fallen far short of the demand, and this pattern is expected to continue. Thus, many new recreation workers will continue to be hired from the fields of social science, physical education, and health education. Persons having less than full professional training also will find employment opportunities. As a result of the great demand for recreation workers, part-time and volunteer personnel will be needed, particularly in social welfare agencies and at the local government level.

Factors that will contribute to growth include increased leisure time and rising levels of per capita income. As income levels rise, more persons will participate in a variety of competitive and noncompetitive sports and larger numbers will travel to parks and resorts for camping, hiking, fishing,

and other recreational pursuits. In addition, improvements in the national highway system will make many State parks and national forests more accessible to vacationing families. Population growth also will create a demand for more recreation workers to expand existing recreation programs and to aid larger numbers of mentally and physically handicapped persons. Longer life and earlier retirements will increase the number of clubs and organizations for retired persons, and thus increase the need for recreation workers.

Other reasons for the anticipated longrun expansion in the number of recreation workers include a growing interest and participation in recreation activities by the general population; the continued trend toward urban living; the rise in industrial recreation activities as more companies promote recreation programs for their employees; increased attention to physical fitness by government, educators, industry and others; and the initiation of programs to insure the preservation of outdoor recreation areas. A number of recent Federal laws also will contribute to the rising demand for recreation workers. Among these are the Elementary and Secondary Education Act of 1965, which includes provisions for grants to local educational agencies for improving and expanding recreation opportunities for the educationally deprived; and the Older Americans Act of 1965, which provides grants to States for programs, including recreation, for older persons.

The average work week for recreation workers is 40 hours, although some work upwards of 50 hours. A person entering the recreation field should expect some nightwork and irregular hours, for many recreation personnel work while other persons are enjoying their leisure time. Most public and private recreation agencies provide from 2 to 4 weeks' vacation and other fringe benefits, such as sick leave and hospital insurance.

Adapted from: U. S. Department of Labor. Occupational Outlook Handbook, 1970-71 edition. (Washington, D.C.: Government Printing Office), 1971. pp. 252-254.

GROWING GREAT GREEN GOALS

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

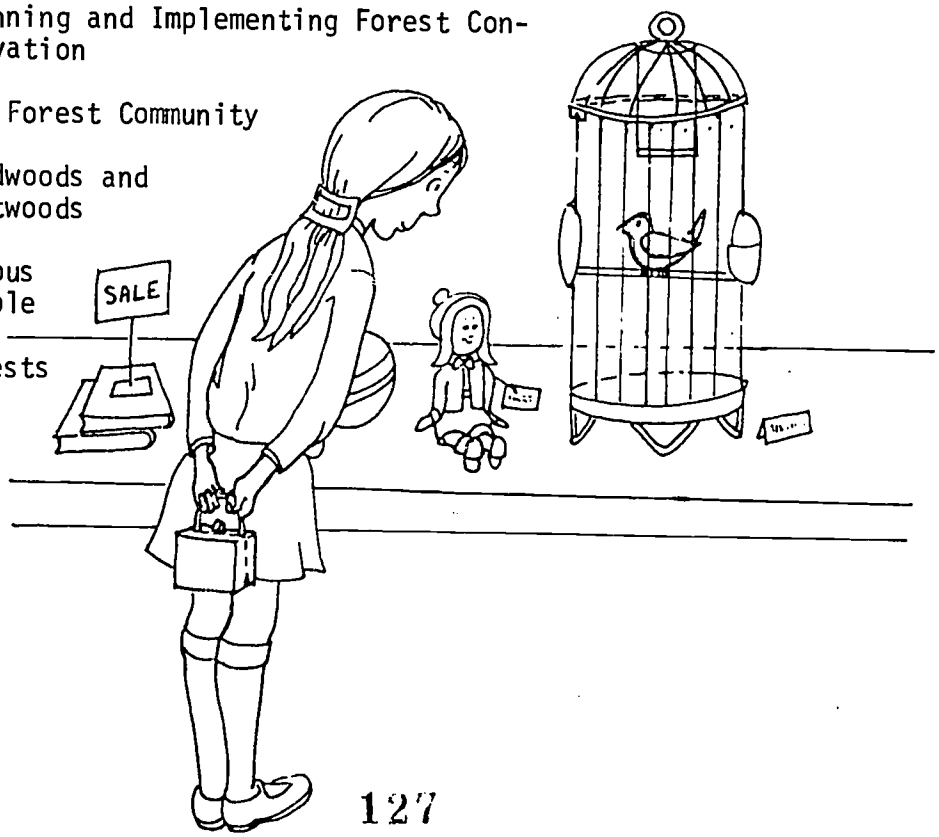
CAREER DEVELOPMENT FOCUS: Decision making plays a role in the setting of immediate and long-range goals.

OCCUPATIONAL FOCUS: Forester

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Planting a Tree
2. Identifying Trees
3. Planning and Implementing Forest Conservation
4. The Forest Community
5. Hardwoods and Softwoods
6. Famous People of Forests



Teacher Goals

Teacher goals of this strategy combine a Decision Making Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of the Forester. In this perspective the teacher's goals are to:

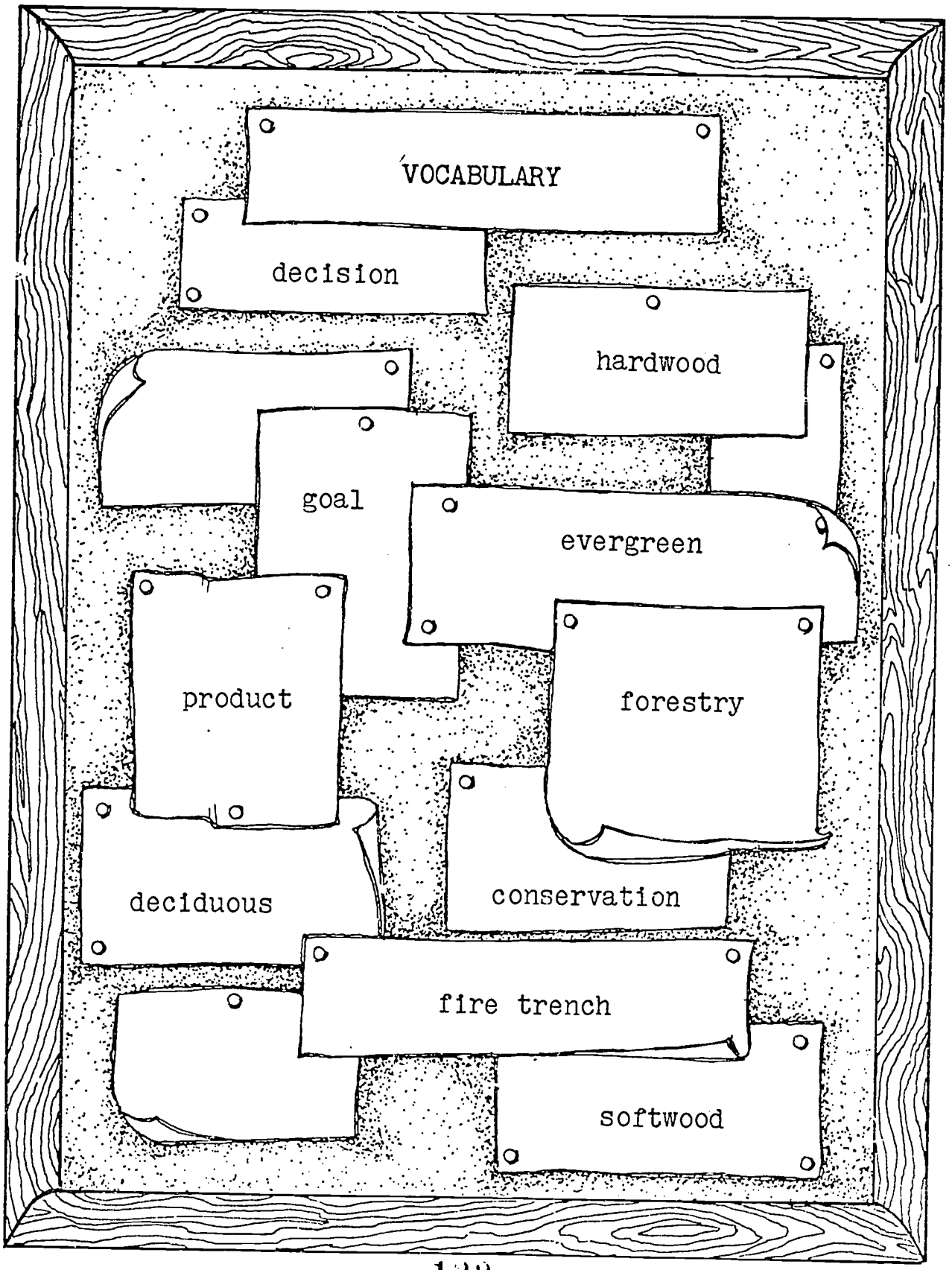
Structure experiences in which pupils can use their scientific knowledge to take part in the decisions and activities of a forester.

Increase pupil awareness of the importance of conservation decisions in reaching responsible goals for forest resources.

Devise ways for pupils to gain some of the knowledge and skills used in forestry.

Interest pupils in the career goals and community contributions of foresters.

Help pupils to relate forestry knowledge and skills to other occupations.


VOCABULARY
decision
hardwood
goal
evergreen
product
forestry
deciduous
conservation
fire trench
softwood

PLANTING A TREE

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *select a class goal for planting a tree.*

. . . *role play a forester making a decision about an immediate or long-range goal.*

Attitudes and Appreciations Dimension

. . . *tell why forestry has been important for mankind.*

. . . *cooperate with a group in planning and participating in a tree-planting.*

Career Information Dimension

. . . *tell whether you would like the forester's work setting.*

Educational Awareness Dimension

. . . *describe the scientific knowledge needed by a forester.*

Subject Matter Concepts

Science
- Biology
  - Man can control the environment of living things.
- Scientific Method
  - Scientific knowledge accumulates.

Social Studies
- Geography
  - Interaction between people and environment influences the way needs are met.
- Economics
  - Different uses of environment

Language Arts
- Reading
  - Sequence

Preplanning Suggestions

Determine where to find a tree and where it could be planted and make arrangements for the activity. (Farm Bureaus or similar agencies can help.)
Library books about forestry and foresters
Materials for a poster or chart (See activity section.)

The class or special groups of class members may discuss and confer in order to decide upon a goal which could be met by planting a tree. Has anyone planted a tree in the past? Why do others plant trees?

. . . *tell why forestry has been important for mankind.* PPO

. . . *select a class goal for planting a tree.* PPO

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

Lead the children to see the wide range of possible goals for a new tree. They may want to plant trees for beautification, for shade, for fruit, for scientific observation, for reforestation, or for a memorial. Encourage cooperation during the discussion so that a common goal can be set within a reasonable time. Interest the children in briefly reflecting upon other times when they have cooperated to reach a common goal--perhaps with a friend about what to do for the weekend, or with a team to figure a winning strategy.

Determined by their goal the pupils will need to decide upon the following: (1) type of tree, (2) whether to plant a seed, a seedling, or an older tree, (3) where to obtain the tree, (4) where to plant the tree.

. . . *describe the scientific knowledge needed by a forester.* PPO

Knowledge and skills in subject areas are helpful in occupational competence.

Educational Awareness

In addition to making use of their knowledge of different kinds of trees, children will need to be alerted to soil and climate requirements and optimal planting time. According to their goal, they will need to know how fast their tree can be expected to grow. If a forest with a

forester guide is not available, perhaps sizes, costs, and advantages of various types of trees could be compared during a trip to a nursery. The four above decisions are related to attaining the group goal. Are any class members making special decisions to reach personal goals?

Our Goal	Decisions to Make	Choices
	1. Tree type 2. How to plant 3. Where to get the tree 4. Where to plant the tree	

Pupils may volunteer to obtain permission to plant the tree in the chosen spot from the proper authority. Other volunteers will be needed to plan the on-going care of the tree.

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

. . . *role play a forester making a decision about an immediate or long-range goal.* PPO

Invite pupils to predict consequences if the on-going care of the tree is not planned. Have any class members suffered consequences because of inadequate planning?

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *cooperate with a group in planning and participating in a tree-planting.* PPO

Ask for volunteers for the following responsibilities: (1) Digging the hole. Evergreens must be planted with the roots burlap-wrapped in the original dirt. The hole must be big enough to put the entire root ball below the surface.

The individual worker determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

An older broadleaf tree must have a hole large enough to spread all of its roots out flat on the bottom of the hole. Fertile top soil should be placed at the bottom of the hole around the roots. (2) Transporting the tree to the spot. (3) Arranging protection. The tree may need extra support from a stake. Good drainage and insect control must also be considered. Does the tree have enough sunlight?

. . . tell whether you would like the forester's work setting. PPO

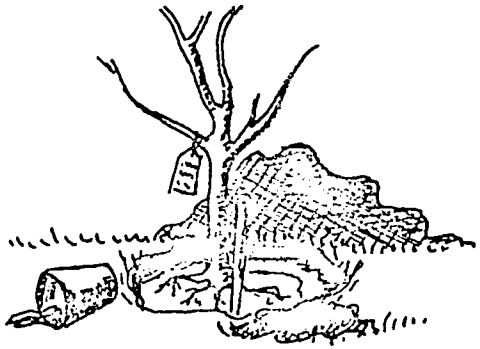
Help class members assess the tree-planting experience. Would they find this forestry task pleasant or unpleasant? Why?

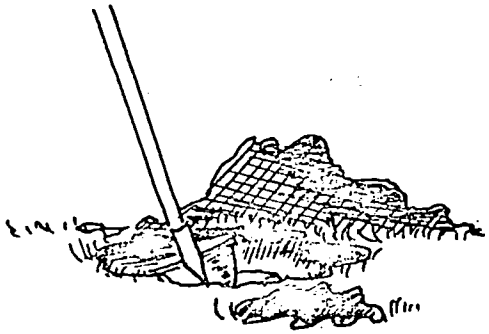
Use the REACT page to examine with the children the necessary steps to acquire the skill of good tree planting. What might the consequences be if careful steps are disregarded?

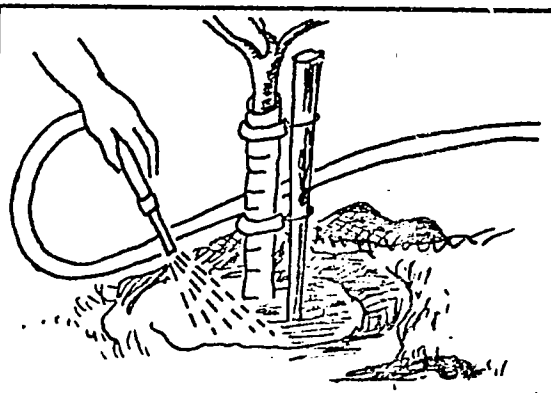
DM/Level 3/7

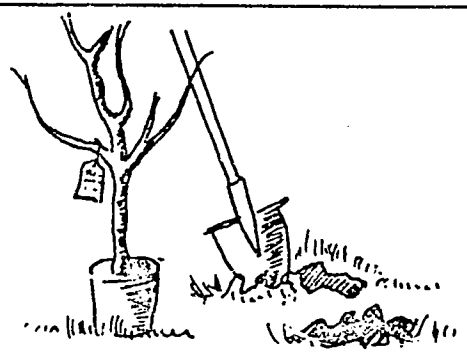
"How to Plant a Tree"

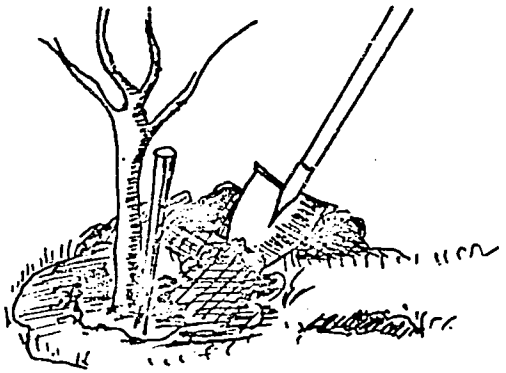
HOW TO PLANT A TREE

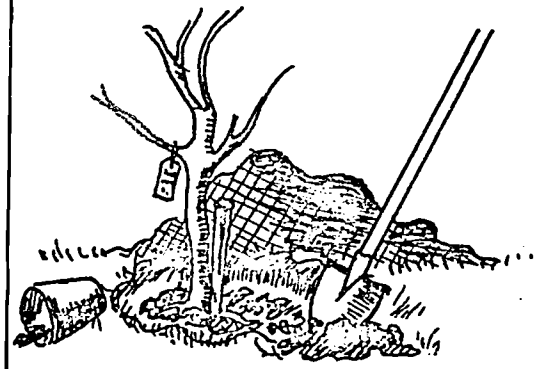












Directions: Cut the picture cards apart. Put the picture cards in the right order for planting a tree.

Label each picture with one of the directions which appear on the following page.

Directions for planting a tree:

Fill with soil and leave a dip around tree.

Save topsoil in á special pile.

Make hole big, to fit tree's roots.

Put topsoil on bottom of hole.

Wrap trunk, water.

Put in tree and support stick.

IDENTIFYING TREES

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *plan a strategy for learning something new about forestry.*

Career Information Dimension

. . . *explain how the forester's skills would be useful in other occupations.*

Educational Awareness Dimension

. . . *describe the scientific knowledge needed by a forester.*

. . . *identify at least ten trees which you did not know before.*

Subject Matter Concepts

Science
- Scientific Method
  - Describe, find similarities, differences

Language Arts
- Listening and Speaking
  - Giving and taking directions

Preplanning Suggestions

Charts, encyclopedias, books, audio-visual aids, etc. about trees
Bulletin board space, cards for mounting leaves, seed pods, etc.
Prepare for alternative areas for nature hikes to observe trees.
Have a knowledgeable guide.
Three sheets of 10" by 7½" tagboard for each child to complete the REACT pages

IDENTIFYING TREES

Knowledge and skills in subject areas are helpful in occupational competence.

Educational Awareness

Learning achievement depends upon effort and ability.

Educational Awareness

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

There are over 1000 different kinds of trees in the United States. See how many the children can name.

. . . *describe the scientific knowledge needed by a forester.* PPO

. . . *identify at least ten trees which you did not know before.* PPO

Stimulate the class to set a goal: being able to name and identify at least ten or more trees which they do not know now.

. . . *plan a strategy for learning something new about forestry.* PPO

A strategy suggestion would be the following: Collect pictures of adult trees and pictures and/or real samples of leaves, seeds, bark, flowers, fruits, and products from different kinds of trees. These specimens can be mounted on sturdy cards with a hole punched in the top. The specimen cards could be hung on a bulletin board peg or nail. The name of the correct tree should appear on the back of the card. The cards can be slipped on pins, pegs, or nails under the name of the tree from which they came. The students may take down all the cards at random and rehang them under the correct tree names.

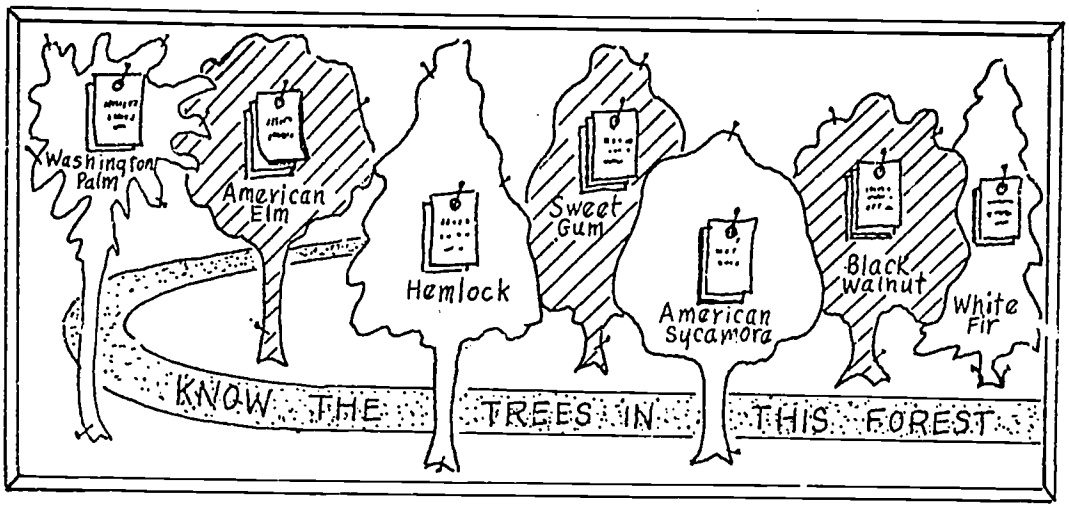
A nature hike would be appropriate during the project. Hopefully a forester or other expert could accompany the class.

Occupations require special personal characteristics.

Career Information

. . . *explain how the forester's skills would be useful in other occupations.* PPO

Provide information about other occupations that require knowledge of trees. Examples could be lumber dealers, landscapers, furniture makers. Can the children think of others?

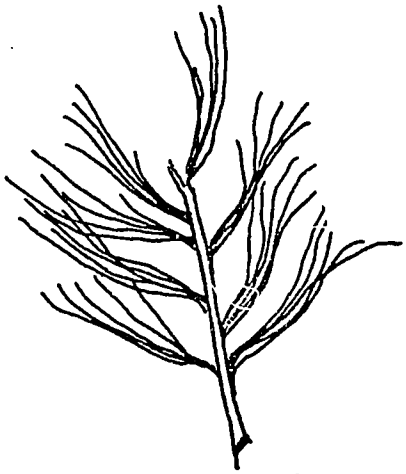


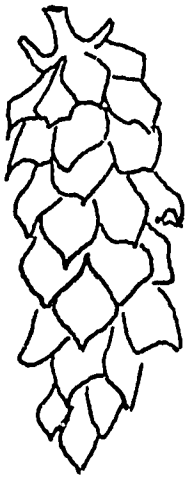
A card game called TREES appears on the REACT pages. Squares for the tree, its seed, and its leaf are in vertical columns from bottom to top. The children should carefully write the name of the tree at the bottom of the column in the space provided on the seed and the leaf cards above it. Cards may then be cut apart and mounted. File folders make good backing. The game plan is modeled after Authors, Whitman, Western Publishing Company. There are three identity cards for each tree type. Players get a "TREE" by acquiring all three identity cards. Shuffle. Deal four cards to each player, leaving the pack face down. A player plays by asking other players, one at a time, for a card needed to complete a TREE. When a player asked answers, "No, I don't have that card," the player whose turn it is draws a card from the pack.

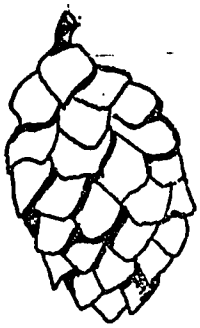
If he draws the desired card, he may draw again. When the three card set for a TREE is assembled, the player lays it down. The player to lay down the most TREES wins.

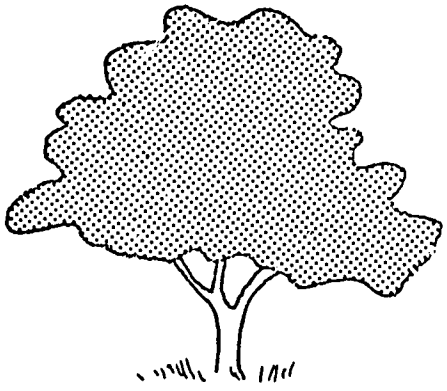
DM/Level 3/8

"TREES: A Card Game"

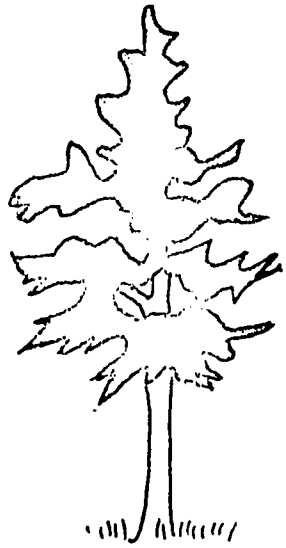






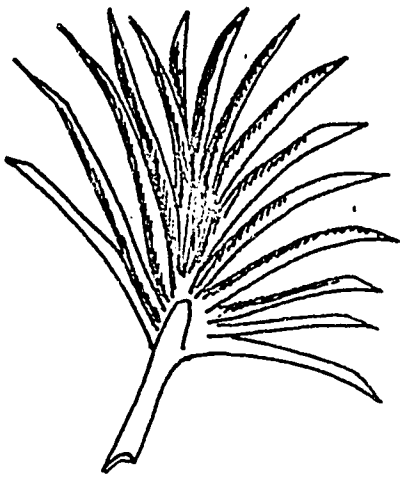


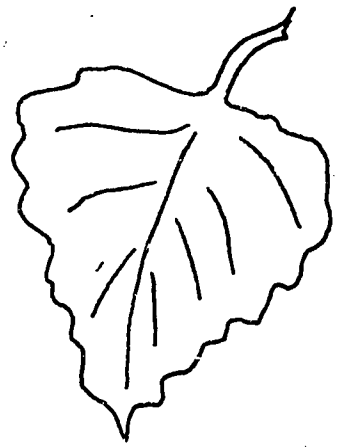
Dogwood

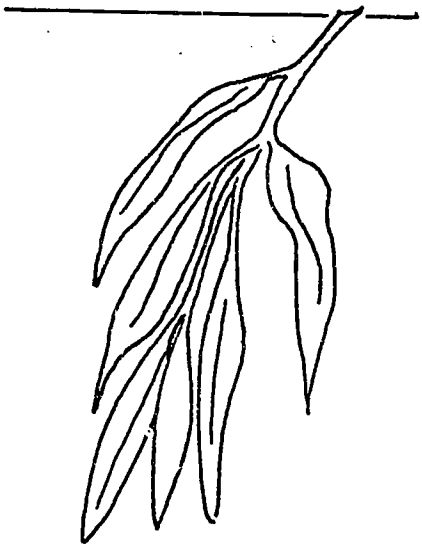


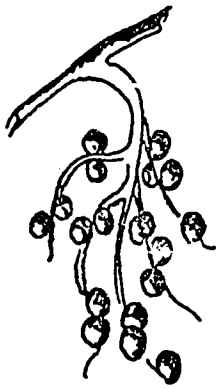
Eastern White Pine

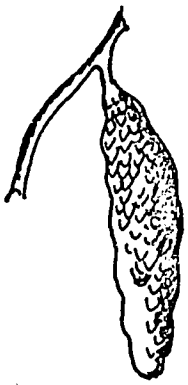
Blue Spruce



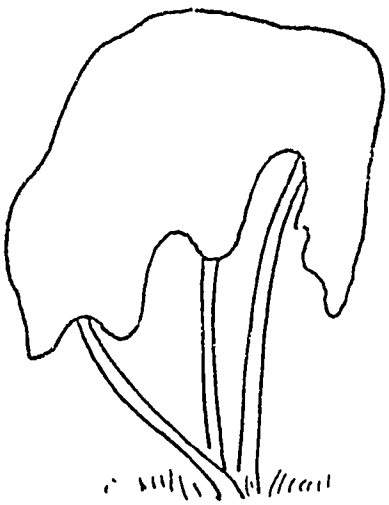




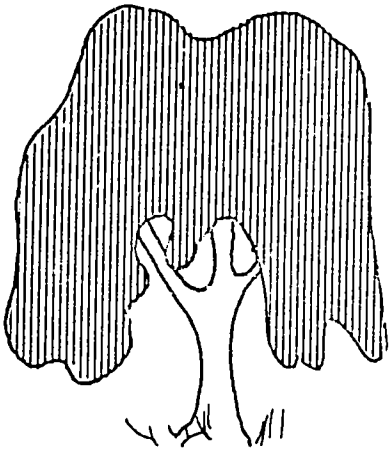




Washington Palm

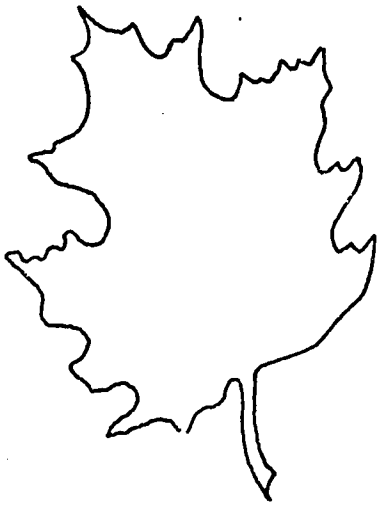


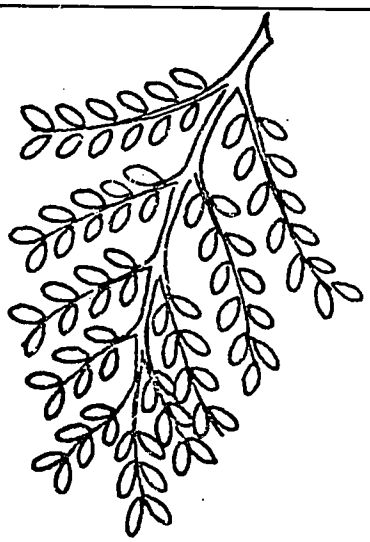
White Birch

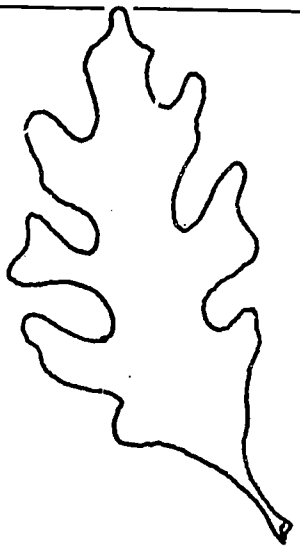


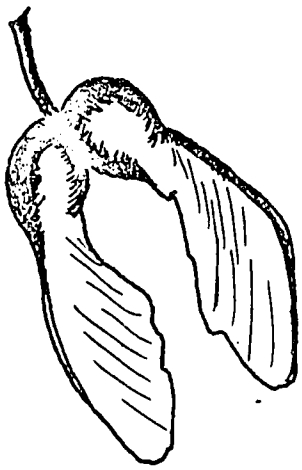
Weeping Willow

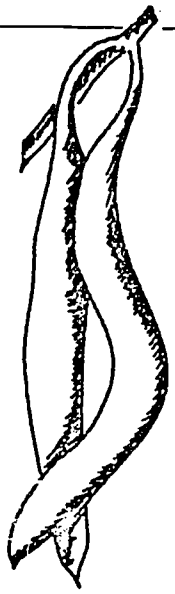
TREES: A CARD GAME

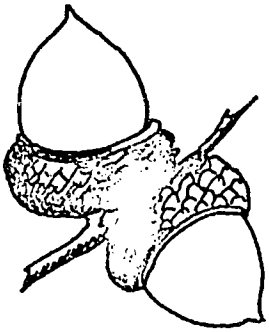


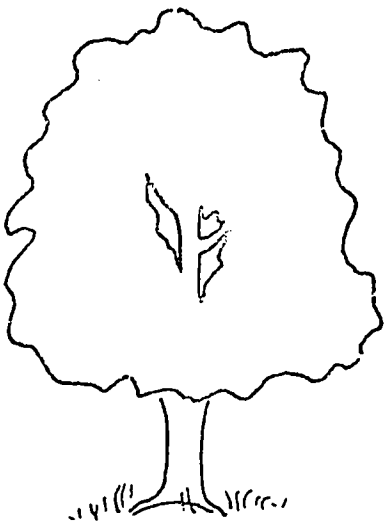




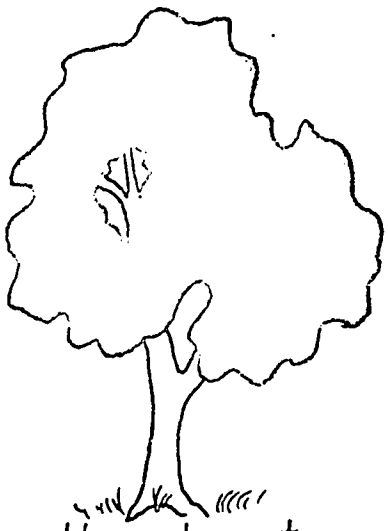




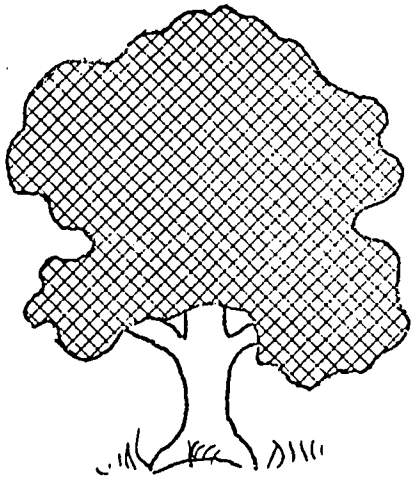




Sugar Maple



Honey Locust



White Oak

PLANNING AND IMPLEMENTING FOREST CONSERVATION

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *explain how products, water and wildlife conservation, and recreation are man's goals for forests.*

. . . *explain how conservation decisions help men to reach their goals for forests.*

. . . *describe a situation in which goals for a forest would be difficult to set.*

. . . *role play a forester making a decision about an immediate or long-range goal.*

Attitudes and Appreciations Dimension

. . . *plan and cooperate in the implementation of five to ten steps for immediate and long-range conservation of a nearby tree or forest.*

. . . *explain why conservation is a long-range responsibility.*

Career Information Dimension

. . . *describe the forester's work setting.*

. . . *name three forestry tools.*

Subject Matter Concepts

Science
- Biology
  - Living things depend upon their environment.
- Earth and Sky
  - The surface of the earth changes constantly.

Social Studies
- Geography
  - Interaction between people and environment
- Economics
  - Different uses of environments

Preplanning Suggestions

Library books and audio-visuals about forest conservation; some commercial companies have advertising in magazines and on television
Display areas for collections of conservation materials
Plan to interview or use a local forester or park supervisor as a resource person.
Have local maps of nature trails and recreation areas.
Large waterproof pan, soil, sod, and water sprinkler for REACT page

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

Interest the children in such questions as, Why do we need trees? Does nature take care of trees? Do trees need the care of people? Why? What is conservation?

Forest conservation is the protection and wise use of the forest as a natural resource.

. . . *explain how products, water and wildlife conservation, and recreation are man's goals for forests.* PPO

. . . *explain how conservation decisions help men reach their goals for forests.* PPO

Research about forest conservation can be carried out by asking the children to volunteer for one of three groups having the following assignments:

Group 1: Describe how the need for forest products necessitates forest conservation.

Group 2: Describe the need for forest conservation because of the crucial part forests play in water, soil, and wildlife protection.

Group 3: Describe conservation of the forest in order to insure beautiful recreation areas.

Each group will discover several enemies of the forest and its trees. The children may be able to assemble pictures and samples of lack of conservation. Each group could set up a small display to show that lack of conservation means no products, no protection for water, soil, and animals, no recreation areas. Lead the children into three stages for their group activities. First, present

products, protection, and recreation as man's goals for forests. Second, invite the children to explore the sad results when men make no special plans for using the forest wisely. Third, help the children discover what conservation decisions could be made to reach the goals.

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

. . . describe a situation in which goals for a forest would be difficult to set. PPO

The children may discover that some goals are conflicting and therefore difficult to set. Recreation interests may conflict with logging interests, for example. Throughout this activity the teacher can present the forester as the one who makes and carries out decisions for conservation goals.

With the group research of conservation needs as a background, invite the children to become junior foresters and undertake a realistic conservation activity. Pick out a single tree, a group of trees, or a forest which is accessible and important to the class members. Find out who takes care of the tree(s) and cooperate with this authority.

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . plan and cooperate in the implementation of five to ten steps for immediate and long-range conservation of a nearby tree or forest. PPO

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

. . . role play a forester making a decision about an immediate or long-range goal. PPO

Examine together the needs of the tree(s) and make a conservation checklist. Select a reasonable number of conservation methods and implement them.

Occupations have their own work settings.

Career Information

Occupations require the use of specific materials and equipment.

Career Information

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *describe the forester's work setting.* PPO

Children may decide to thin, prune, irrigate, replant, clean up, dig a fire trence, or do a public awareness campaign.

. . . *name three forestry tools.* PPO

Decisions may require the supervised use of some of the forester's tools such as the ax, saw, and shovel. Children could paint signs to instill good fire prevention and forest conservation habits in campers or picnickers. Or they may want to make the public aware of their spot as a recreation area. Parents or younger friends could be taken on a nature hike. Trails could be mapped and named.

. . . *explain why conservation is a long-range responsibility.* PPO

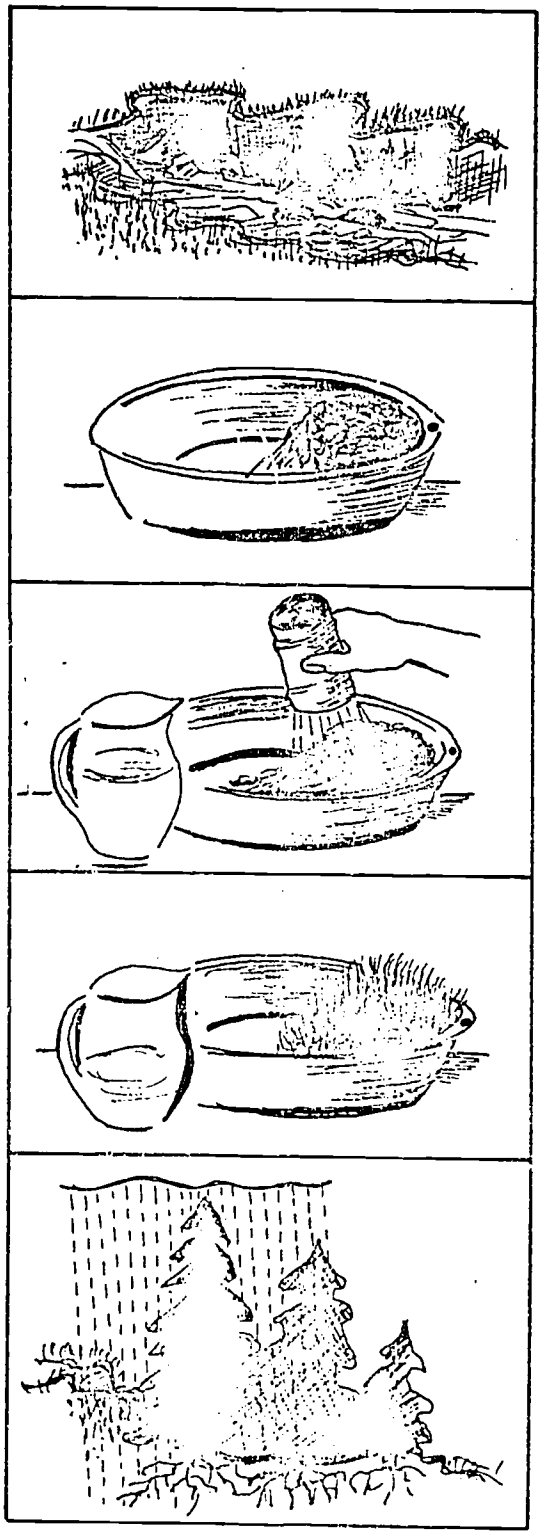
If necessary and possible, plan for the continuing care of the selected trees. Whenever the time is ripe relate the conservation activities to other goals of the class members. What decisions have they made about reaching them?

The REACT page is an opportunity to investigate the role of trees in conserving soil.

DM/Level 3/9

"Trees Conserve Soil"

TREES CONSERVE SOIL



Erosion takes place when nothing has been done to keep the soil in place. Erosion is wasteful. Why? Would you say that eroded soil is also ugly?

Try the following experiment. Make a hill of soil on the side of a dishpan.

Next find a way to make rain on the little hill. A simple way to make a sprinkler for rain is to pound nail holes in the bottom of a tin can. What happens to the hill in the rain?

Next make a new hill with a piece of sod. Think of the hill as a real one. Think of the blades of grass and their roots as trees. Again make rain on the hill. Does much soil wash away? Replant your sod.

Discuss what the trees are doing for the soil in this landscape. Why does rain always fall softly on the forest floor? Do you think roots of trees are especially strong? Why?

THE FOREST COMMUNITY

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *compare nature's forest community with man's city community from the point of view of planning.*

. . . *compare the results of an instance in which plans were made to reach a goal with results of an instance in which no plans were made.*

Attitudes and Appreciations Dimension

. . . *tell four ways the work of the forester assists other men.*

Subject Matter Concepts

Language Arts
- Writing Skills
  - Paragraphing
- Reading
  - Recognizing qualifying words

Social Studies
- Sociology-Anthropology
  - Community wants and needs

Preplanning Suggestions

Library books and other research materials about workers in the community and about workers in a forest area

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

. . . compare nature's forest community with man's city community from the point of view of planning. PPO

For a creative writing activity invite the children to compare nature's forest community with man's city community. One of the following topics for comparison could be chosen. Discuss the idea that the forest is organized naturally while the city is planned by people.

Forest Workers/City Workers

Forest Homes/City Homes

Forest Roofs/City Roofs

Forest Roads/City Roads

Forest Food/City Food

Forest Enemies/City Enemies

Forest Growth/City Growth

Forest Products/City Products

Forest topics should be discussed in terms of plants and animals and natural events. City topics should be discussed in terms of things people care for and build and do.

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

. . . tell four ways the work of the forester assists other men. PPO

After the children have had a chance to read and share one another's work, ask them to name some of the goals accomplished in the forest community. How do foresters assist nature in accomplishing its goals? What goals

Decision making plays a role in the setting of immediate and long-range goals.

Decision Making

are accomplished in the city community? Does the forester help the city community?

> . . . *compare results of an instance in which plans were made to reach a goal with results of an instance in which no plans were made.* PPO

Do communities in nature make decisions to reach their goals? Do communities of people? How?

Ask the children whether they customarily make decisions to reach their goals or hope the goals will come about "naturally."

The REACT page elicits personal consideration of the advantages and problems of making plans. Encourage children to remember both pleasant and unpleasant chance events and to make some value judgements about which matters need planning.

DM/Level 3/10

"Introducing: Natural Norris and Planning Pat"

INTRODUCING:

NATURAL NORRIS

Norris makes few plans--likes to let things happen naturally. You might expect him to be: (Check)

on time	____
happy	____
forgetful	____
hard working	____
neat	____
friendly	____
reaching goals	____
_____ (put your own idea)	____

PLANNING PAT

Pat thinks ahead, makes lists, works on schedule. You might expect him to be: (Check)

on time	____
happy	____
forgetful	____
hard working	____
neat	____
friendly	____
reaching goals	____
_____ (put your own idea)	____

What things do you like to let happen naturally? When do you like to have plans? Answer in a short paragraph on the back of this page. Discuss you answers with a classmate. How were your ideas alike? Different?

HARDWOODS AND SOFTWOODS

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *tell a possible use for a hardwood and a softwood.*

Career Information Dimension

. . . *explain how the forester's skills would be useful in other occupations.*

Educational Awareness Dimension

. . . *describe the scientific knowledge needed by a forester.*

Subject Matter Concepts

Science
- Scientific Method
  - Describe, find similarities, differences

Social Studies
- Geography
  - Special purpose maps

Preplanning Suggestions

Maps and globes with elevation markings
Samples of lumber of various degrees of hardness
Science books about trees and growing conditions
Hammer and steel ball (or nail, etc.)

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Hardwood, softwood, and tropical rain forests cover 1/3 of the earth's surface except above the snow line. Foresters must know their different soil, water, and climate needs to assist their growth.

. . . *describe the scientific knowledge needed by a forester.* PPO

Interest children in discovering as many differences as they can between hardwood and softwood trees and displaying these differences with maps, pictures, and samples. Here are some leads which could be researched.

Leaf: Hardwoods are broadleaf and deciduous. Softwoods are needleleaf and evergreen.

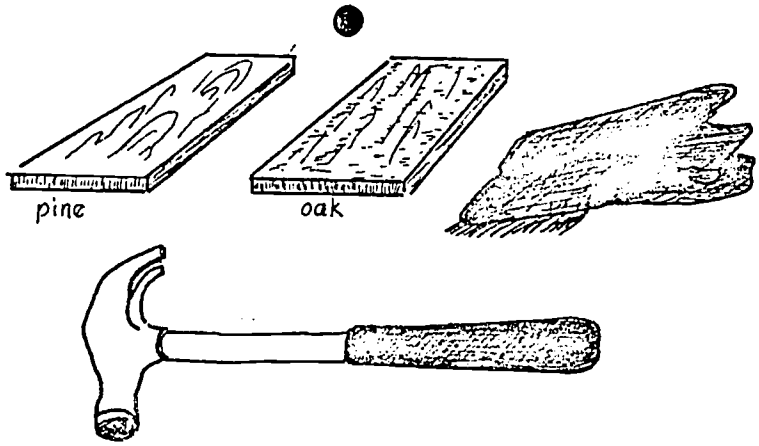
Growing climates: Softwoods can thrive in colder regions. Examine a foliage map. How does the leaf shape and the waxy coat help in cold climates?

Shape: In general, softwoods have triangle shapes; hardwoods have fan shapes.

Wood texture: Try to collect from a lumber yard several small samples of hard and soft woods. Identify these by name. Compare the closeness of the grain.

Allow as many children as possible to try this demonstration. Using perhaps an oak sample and a pine sample, see how many hammer blows of equal force it takes to drive a steel ball into the oak piece, and then into the pine piece. Ask those who demonstrate to reach a conclusion about which wood

sample is harder. To prevent the steel ball from flying away, cover the wood and ball with a rag before striking with the hammer.



Occupations require special personal characteristics.

Career Information

Decision making plays a role in setting immediate and long-range goals.

Decision Making

. . . explain how the forester's skills would be useful in other occupations. PPO

. . . tell a possible use for a hardwood and a softwood. PPO

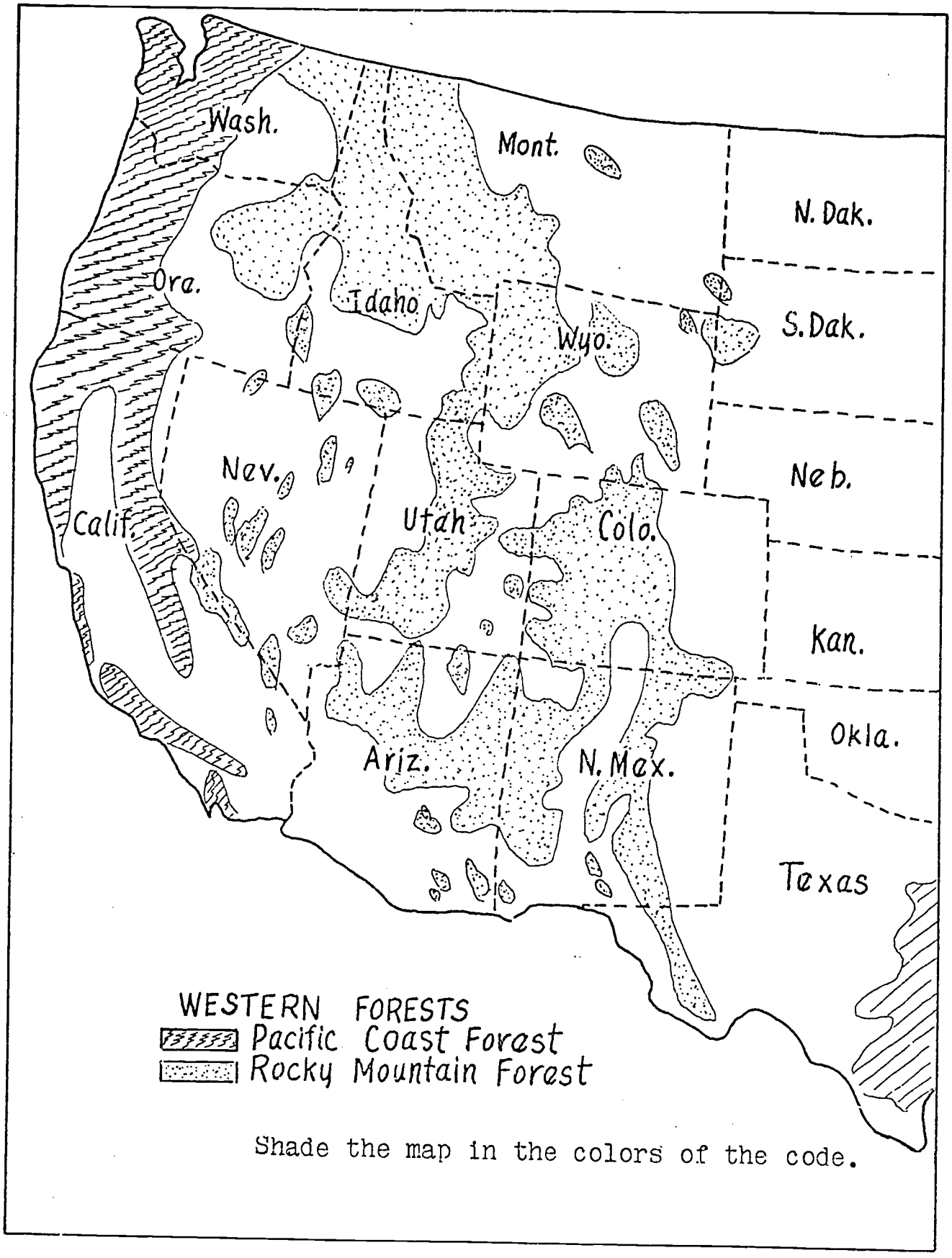
Ask the children to name a use for which a softwood might be chosen. A hardwood? What use would knowledge of hardwoods and softwoods be in occupations other than forestry?

The REACT page presents a map of forest regions and other vegetation. Ask the children to assign appropriate colors to the map code and shade the regions according to their code. Know which regions are hardwood and which are mainly softwood trees.

DM/Level 3/11

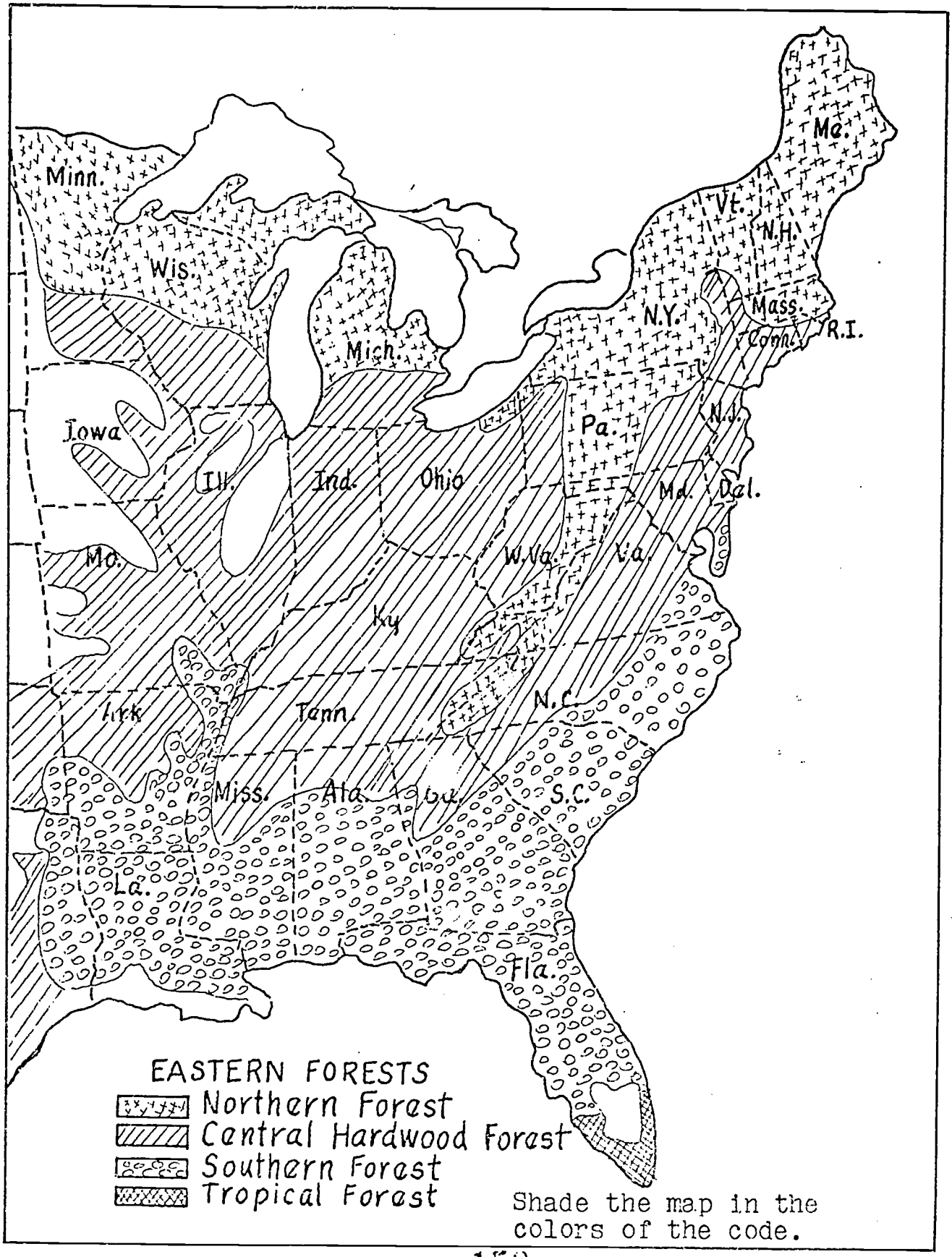
"Forest Regions Map"

FOREST REGIONS MAP



Shade the map in the colors of the code.

FOREST REGIONS MAP



FAMOUS PEOPLE OF THE FORESTS

Third Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *name the career goals of two famous foresters.*

Educational Awareness Dimension

. . . *cite the work experience of a famous forest conservationist as an example of continuing learning.*

Subject Matter Concepts

Social Studies
- History
  - Great Americans in history
- Economics
  - Different uses of environment

Science
- Biology
  - Man can control the environments of living things.

Preplanning Suggestions

Books and audio-visuals about persons who have been interested in forest conservation

FAMOUS PEOPLE OF THE FORESTS

Decision making plays a role in setting immediate and long-range goals.

Decision Making

Learning is a lifelong process.

Educational Awareness

Provide pupils with access to information about the lives of famous persons who chose to work for forest conservation. Examples might be:

Theodore Roosevelt
John Muir
Rachel Carson
Gifford Pinchot
Johnny Appleseed Chapman

. . . *name the career goals of two famous foresters.* PPO

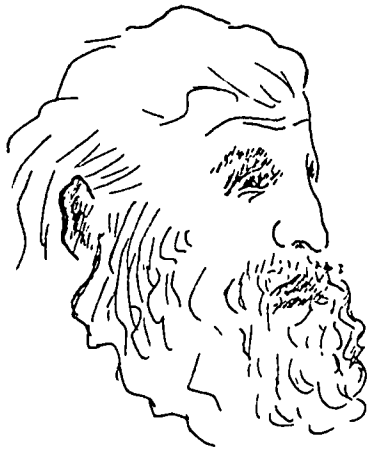
. . . *cite the work experience of a famous forest conservationist as an example of continuing learning.* PPO

Identify the career goals of these people and others. Identify decisions they made which influenced the way men used trees. Were there any key decisions in their lives which affected their career goals? How did their work teach them about the forests? Ask the children whether they have made any decisions which might affect their career goals.

A biographical sketch of John Muir appears on the REACT pages. His story can be read individually or aloud. Pupil responses to questions following the story should be discussed by the group.

DM/Level 3/12

"John Muir: Father of the National Parks"



JOHN MUIR: FATHER OF THE NATIONAL PARKS

Vocabulary: wilderness, inventions, whittles, pendulum, carriages, Yosemite Valley, sequoia, petrified, glacier

In 1849, 11-year-old John Muir traveled with his family all the way from Dunbar, Scotland, to settle in central Wisconsin. Wisconsin was then a green wilderness. For eight years young John helped his father clear the land and break the soil for farming. Finally John decided to ask his brother-in-law for 40 acres of land--but not to clear for farming. John wanted to save the wilderness and all the wild animals, trees, ferns, and flowers in it. He wanted to fence the land so that no farm animals could break in. This land was John Muir's first plan for a park. It would be a place for people to see and enjoy, not cut and spoil, the fine plants and animals that lived there. But, young John never had the money to buy this Wisconsin land from his brother-in-law.

Meanwhile Muir was becoming well known in Wisconsin for his inventions. He whittled a whole clock and its gears by hand. He made a great clock to hang in a tree with a rock pendulum 14 feet long so workers would know the time to come in from the fields. He made a bed that tipped out the sleeper when it was time to get up. People who saw John's inventions at the Wisconsin State Fair in 1860 wanted John to work for them, but he decided instead to go to college. He was hungry to learn and went to all the classes he could to study plant science, animal science, and earth science. He also began feeling an urge to wander

in the wild. He went for long, long wilderness hikes to quietly study trees, plants, rocks, birds, and animals.

But when John was offered a good job making carriages he made a practical decision. He would leave his wandering and earn some money. He was successful at his work. His inventions helped the carriage maker and business improved. Then one day a long metal file slipped out of John's hand and cut into his right eye, blinding it. He stood the pain, but when the left eye began to go blind too, he was suddenly filled with the fear that he might never see a wilderness again. Then he decided that if his sight ever came back, he would give up the inventions of men and study only the inventions of nature.

The light slowly came back to both his eyes and John kept his promise to himself. Later he said, "I might have become a millionaire, but I chose to become a tramp." He set out on foot through the great forests of America. He took only a small bag with a brush and comb, soap and towel, clean underwear, a book of poems, and a Bible. He kept careful notes about what he saw and sent back many letters and articles for newspapers. He discovered the rare beauties of the Yosemite Valley in California, the giant sequoia trees, the petrified forest in Arizona, the Grand Canyon, and Glacier Bay in Alaska. President Theodore Roosevelt took a camping trip with John Muir and thought it was a great honor to explore the wilderness with him. After this trip, President Roosevelt urged Congress to pass many bills to save great regions of forests for our national parks. Today we remember John Muir as the Father of our National Parks. He was a special person who could sign his name and address: John Muir, Earth Planet, Universe.

List three key decisions in the life of John Muir:

1. _____

_____

2. _____

_____

3. _____

_____

John Muir studied in two kinds of places. These were:

1. _____ 2. _____

Find the places John Muir traveled on a map of North America.

RELATED MATERIALS

Beginning Responsibility: Rules at School (Film, Color, 11-min.) Coronet Instructional Films, 65 East South Water Street, Chicago, Illinois 60601, 1964.

Cooperation, Sharing, and Living Together (Multi-Media) Educational Projections Corporation, 1911 Pickwick Avenue, Glenview, Illinois 60025, 1971.

Everything Changes (Book) Morris Philipson. Pantheon Books, Inc., Division of Random House, 201 East 50th Street, New York, New York 10022, 1972.

Forest Ranger (Book) John J. Floherty. J. B. Lippincott Co., Philadelphia, Pennsylvania 19105, 1956.

I Want To Be A Forester (Book) E. Baker. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1958.

Living Forest, The (Book) Jack McCormick. Harper and Brothers, New York, New York, 1959.

Our Friend the Forest (Book) Patricia Lauber. Doubleday and Company, School and Library Division, Garden City, New York 11530, 1959.

Our National Parks (Filmstrips) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Picture Book of Timber, The (Book) Anita Brooks, The John Day Company, Inc., 257 Park Avenue, South, New York, New York 10010, 1967.

Smokey Bear and Little Marcy (Sound Filmstrip) Society for Visual Education, Inc., 1345 Diversey Parkway, Chicago, Illinois 60614, 1972.

Trees and How We Use Them (Book) Tillie S. Pine and Joseph Levine, McGraw-Hill Books Company, 330 W. 42nd Street, New York, New York 10036, 1969.

Trees: Man's Best-Known Plants (Sound Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Why People Have Special Jobs (Film, Color, 7-min.) Learning Corporation of America, 711 Fifth Avenue, New York, New York, 10022, 1972.

FORESTERS

Forests are one of America's greatest natural resources. They cover more than one-third of the land area of the country. Foresters manage, develop, and protect these valuable lands and their resources--timber, water, wildlife, forage, and recreation areas. They estimate the amount and value of these resources. They plan and supervise the harvesting and cutting of trees, purchase and sale of trees and timber, the processing, utilization and marketing of forest products, and reforestation activities (renewing the forest cover by seeding or planting). Foresters also safeguard forests from fire, destructive animals and insects, and diseases. Other responsibilities of foresters include wildlife protection and watershed management, and the management of camps, parks, and grazing land.

Foresters usually specialize in one area of work, such as timber management, fire control, forest economics, outdoor recreation, watershed management, wildlife management, or range management. Some of these specialized activities are becoming recognized as distinct professions. Foresters also may engage in research activities, extension work (providing forestry information to farmers, logging companies, and the public), forest marketing, and college and university teaching.

An estimated 25,000 persons were employed as foresters in the United States in 1968. About one-third were employed in private industry, mainly by pulp and paper, lumber, logging, and milling companies. Slightly less than one-third were employed by the Federal Government, mainly in the Forest Service of the Department of Agriculture. Other federal agencies employing significant numbers of foresters were the Departments of the Interior and Defense. Most of the remainder were employed by state and local governments, colleges and universities, and consulting firms. Others were managers of their own lands or were in business for themselves as consultants.

Education in forestry leading to a bachelor's or higher degree includes specialized courses in five essential areas: (1) silviculture (methods of growing and improving forest crops); (2) forest protection (primarily against fire, insects, and disease); (3) forest management (the application of business methods and technical forestry principles to the operation of a forest property); (4) forest economics (study of the factors affecting the supply of and the demand for forest products); and (5) forest utilization (the harvesting, processing, and marketing of the forest crop and other forest resources).

Qualifications for success in forestry include an enthusiasm for outdoor work, good health, love of the outdoors, and the ability to meet and deal effectively with people. Many jobs also require physical stamina and a willingness to work in remote areas.

Employment opportunities for forestry graduates are expected to be favorable through the 1970's. Among the major factors underlying this anticipated demand are the country's growing population and rising living standards, which will tend to increase the demand for forest products and the use of

forests for recreation areas. Forestry and related employment also may be favorably influenced by the growing awareness of the need to conserve and replenish our forest resources. Private owners of timberland, federal and state governments, teaching and research institutions are expected to employ increasing numbers of foresters.

The trend is toward more scientific management of forest lands, expanding research in forest products and conservation programs in areas such as outdoor recreation, watershed management, wildlife protection, and range management.

Opportunities for women in outdoor forestry are somewhat limited, largely because of the strenuous physical requirements of much of the work. The women presently employed in forestry are engaged chiefly in research, administration, and educational work; future opportunities for women also are likely to be primarily in these fields.

Beginning salaries of foresters employed by state governments vary widely; but, with a few exceptions, they tend to be lower than federal salaries. Entrance salaries in private industry, according to limited data, are fairly comparable to federal salary levels.

As part of his regular duties, the forester--particularly in beginning positions--spends considerable time outdoors under all kinds of weather conditions. Many foresters work extra hours on emergency duty, such as fire-fighting.

Adapted from: U. S. Department of Labor. Occupational Outlook Handbook, 1970-71 edition. (Washington, D.C.: Government Printing Office), 1971. pp. 47-49.

HOW SOCIAL IS SEWING?

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

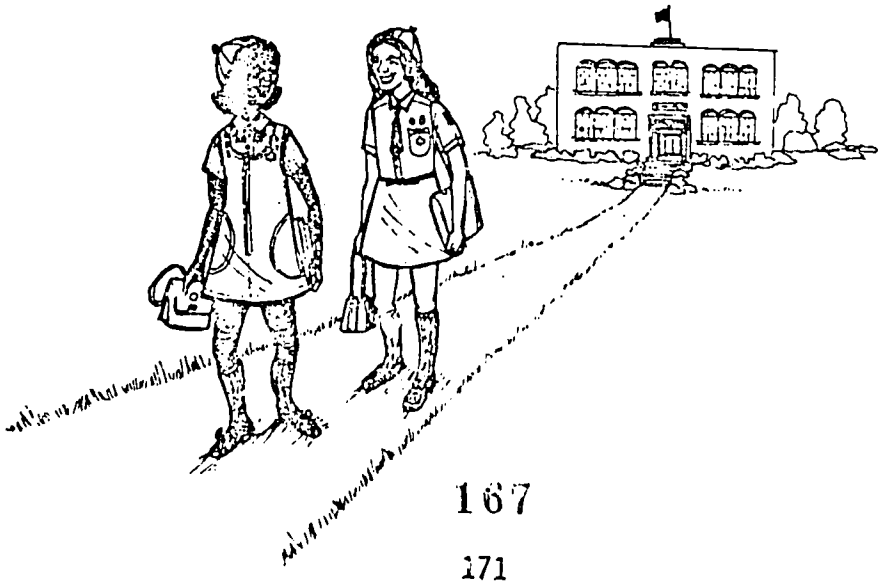
CAREER DEVELOPMENT FOCUS: Relationships exist between a person's occupation and the people with whom a person tends to associate.

OCCUPATIONAL FOCUS: Industrial Sewing Machine Operator

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Don't Lack a Good Back
2. Mass Producing Bean Bags
3. Garments for Goodwill
4. Unions
5. How Do You Do It? Inviting a Resource Person



Teacher Goals

Teacher goals of this strategy combine a Lifestyle Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Industrial Sewing Machine Operator. In this perspective the teacher's goals are to:

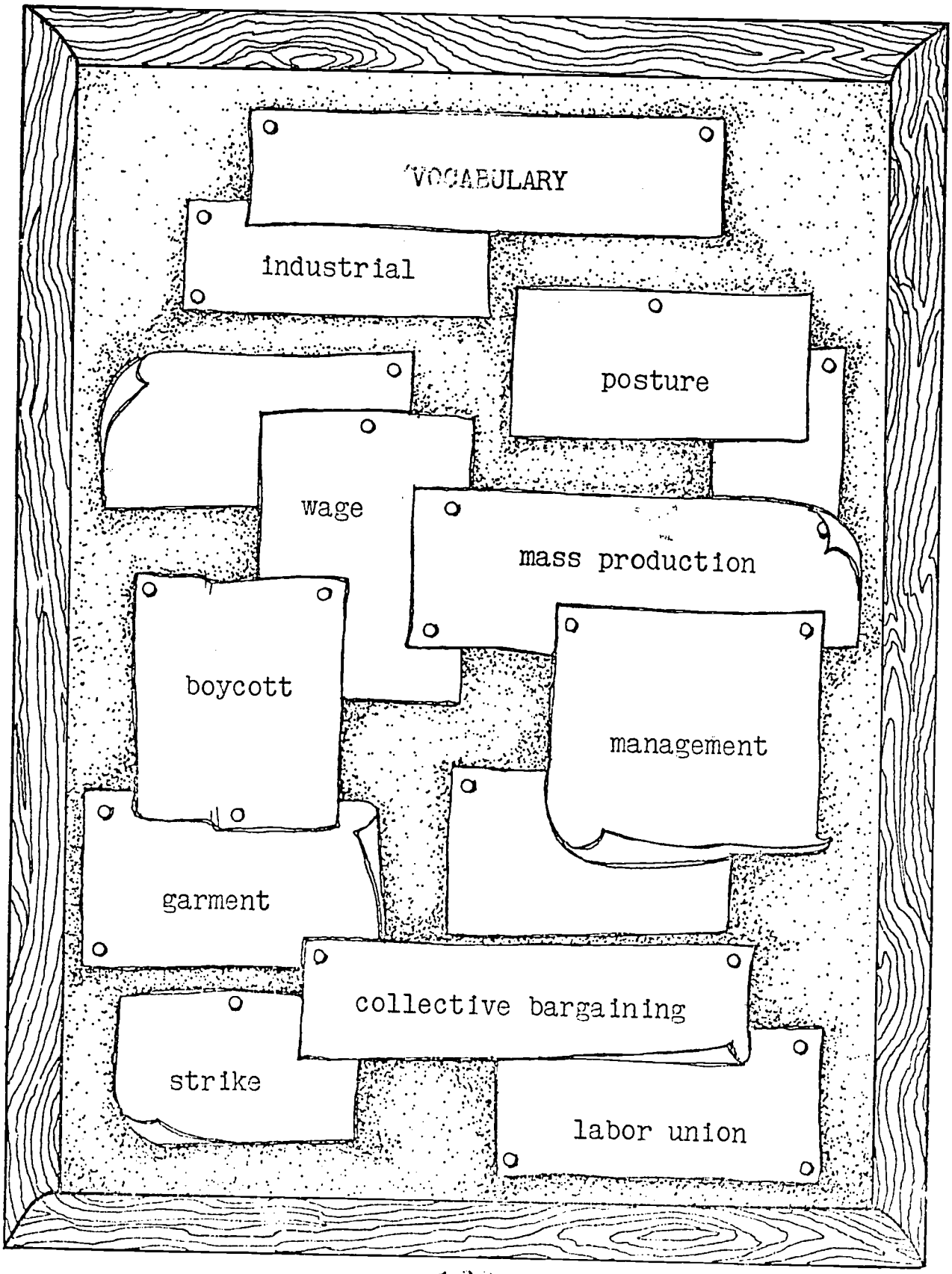
Help pupils to compare the work setting of the industrial sewing machine operator with their school work setting in terms of interpersonal activity which can be expected.

Guide pupils in using their knowledge of the human body to understand the physical needs of the industrial sewing machine operator.

Help pupils to understand possible relationships between the industrial sewing machine operator's occupation and persons with whom he associates off the job.

Increase pupil appreciation of advantages and disadvantages of the assembly-line method of production for the worker and for the product.

Enhance pupil awareness of the value of personal associations in occupational tasks.


VOCABULARY
industrial
posture
wage
mass production
boycott
management
garment
collective bargaining
strike
labor union

DON'T LACK A GOOD BACK

Third Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *name three ways fellow workers may help the industrial sewing machine operator.*

Attitudes and Appreciations Dimension

. . . *take part in a dramatization of an experienced industrial sewing machine operator introducing a newly hired worker to the work setting.*

Career Information Dimension

. . . *compare the working posture of the industrial sewing machine operator to the posture recommended for handwriting.*

Educational Awareness Dimension

. . . *tell what the industrial sewing machine operator needs to know about muscles.*

Subject Matter Concepts

Science
- Biology
  - Systems of the human body; skeletal muscles
- Physics
  - Force moves things; muscles

Language Arts
- Listening and Speaking
  - Acting out stories
  - Giving and taking directions

Preplanning Suggestions

Visuals of industrial sewing machine operators at work
Visuals of the muscle structure of the back
Rubber bands for experiments
Piece of fruit (or clay) on a stick

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Ask the children whether they have ever done the same thing over and over again for several hours. What happened? Were any muscles sore afterwards? Did anyone ever sleep in a strange position and then wake up with a tired muscle?

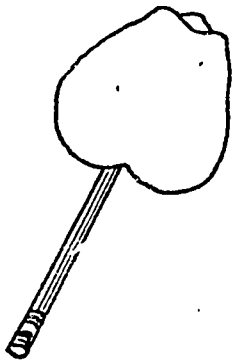
. . . tell what the industrial sewing machine operator needs to know about muscles. PPC

Show a picture of the industrial sewing machine operator at work. Explain to the children that this type of worker must bend over the sewing machine and do the same thing for eight hours each day. What muscles of the worker's body need to be strong? Why would knowledge about muscles be helpful to the industrial sewing machine operator? Provide the class with models or pictures of the back muscles. Demonstrate their elasticity with a rubber band. Muscles can only contract. They stretch when another muscle contracts.

Demonstrate that the skeletal muscles work in pairs. The children can feel this by alternately straightening and bending the lower arm while touching the movement of muscles in the upper arm with the fingers of the other hand.

Conduct a posture experiment. Ask children to slouch by drawing in chest muscles and front shoulder muscles. Straighten up by firming the back and back shoulder muscles. Ask why a straight back makes breathing easier. Would this help the industrial sewing machine operator?

Let each child stand in free space and pretend he suddenly had no skeletal muscles. Children will express



Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

The individual worker determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

different solutions to this physical problem. Some may think of balancing on their bones, but most will fall in a heap.

Put a piece of fruit--apple or orange--on a stick. Let several children try holding the stick between their index finger and thumb. Pretend these are a muscle pair for the back. Ask whether it takes more finger power to hold the fruit up straight or at an angle. What does this mean for posture?

. . . *name three ways fellow workers may help the industrial sewing machine operator.* PPO

. . . *take part in a dramatization of an experienced industrial sewing machine operator introducing a newly hired worker to the work setting.* PPO

. . . *compare the working posture of the industrial sewing machine operator to the posture recommended for handwriting.* PPO

New industrial sewing machine operators learn their work from more experienced operators. Encourage the children to dramatize how experienced operators could suggest good posture to someone newly hired. What should the factory furnish in terms of good chairs, light, air, break times? How is the working posture of the industrial sewing machine operator like that the children are advised to use for handwriting?

The REACT page gives directions for exercises to relax and strengthen the back.

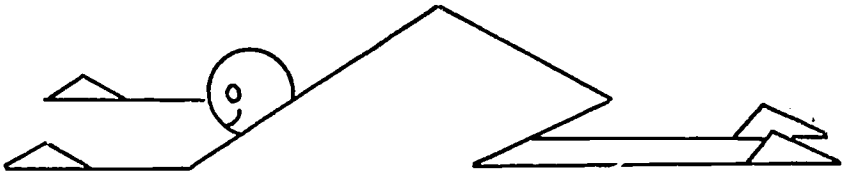
LS/Level 3/1

"The Swan, the Inchworm, and the Rocker"

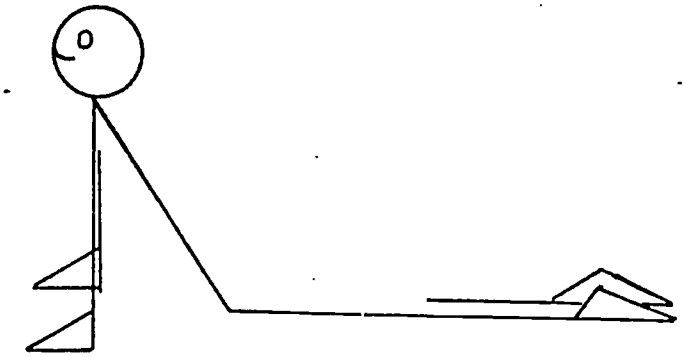
THE SWAN, THE INCHWORM, AND THE ROCKER

Here are three exercises for a good back and better posture.

THE SWAN



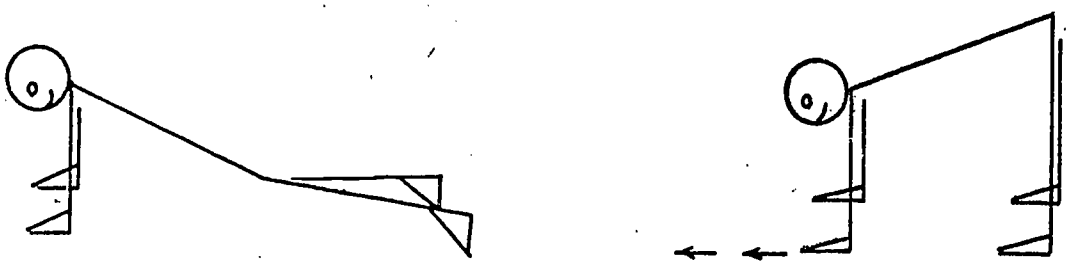
Step 1: Lie on the floor with arms out and knees tucked under. Hold your breath for a few seconds.



Step 2: Breath out slowly. Move out off your knees until your legs and elbows are straight. Don't move your hands.

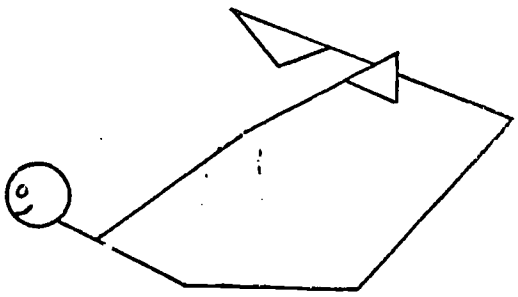
Breath in and bend back to the starting position. Repeat steps 1 and 2.

THE INCH WORM



Lie down on the floor. Put your arms straight and your hands flat on the floor. Do not move your hands. Walk your feet up to your hands until you are bent in half. Do not move your feet. Walk your hands out until you are flat again. Repeat.

THE ROCKER



Lie face down on the floor. Keep your legs together and bend them up until you can hold your feet with your hands. Pull your legs as high off the floor as you can. Rock. Let go and rest. Do the exercise again.

MASS PRODUCING BEAN BAGS

Third Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *describe interpersonal activity which could be expected in the industrial sewing machine operator's occupation.*

. . . *tell about a school activity which led him to meet new people.*

Attitudes and Appreciations Dimension

. . . *plan and take part in the assembly line production of bean bags.*

. . . *explain the interdependence of workers on an assembly line.*

Career Information Dimension

. . . *name three products which are made on an assembly line.*

. . . *tell a personal advantage and disadvantage of the assembly line method of production.*

. . . *tell how wages might motivate the industrial sewing machine operator.*

Subject Matter Concepts

Social Studies
- Economics
  - Division of labor
  - Earning money
- Sociology-Anthropology
  - Technology produces changes in ways of living.
- History
  - Great Americans in history

Mathematics
- Problem Solving
  - Multiplication and division situations

Language Arts
- Listening and Speaking
  - Acting out stories

Preplanning Suggestions

Plan to visit an assembly line operation if possible.
Pictures of assembly line workers in action
Materials for making bean bags--cloth, thread, beans, needles, etc.

Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

Occupations have their own work settings.

Career Information

. . . describe interpersonal activity which could be expected in the industrial sewing machine operator's occupation. PPO

. . . name three products which are made on an assembly line. PPO

Describe the work setting of the industrial sewing machine operator for the children. Explain that production in a garment factory takes place on an assembly line. Instead of one worker making the whole garment, the job is divided into many parts. Each worker does one small part over and over again, such as sewing on sleeves or putting in button holes. Ask the children what other details of garment making would need to take place on the assembly line. Speculate with the children about how well the industrial sewing machine operator would get to know other workers on the assembly line. If possible, visit a garment factory. Do the pupils know of other products which are made on an assembly line? Are any of today's products made entirely by one person?

Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

. . . tell about a school activity which led him to meet new people. PPO

. . . plan and take part in the assembly line production of bean bags. PPO

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

Bean bags are relatively easy for third level students to sew. They are useful in physical education activities and, if you've got one, you can ask someone to play catch or target games with you.

The individual worker determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Assist the class in planning the mass production operations which can occur on the assembly line: marking the pattern, cutting the cloth, stitching three sides, pouring in the beans, and stitching the last side. Maybe a child has access to a portable sewing machine and could use it at school for sewing the straight sides. If a machine is not available, you may want to include needle threaders, thread knotters, and several stitchers on the assembly line.

. . . *tell a personal advantage and disadvantage of the assembly line method of production.* PPO

. . . *explain the interdependence of workers on an assembly line.* PPO

Throughout the activity keep the children alert to advantages and disadvantages of the assembly line method for the individual industrial sewer. Ask the children who sew for their ideas about their relationships with others on the assembly line. All the workers could discuss:

Is each worker doing what he or she is best at doing?

Is it boring?

Is the quality of the bean bags likely to be better or worse than if each child made his own?

Why is the assembly line method likely to produce bean bags faster than each child could make his own?

How are assembly line workers dependent upon each other?

How does the speed of one worker affect the others?

Earnings vary with occupations.

Career Information

Explain that in factories work accumulates at each station and each worker is usually able to work as fast as he can. In other factories conveyor belts move the products from one worker to another. Based on the bean bag experience, how do the children think assembly line jobs would compare with other jobs in opportunities to meet people. Encourage the children to use the finished bean bag to play a game with old or new friends.

. . . tell how wages might motivate the industrial sewing machine operator. PPO

Explain that most industrial sewing machine operators are paid by how many pieces they sew. Would the industrial sewing machine operator want to work as fast as possible? Elicit from the children that the need for accuracy would limit speed. Imperfect work is rejected or must be done over.

Topics for the REACT pages are figuring piece wages and, for those who are interested, a dramatization of Eli Whitney's invention of the assembly line method of production.

LS/Level 3/2

"How Much Money Will I Earn?"

LS/Level 3/3

"Eli Whitney Had a Problem"

HOW MUCH MONEY WILL I EARN?

Industrial sewing machine operators are often paid by how much work they do. Help figure a day's wages by filling in the blanks on this chart.

Worker	Job	Pay	Work Done	Wages
Tom	collar stitcher	$3 for 100 collars	500 collars	
Rose	button hole maker	$4 for 200 button holes		$8.00
Bill	sleeve finisher	$7 for 200 sleeves	400 sleeves	
Jane	pocket stitcher	$___ for 100 pockets	300 pockets	$18.00
Jack	shirt hemmer	$4 for 100 shirts		$16.00
Marybeth	waistband stitcher	$5 for 100 waistbands	400 waistbands	

ELI WHITNEY HAD A PROBLEM

In 1798, America was building up her army for protection from other nations and from Indians. The government asked Eli Whitney to make 10,000 new guns for the army in two years. In 1800, Mr. Whitney was called to Washington because he had delivered only 500 guns. In front of the experts Mr. Whitney opened a big box. He made piles of 10 gun barrels, 10 triggers, 10 stocks, and 10 of each of the other parts. He told the experts to watch. Whitney moved from one pile to the next and soon he had put 10 guns together. The experts were amazed. Before this, barrels and triggers and stocks for different guns would not fit together. Each gun and its parts were different because they were handmade by different gunsmiths.

For two years Whitney had been busy making machine tools. Machine tools made many perfectly fitting parts all alike. Now Eli Whitney could mass produce 10,000 guns in an assembly line in the same time it would take a gunsmith to make one gun. Whitney had solved his problem in a very important way.

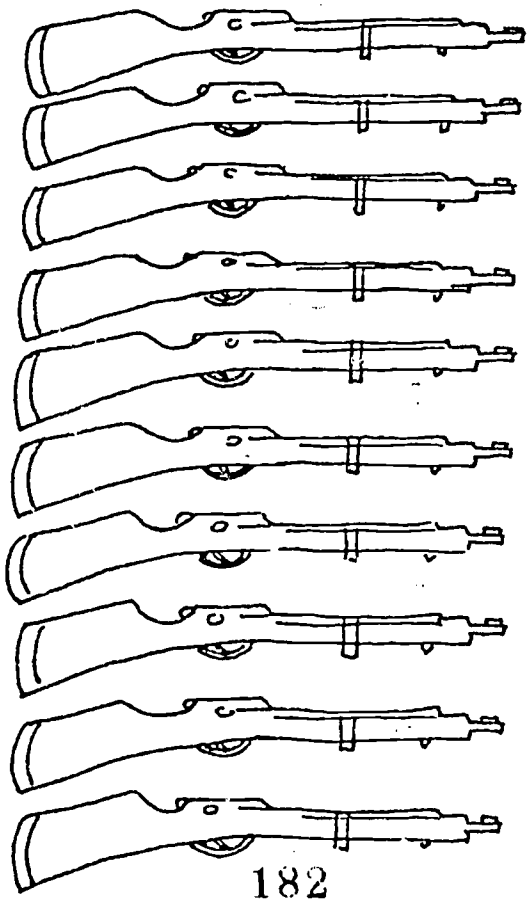
Read the story of Eli Whitney and make up a short play to show his invention of mass production.

Show Mr. Whitney coming before the experts with his big boxes of parts.

Have the experts question Mr. Whitney.

Have Mr. Whitney demonstrate his new idea.

What will the experts say after they have seen the new idea?



182

GARMENTS FOR GOODWILL

Third Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *discuss how the industrial sewing machine operator could use his skills to help others.*

Educational Awareness Dimension

. . . *cite an example of a sewing skill which could be transferred to a different work setting.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Community needs a variety of services.
- Economics
  - Needs and wants

Preplanning Suggestions

Materials for making written class charts of activities and skills
Contact a social agency which needs volunteers to do simple sewing activities. Make arrangements for an interview.

Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

Learning achievement depends upon effort and ability.

Educational Awareness

Off the job a worker's expert skills can be handy. He may be able to help himself or others. Who has heard, "Oh, I wish we had a plumber, or a TV repairman, or a doctor in the family."? Ask the children if they have ever been helped by the special skills of a worker away from his job.

. . . discuss how the industrial sewing machine operator could use his skills to help others. PPI

. . . cite an example of a sewing skill which could be transferred to a different work setting. PPC

Gather the children's ideas about ways the industrial sewing machine operator could use his skills after work. Do they think someone who sewed for eight hours a day may still want to do more sewing?

Interest the children in a class project to repair some of their family clothing or else some things for distribution to the needy. Do the children know of any people who need the clothes that the industrial sewing machine operator makes?

Find out what simple garment making skills the class members have. Perhaps some can sew on a button, mend a seam, iron on a patch, wash the clothes, or press the clothes. Others may want to learn these skills. A parent or two to serve as resource people could instruct and supervise these simple operations nicely.

If possible, cooperate with a local agency which customarily distributes good used clothing such as Goodwill Industries or Salvation Army.

Relationships between one's occupational activity and other activities which may be social situations are considered on the REACT page.

LS/Level 3/4

"So Many People Sew"

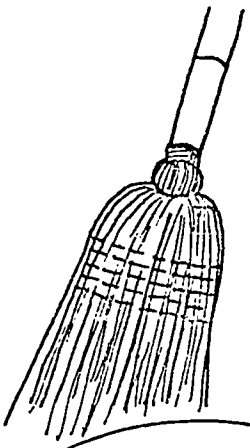
SO MANY PEOPLE SEW

Pretend you are sewing what you see in the pictures.
The words tell things some people might think about as they sew.
What other things might you think about?
Write your own ideas in the circles.

running

basketball

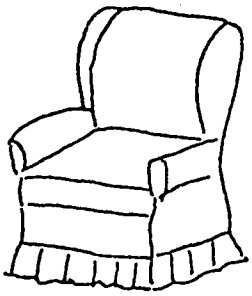
footbones



different kinds of straw

cloth

wood



posture

camping

waterproof cloth

fishing

UNIONS

Third Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *briefly describe a labor union.*

. . . *choose to participate in a labor-management simulation activity.*

Attitudes and Appreciations Dimension

. . . *identify the industrial sewing machine operator as a likely member of a labor union.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Groups within the community--labor unions

Language Arts
- Reading
  - Figurative language

Preplanning Suggestions

Names of unions which are active in the school area
Union activities which involve parents of children

Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

Of the 78 million workers in America in 1970, about one-third belonged to labor unions. The industrial sewing machine operator is very likely to belong to a labor union. Present union membership as a common way to relate to other people in an occupation.

. . . *briefly describe a labor union.* PPO

Explain to the children that mass production and invention of machines created a need for lots of factory workers. The group of factory bosses who hire the workers are called management. The group of workers are called labor. At first, factory workers' pay was low, hours were long, and working conditions were unhealthy and dangerous. Workers organized themselves into labor unions to protect themselves from these problems and to bargain with the management for improvements.

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . *identify the industrial sewing machine operator as a likely member of a labor union.* PPO

Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

. . . *choose to participate in a labor-management simulation activity.* PPO

Industrial sewing machine operators in the garment industry are members of the International Ladies Garment Workers Union if they sew women's clothing or the Amalgamated Clothing Workers of America if they sew men's clothing. Suggest that class members identify themselves as labor or management for either or both of the preceding activities, Mass Producing Bean Bags or Garments for Goodwill. Management children will plan wages

and hours, provide equipment, and set up working conditions. Labor pupils will hold a union meeting after having spent some time on the job. They will discuss whether the work situation is satisfactory. If not, group spokesmen can meet with the management and bargain. Alert pupils to the possibilities of strike and boycott. Social and community activities are often sponsored by local unions. Are any class parents union members? If possible, interview an industrial sewing machine operator who is a member of a union.

If you are a member of a teacher's union, describe that group for the class.

The REACT page offers two of Carl Sandburg's poems which groups of class members can read and discuss together. Introduce the poems so that vocabulary and imagery which may be difficult for your class is clear. Brainstorm with the children for images which could be used in a poem about the industrial sewing machine operator and encourage them to write a poem for this worker.

Another pertinent sidelight would be to tell the children the story of Bessie and Sidney Hillman who, with the help of Jane Addams of Hull House, organized the historic Chicago garment workers strike in 1910 and later founded Amalgamated Clothing Workers of America. (Ms., May, 1973, p. 16)

LS/Level 3/5

"Poems for Working People"

POEMS FOR WORKING PEOPLE

Carl Sandburg wrote many poems about working people. Read these to each other and discuss what you learn about the workers' problems. Tell what little problems and pleasures you have in your work.

MANUAL SYSTEM

(about a telephone operator)

Mary has a thingamajig clamped on her ears
And sits all day taking plugs out and sticking plugs in.
Flashes and flashes--voices and voices
calling for ears to pour words in
Faces at the ends of wires asking for other faces
at the ends of other wires;
All day taking plugs out and sticking plugs in,
Mary has a thingamajig clamped on her ears.

PSALM OF THOSE WHO GO FORTH BEFORE DAYLIGHT

The policeman buys shoes slow and careful; the teamster buys gloves slow and careful; they take care of their feet and hands; they live on their feet and hands.

The milkman never argues; he works alone and no one speaks to him; the city is asleep when he is on the job; he puts a bottle on six hundred porches and calls it a day's work; he climbs two hundred wooden stairways; two horses are company for him; he never argues.

The rolling-mill men and the sheet-steel men are brothers of cinders; they empty cinders out of their shoes after the day's work; they ask their wives to fix burnt holes in the knees of their trousers; their necks and ears are covered with a smut; they scour their necks and ears; they are brothers of cinders.

Here are the names of other poems about workers written by Carl Sandburg. Look them up in library books. Ask your teacher to help you enjoy them.

People Who Must

Fish Crier

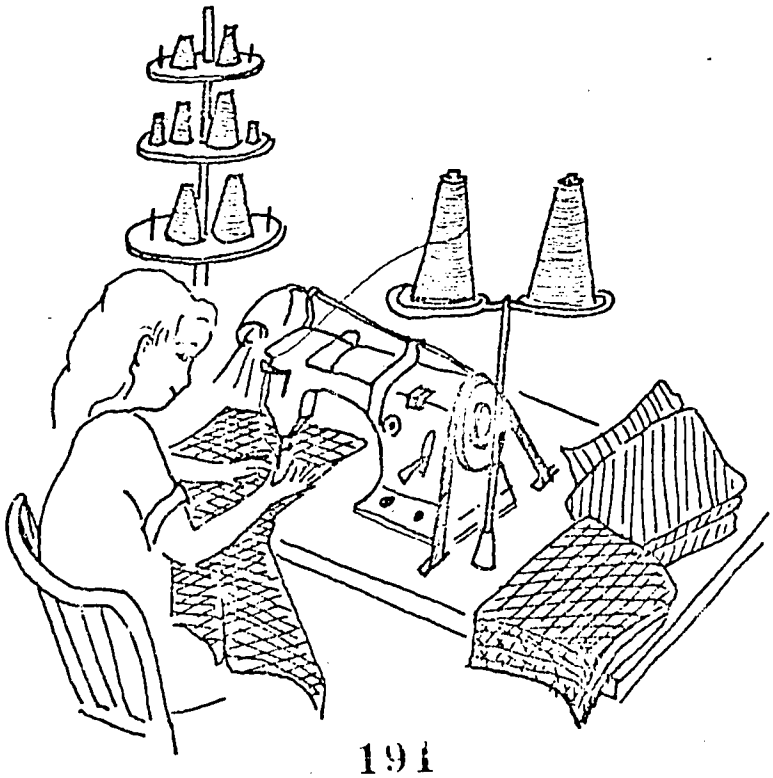
Weeds

Illinois Farmer

Prayers of Steel

I Am the People, the Mob

Think of the sights and sounds of the factory where the industrial sewing machine operator works. Think of how the industrial sewing machine operator feels at work. Use these ideas to write a poem.



HOW DO YOU DO IT? INVITING A RESOURCE PERSON

Third Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *tell about a school activity which led him to meet new people.*

. . . *gather data about occupational interests which led an industrial sewing machine operator to meet new people.*

Career Information Dimension

. . . *name three things necessary for the operation of a sewing machine.*

Subject Matter Concepts

Language Arts
- Listening and Speaking
  - Developing discussion skills
  - Interviewing

Social Studies
- Economics
  - Production of goods
- Sociology-Anthropology
  - Technology produces changes in ways of living.

Science
- Physics
  - Machines move things.
  - Simple machines

Preplanning Suggestions

Plan to have a school demonstration of a sewing machine. Interview the person demonstrating the machine.

Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

. . . *tell about a school activity which led him to meet new people.* PPO

Ask for pupil volunteers for a committee to invite an industrial sewing machine operator or seamstress or tailor (if there are no industrial sewing machine operators in your area) to bring a sewing machine to school and demonstrate it for the class. Explain that industrial sewing machines cannot be taken out of the factory, but there are probably persons nearby who could bring a household sewing machine and demonstrate the work done by the industrial sewing machine operator.

Help pupils to plan their invitation and hospitality. Decide upon a likely person to invite. Ask the volunteers to rehearse the telephone or written invitation before the class. Be sure it includes an introduction, clear explanation of the purpose of the visit, times available, length of stay, and the location of your school and your room in the school. Confirm the arrangement by means of a thank you for acceptance.

Relationships exist between a person's occupation and the people with whom a person tends to associate.

Lifestyle

. . . *gather data about occupational interests which led an industrial sewing machine operator to meet new people.* PPO

Occupations require the use of specific materials and equipment.

Career Information

. . . *name three things necessary for the operation of a sewing machine.* PPO

Arrange the classroom to accommodate the resource person. Plan questions to ask, especially how the demonstrator feels about assembly line sewing and whether he has friends who sew. Ask

about posture and whether it is difficult to operate the machine. Ask the demonstrator how he learned his work. Follow the visit with a thank you letter.

The first REACT page suggests a bulletin board displaying the childrens' collection of pictures of objects that are sewed. Guard against displaying 57 pieces of clothing. Encourage children to find different kinds of things that are sewed. Ideally, display the objects themselves.

The second REACT page gives the children an opportunity to find instances on the sewing machine of principles of simple machines.

LS/Level 3/6

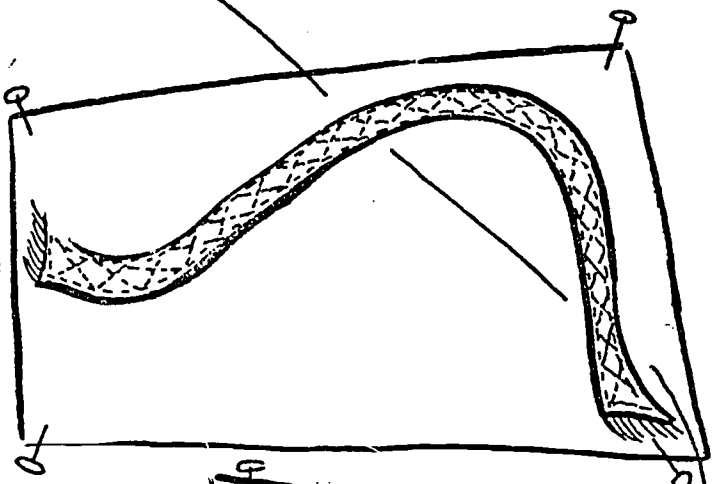
"So Many Things Are Sewed"

LS/Level 3/7

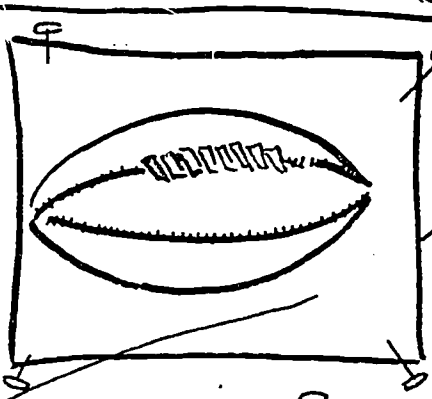
"Simple Machines on the Sewing Machine"

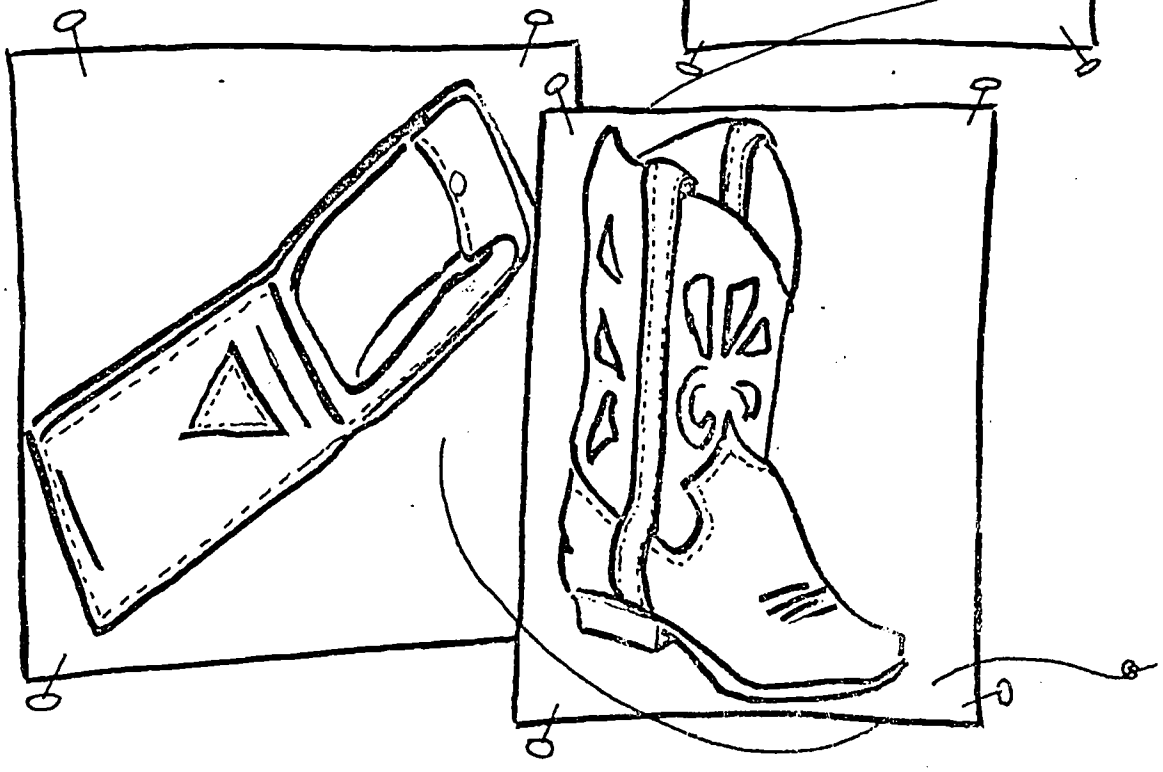
SO MANY THINGS ARE SEWED

Bring pictures of sewed things to school. Get lots of different kinds of things. Put them on your bulletin board like this.



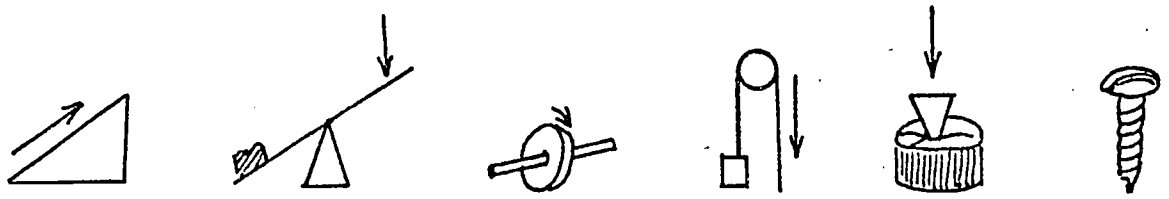
You may want to bring real things that are sewed to school. You could put them on a table so everyone could see and feel the different kinds of stitches.





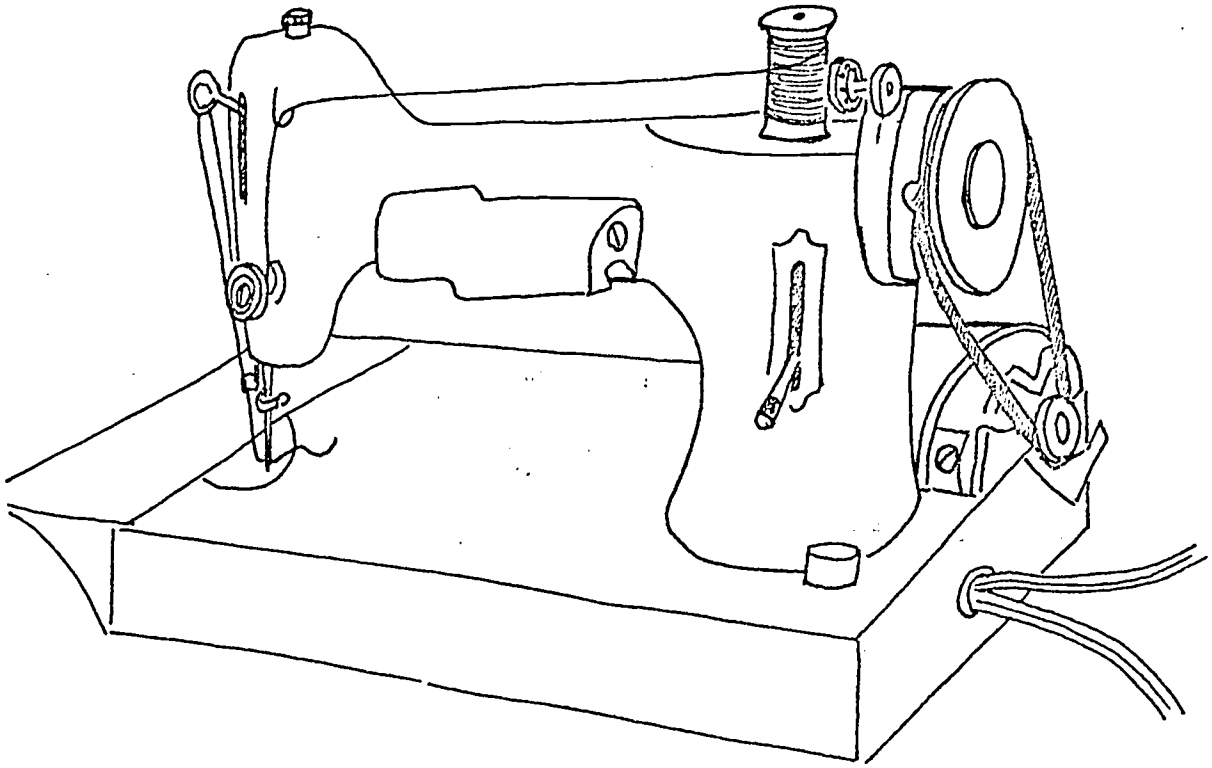
SIMPLE MACHINES ON THE SEWING MACHINE

Remember the simple machines?
Draw a line from the picture to its name.



wheel and axle (WA)	inclined plane (IN.PL)	pulley (P)	lever (L)	screw (S)	wedge (W)

Put the initial of the simple machine where you see it on the sewing machine.



RELATED MATERIALS

About Ready-To-Wear Clothes (Book) T. Shannon. Childrens Press, Inc., 1224 West Van Buren Street, Chicago, Illinois 60607, 1961.

Cloth--Fiber to Fabric (Film, Color or B/W, 16-min.) Encyclopaedia Britannica Educational Films, Inc., 425 North Michigan Avenue, Chicago, Illinois 60611, 1973.

Developing Basic Values (Sound Filmstrip) Society for Visual Education, Inc., 1345 Diversey Parkway, Chicago, Illinois 60614, 1972.

Families and Recreation: Fun is for Everyone (Film, Color, 10-min.) McGraw-Hill Book Company, Text-Film Department, 1221 Avenue of the Americas, New York, New York 10020, 1967.

Families and Their Needs (Social Studies Text) Edna S. Anderson. Silver Burdett Company, Morristown, New Jersey, 1969.

"Families at Work," Our Working World Series (Record) Science Research Associates, 259 East Erie Street, Chicago, Illinois 60611, 1970.

Fibers (Book) Irving and Ruth Adler. John Day Company, 62 West 45th Street, New York, New York 10036, 1964.

Friends, Ripples Series (Video tape, Color, 14-min.) Field Services, National Instructional Television, Box A, Bloomington, Indiana 47401.

How Is Clothing Made: The Story of Mass Production (Film, Color or B/W, 14-min.) BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404, 1971.

How We Get Our Clothing (Four Filmstrips) Society for Visual Education, 1345 Diversey Parkway, Chicago, Illinois 60614, 1972.

Learning to Live With Others (Sound Filmstrip) Society for Visual Education, 1345 Diversey Parkway, Chicago, Illinois 60614, 1971.

Let's Go to a Clothing Factory (Book) Harry Lazarus. G. P. Putnam's Sons, 200 Madison Avenue, New York, New York 10016, 1961.

Mommies at Work (Book) Eve Merriam. Alfred A. Knopf, Inc., 501 Madison Avenue, New York, New York 10022, 1961.

People Who Work in Factories, People Who Work in Offices, People Who Work in Stores (Films, Color, 11-min. each) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1972.

The Factory Worker (Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

SEWING MACHINE OPERATORS

About 1.4 million men and women were employed in the apparel industry in 1968. Approximately 633,000 produced women's and children's apparel, and about 505,000 produced men's clothing. About 430,000 workers made dresses, skirts, blouses, suits, and coats and 124,000 produced undergarments for women and children. In the men's apparel industry, 133,000 workers produced tailored clothing (suits, overcoats, topcoats, and sportcoats) for men and boys and 372,000 made men's and boys' shirts, slacks, work clothes, separate trousers, nightwear, undergarments, and other furnishings. Another 104,000 were employed in shops which made miscellaneous apparel, such as fur goods, raincoats, gloves, and dressing gowns. About 176,000 workers classified in the apparel industry produced curtains and draperies.

Although apparel factories are located in nearly all states, approximately seven out of every ten of the workers are employed in ten states: New York, Pennsylvania, New Jersey, Tennessee, California, North Carolina, Georgia, Massachusetts, Texas, and South Carolina. New York City is the nation's fashion center and most large apparel manufacturers maintain sales offices there. Store buyers visit these showrooms to see the latest styles, especially "high fashion" women's apparel, including dresses, coats, and suits. As a result, many of the jobs which have to do with designing, sample making, and selling are in New York City.

In women's apparel manufacturing, almost one-half of the workers were employed in plants located in the New York-Northeastern New Jersey metropolitan area and in areas of Pennsylvania such as Wilkes-Barre-Hazelton, Allentown-Bethlehem-Easton, and Philadelphia. However, many jobs for workers manufacturing women's apparel also are found in Los Angeles-Long Beach and San Francisco, California; Fall River-New Bedford, Massachusetts; Chicago, Illinois; Miami, Florida; Dallas, Texas; and St. Louis, Missouri.

In the men's and boys' tailored clothing industry the major manufacturing centers are: New York City, Philadelphia, Chicago, Rochester-Buffalo, Allentown-Reading-Easton, Baltimore, Boston, Cleveland, Cincinnati, Los Angeles-Long Beach, and St. Louis. Most of the factories making men's, youths', and boys' furnishings such as trousers, work clothing, shirts, and nightwear are located in small communities primarily in the South and Southwest.

Most apparel factories are small. Although plants have been growing larger in recent years, only about twenty percent of them employ more than one hundred workers. Many of the large plants make men's and boys' apparel. Plants that manufacture garments that are subject to rapid style change tend to be smaller than those making standard type garments such as work pants.

The major operations in making apparel are designing the garment, cutting the cloth, sewing the pieces together, and pressing the assembled garment. Generally, high-grade apparel and style-oriented garments are more carefully designed and involve more handwork and fewer machine operations than the cheaper, more standardized garments. For example, much hand detailing goes into a woman's high-priced fashionable cocktail dress or into a man's high-priced

suit or coat. In contrast, standardized garments such as men's undershirts, overalls, and work shirts usually are sewn entirely by machine. To make the many different types, styles, and grades of garments, workers with various skills and educational backgrounds are employed in the apparel industry.

Sewing machine operators use sewing machines that are generally heavier and capable of faster speeds than the sewing machines found in the home. Special devices or attachments that hold buttons, guide stitches, or fold seams are often used. Some sewing machine operators specialize in a single operation such as sewing shoulder seams, attaching cuffs to sleeves, or hemming blouses. Others make garment sections such as pockets, collars, or sleeves. Still others assemble and join these completed sections to the main parts of the garment. Some sewing machine operators employed in shops making high-priced dresses and women's coats and suits perform all the machine operations on a garment.

Sewing machine operators generally are classified according to the type of machine they use, such as single-needle sewing machine operator or blindstitch machine operator. Others are known by the type of work performed, such as collar stitcher, sleeve finisher, cuff tacker, or coat baster.

Hand sewing is done on better quality or highly styled dresses, suits, or coats to produce garments which are superior in fit and drape. Hand sewers use needle and thread to perform various operations ranging from simple sewing to complex stitching. Many hand sewers specialize in a single operation, such as buttonhole making, lapel basting, or lining stitching.

In a typical apparel plant, bundles of cut garment pieces move through the sewing department, where the garments take form as they pass through a series of sewing operations. Each operator performs one or two assigned tasks on each piece in the bundle and then passes the bundle to the next operator. Some plants employ material handlers often called floor boys or floor girls who move garment bundles from one sewing operation to another.

At various stages of the sewing operations, inspectors and checkers examine garments for proper workmanship. They mark defects such as skipped stitches or bad seams, which are repaired before the garments are passed on to the next sewing operation. Inspectors sometimes make minor repairs. Thread trimmers and cleaners remove loose threads, basting stitches, and lint from garments. This is called "in-process inspection."

Entry into beginning hand- or machine-sewing jobs is relatively easy for young women since there are few restrictions regarding educational and physical condition. Some previous training in sewing operations is preferred, but many apparel plants hire workers who have had no experience in sewing. Generally, training is informal and received on the job. New workers usually start by sewing straight seams under the supervision of a section foreman or experienced worker.

Some large companies have formal on-the-job training programs for sewing machine operators. Training usually consists of learning how to perform a single operation with minimal finger, arm, and body movements.

Most sewing jobs require the ability to do routine work rapidly. The same sewing operation is repeated on each identical garment piece. Since almost all these workers are paid on the basis of the number of pieces produced, any clumsiness of hand may reduce the worker's earnings. Good eyesight and ability to work at a steady and fast pace are essential for both hand- and machine-sewing jobs.

The average sewing machine operator has little opportunity for promotion beyond section forelady, although some sewing machine operators have worked their way up to production manager. Most sewers stay on the same general type of operation throughout most of their working lives. However, some workers may be moved from simpler sewing operations to more complicated tasks that pay higher piece rates.

Most sewing jobs are performed while sitting and are not physically strenuous. The working pace is rapid because workers' earnings depend on their production. In addition, many tasks are extremely monotonous. Serious accidents among sewers are rare, although a sewer may occasionally pierce a finger with a needle. On the other hand, pressing may be strenuous work and involves working with hot steam.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U. S. Department of Labor, Washington, D. C.
pp. 619-628.

LIFE WITH LIBRARIES

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

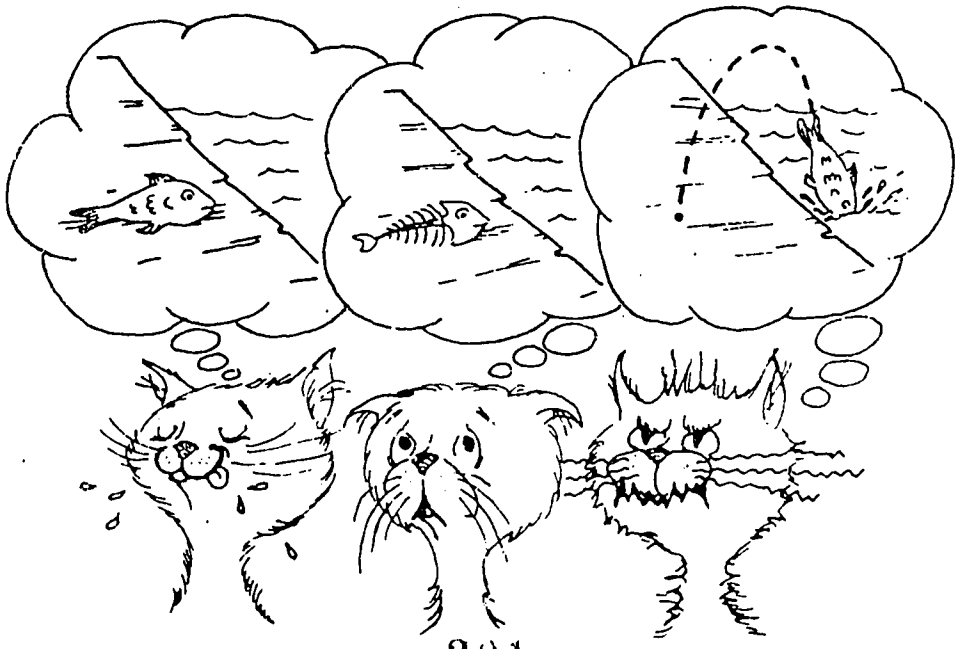
CAREER DEVELOPMENT FOCUS: An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

OCCUPATIONAL FOCUS: Librarian

ACTIVITIES

IN THIS INFUSION STRATEGY

1. How Do You Feel About Owning the Library?
2. Library Order
3. Picking and Choosing



Teacher Goals

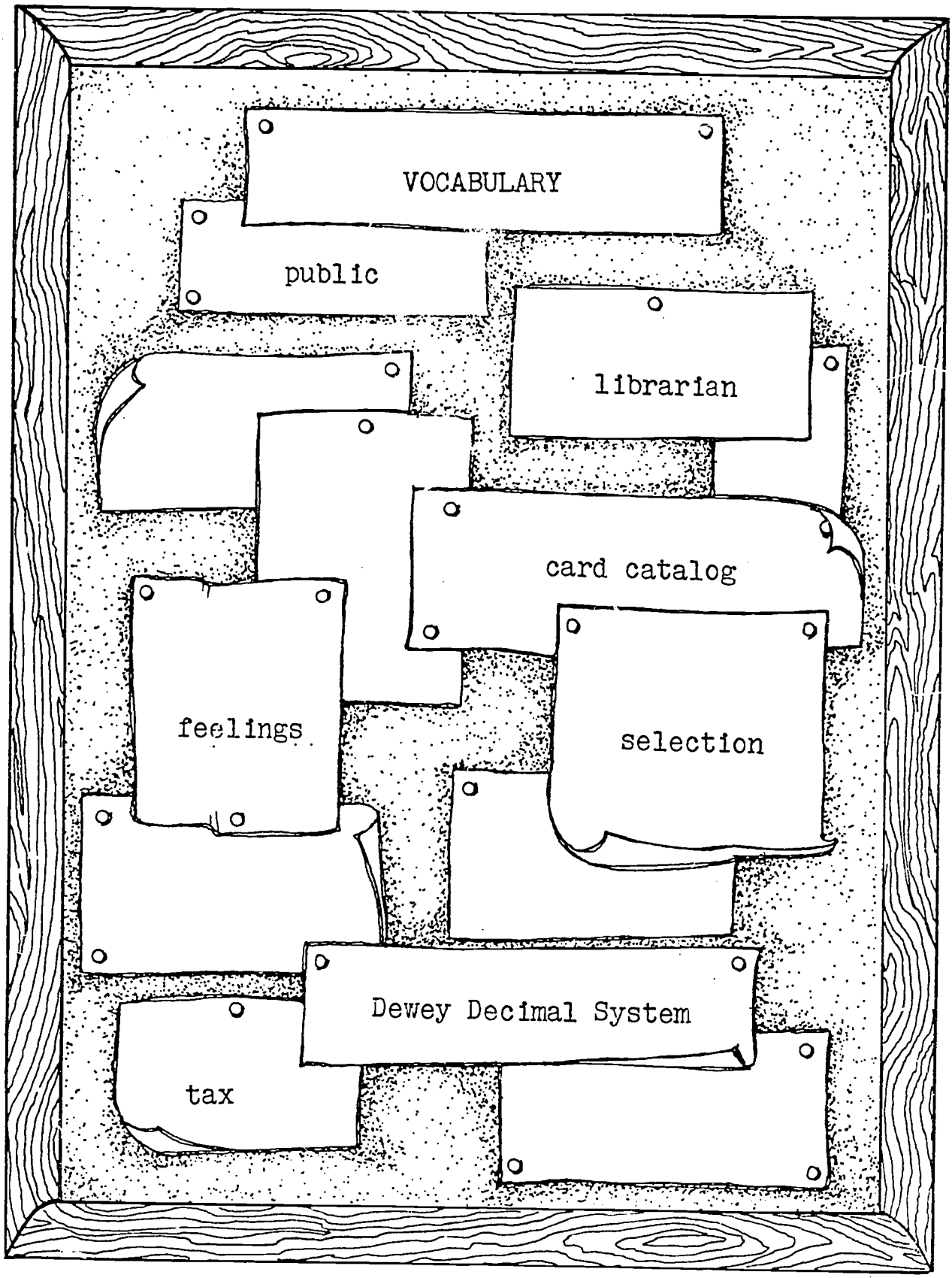
Teacher goals of this strategy combine a Self-Development Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Librarian. In this perspective the teacher's goals are to:

Encourage a classroom atmosphere which is open and receptive toward expressions of diverse feelings.

Help children to understand the several personal feelings a librarian may have about library work.

Provide opportunities for children to gain library skills.

Share your own feelings about libraries with the children.


VOCABULARY
public
librarian
card catalog
feelings
selection
Dewey Decimal System
tax

HOW DO YOU FEEL ABOUT OWNING THE LIBRARY?

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *distinguish feelings about private ownership from feelings about social ownership.*

. . . *discuss how it feels to own the library.*

. . . *interview a taxpayer to find out how this person feels about the library.*

. . . *draw a picture of one's favorite library activity.*

Attitudes and Appreciations Dimension

. . . *describe what the library does for the taxpayers.*

. . . *tell how taxpayers trust the librarian.*

Career Information Dimension

. . . *give a probable economic reason why the library is publicly owned.*

Subject Matter Concepts

Social Studies
- Political Science
  - Public services
  - Schools (libraries) supported by taxes
- Sociology-Anthropology
  - Community needs a variety of services.
  - Community reflects values.

Language Arts
- Listening and Speaking
  - Developing discussion skills
  - Interviewing

Preplanning Suggestions

Visuals of libraries, particularly the local library
Knowledge of tax-supported institutions in the community
Interview with a librarian

HOW DO YOU FEEL ABOUT OWNING THE LIBRARY?

An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

Self-Development

. . . *distinguish feelings about private ownership from feelings about social ownership.* PPO

Ask the children to name different kinds of things they own. What kinds of things are fun to own? Which are necessary? Do they own anything jointly with someone else? Ask them how they feel about owning things by themselves or together with someone else. How do they feel about things they don't own at all?

An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

Self-Development

. . . *discuss how it feels to own the library.* PPO

Tell the children that you have something special in mind which you all own together. Give hints to help the children guess the library. Have a picture of your public library handy if possible.

Technological, economic, social, and political factors influence the supply and demand of jobs.

Career Information

. . . *give a probable economic reason why the library is publicly owned.* PPO

Perhaps a child can explain why the library is publicly owned. If not, explain that books are very expensive. We can own a lot more together by sharing than we can individually. Everyone in the community pays a tax. Tax money buys what all the people need to use together--the sidewalks and streets, water treatment plants, parks, fire and police protection and, of course, your school. People vote to decide how to spend their tax money.

Divide the class into four or five groups. Pretend each group represents a small town. All group members pay taxes. Have the groups list suggestions for both necessary and nice ways to

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

Self-Development

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

Self-Development

spend tax money. Then have group members vote to decide tax expenditures. Have the townspeople share the final lists. Which towns included public libraries? Why?

. . . *describe what the library does for the taxpayers.* PPO

. . . *interview a taxpayer to find out how this person feels about the library.* PPO

. . . *tell how taxpayers trust the librarian.* PPO

For homework ask the children to interview a neighbor taxpayer to find out how he or she feels about paying taxes for the library. Compare findings and prepare for the interview with regard to the above objectives.

Volunteers could visit or telephone a public librarian to ask what services this person gives to the community and how it feels to be a public servant.

. . . *draw a picture of one's favorite library activity.* PPO

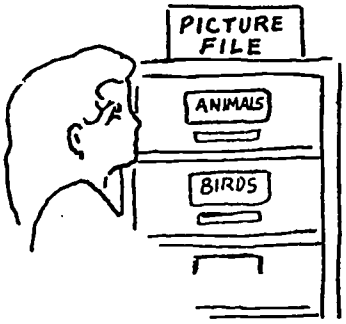
The REACT page reviews public services supervised by librarians and asks that the child draw his favorite library activity.

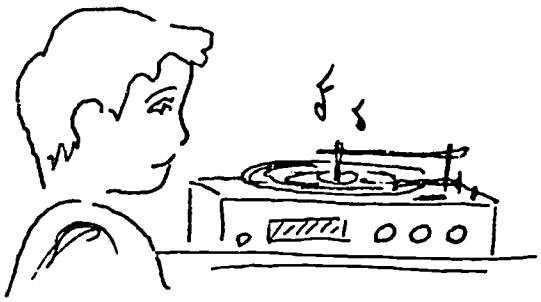
SD/Level 3/1

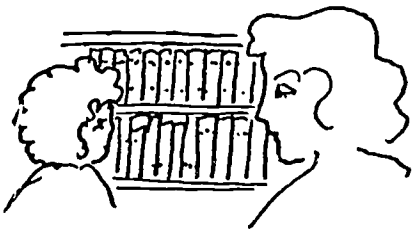
"At the Library"

AT THE LIBRARY

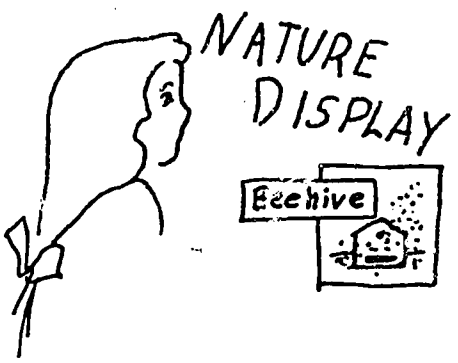
Put a circle around things that happen at the library.

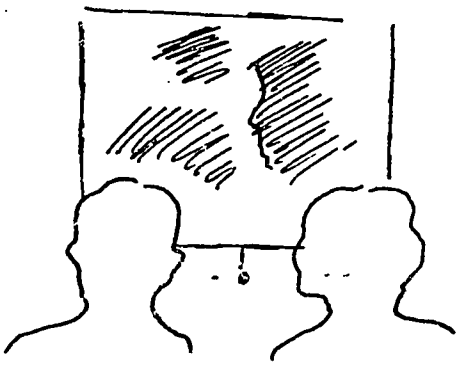






(over)





Use another paper to draw a picture of yourself doing what you like best at the library.

LIBRARY ORDER

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *tell two different feelings librarians have about order.*

. . . *participate in a group discussion to discover individual feelings about order.*

Attitudes and Appreciations Dimension

. . . *explain the need for order in the library.*

. . . *identify keeping books in order as one of the librarian's jobs.*

Career Information Dimension

. . . *describe a librarian whom you know.*

Educational Awareness Dimension

. . . *be able to locate a library book by using the card catalog and the Dewey Decimal System.*

Subject Matter Concepts

Language Arts
- Reading
  - Finding information
  - Library skills
- Listening and Speaking
  - Developing discussion skills

Mathematics
- Facts and Operations
  - Ordinals

Social Studies
- Political Science
  - Rules regulate behavior.
- History
  - Great Americans in history

Preplanning Suggestions

Available copies of dictionaries and encyclopedias
Cards from library card catalog or an acquaintanceship with where to find such cards in a local library (REACT pages provide samples.)
Cards or paper cut to card size for classroom cataloging
Source for numbers used on card catalogs (An interview or questionnaire for the librarian could be planned.)

LIBRARY ORDER

Ask the children to think about reference materials with which they are already familiar--the dictionary for example. Pretend the writer of the dictionary started with baskets and baskets full of words. How would he put them in order? Why do you need order in the dictionary? Think of the encyclopedia. Ask the children, "How does the encyclopedia have order?" Your reading book? How do page numbers keep order? Alphabetizing? Lead the children to conclude that order makes it possible to find things in a book.

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . explain the need for order in the library. PPO

. . . identify keeping books in order as one of the librarian's jobs. PPO

Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

Ask what will be necessary for finding things in the library. Tell the children that each library book has a place according to a number order called the Dewey Decimal System. (You may mention the Library of Congress System as common in very large libraries.) Tell them that you can find a book's number by looking up it's author, title, or subject by alphabetical order in the card catalog. Each book has cards, a number painted on it, and a place on the shelves.

Learning achievement depends upon effort and ability.

Educational Awareness

. . . be able to locate a library book by using the card catalog and the Dewey Decimal System. PPO

If you have not already done so, plan a library skill lesson with the children. Visit your school or public library. Teach the card catalog and the Dewey Decimal System as ways of keeping library order. The REACT pages will supplement this lesson.

Occupations require special personal characteristics.

Career Information

An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

Self-Development

An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

Self-Development

. . . *describe a librarian whom you know.* PPO

. . . *tell two different feelings librarians have about order.* PPO

While the class is at the library suggest that prepared volunteers interview the librarian to find out how she feels about keeping good order in the library. Is it fun? Tiring? Satisfying?

When you return to the classroom ask the children to point out places where order in the classroom is good and where it is poor.

. . . *participate in a group discussion to discover individual feelings about order.* PPO

Divide the class into groups. Suggest that they discuss for ten minutes or so how they feel about keeping order at home and at school. Perhaps they could together make a list of words to tell how persons feel about order--words such as clean, quiet, tired, etc. Make another list telling feelings about disorder. Report to the rest of the class if possible.

The first REACT page illustrates and implies rules. Library rules are a part of library order. The librarian is responsible for making good rules. Find out whether the children can think of other workers who make rules for others to follow.

The second REACT page offers models of three main types of catalog cards. Children are invited to make author, title, and subject cards for their favorite book or books. These need be no more detailed than having the number, author, title, and subject in the right order. If children

are interested in the illustrator, publisher, date, etc., encourage them to add this detail to their cards.

Next are two REACT pages to help teach the Dewey Decimal System. The first gives the history of the System and asks the children to supply cartoon drawings according to Mr. Dewey's method of invention. The second set of pages provides practice in assigning Dewey numbers--a skill the librarian will have.

SD/Level 3/2

"Rules for Keeping Order"

SD/Level 3/3

"Cards for Finding Books"

SD/Level 3/4

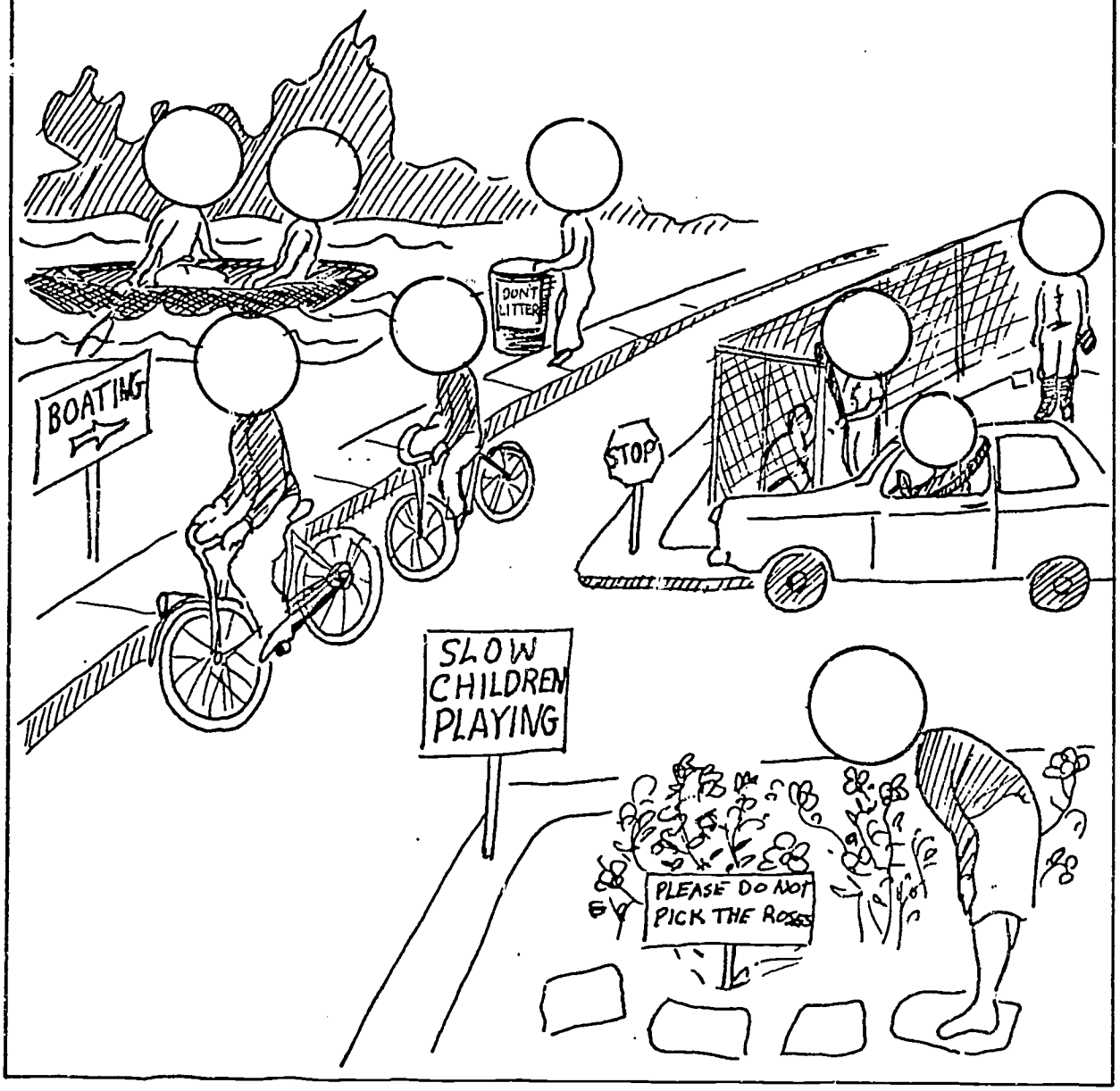
"Caveman's Questions"

SD/Level 3/5

"What's My Number?"

RULES FOR KEEPING ORDER

Make a little red X where you see people obeying rules or where there is a sign of a rule. Be able to tell why you put your Xs. Put faces on the people to show their feelings.



CARDS FOR FINDING BOOKS

Here are three kinds of cards in the card catalog.

Use blank cards to make author, title, and subject cards for your favorite library book.

Put everyone's cards together in alphabetical order.

You will have a favorite book card catalog for your class.

Add cards to the card catalog when you find other good library books.

Author Card

E
800
G83i *l*

Greene, Carla, 1906-
I want to be a librarian. Illus. by Frances Eckart. [Chicago,] Childrens Press [1960]
unpaged. illus. 25 cm.

1. Library science—~~Juvenile literature.~~ 2. Title.

PZ10.G7 Ialr 60—6674 ‡

Library of Congress [61k3]
LAB. SC.

(over)

Title Card

E
800
G83i *l*

I want to be a librarian

Greene, Carla, 1906-

I want to be a librarian. Illus. by Frances Eckart. [Chicago,] Childrens Press [1960]

unpaged. illus. 25 cm.

1. Library science—Juvenile literature. I. Title.

PZ10.G7 Ialr — 60—6674 ‡

Library of Congress [61k3]

LAB. SC.-

Subject Card

E
800
G83i *l*

Library science

Greene, Carla, 1906-

I want to be a librarian. Illus. by Frances Eckart. [Chicago,] Childrens Press [1960]

unpaged. illus. 25 cm.

1. Library science—Juvenile literature. I. Title.

PZ10.G7 Ialr — 60—6674 ‡

Library of Congress [61k3]

LAB. SC.-

CAVEMAN'S QUESTIONS

In the late 1800's Mr. Melvil Dewey invented a way to keep library books in order. He pretended he was a caveman. He tried to ask himself the most important questions. Then he thought of what kinds of books would answer each question. He gave a hundreds number to each set of books.

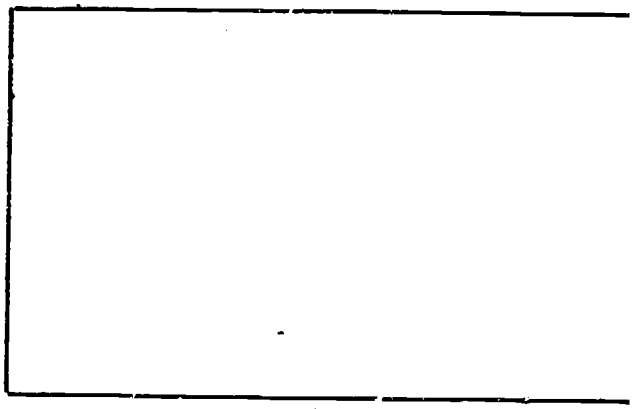
Use the boxes to draw a set of cartoons. Have the cartoons show the caveman asking Mr. Dewey's questions.

Caveman's Question:
Who am I?
(Man thinks about himself.)
Kind of books:
Philosophy and Psychology
Hundreds Number:
100's

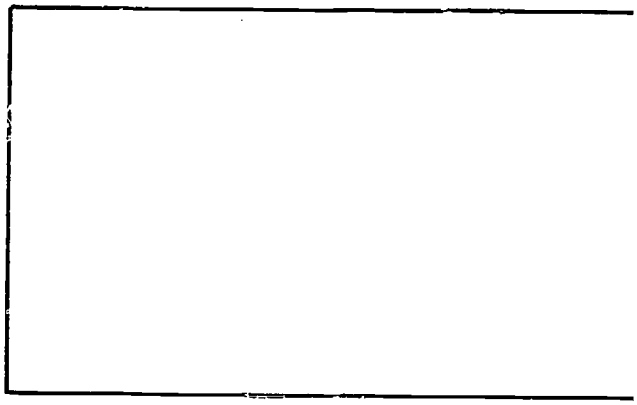
Caveman's Question:
Who made me?
(Man thinks about God.)
Kind of books:
Religion
Hundreds Number:
200's

(over)

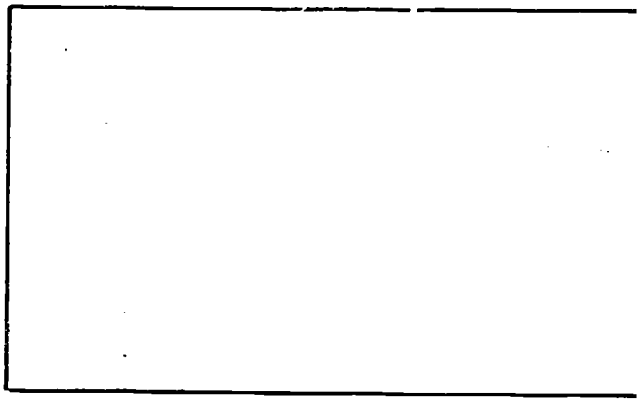
Caveman's Question:
Who is the man in the next cave?
(Man thinks about others.)
Kind of books:
Social Studies
Hundreds Number:
300's



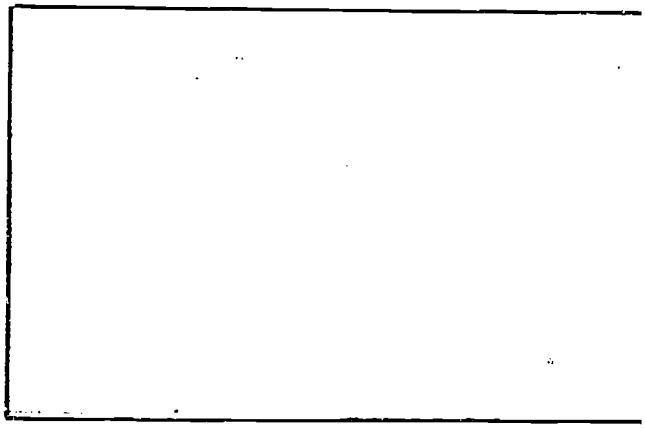
Caveman's Question:
How can I make that man
understand me?
(Man learns to use words.)
Kind of books:
Language
Hundreds Number:
400's



Caveman's Question:
How can I understand nature
and the world around me?
(Man learns to understand
the land, the sea, and the air.)
Kind of books:
Pure Science
Hundreds Number:
500's

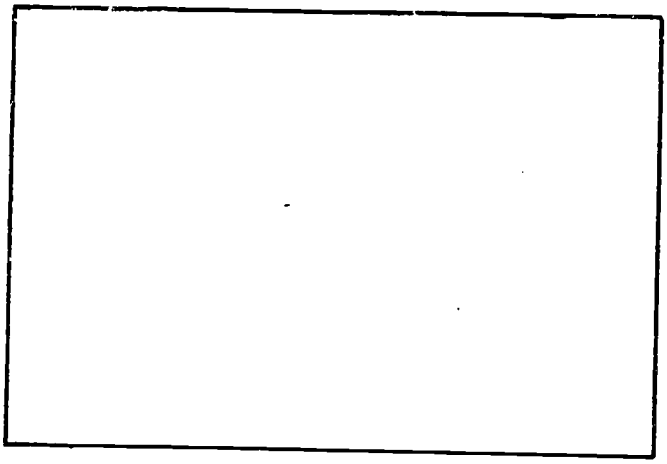


Caveman's Question:
How can I use what I know
about the world?
(Man makes plans and tools
for himself. He learns to
plant, build, and cure.)
Kind of books:
Useful Science and Arts
Hundreds Number:
600's

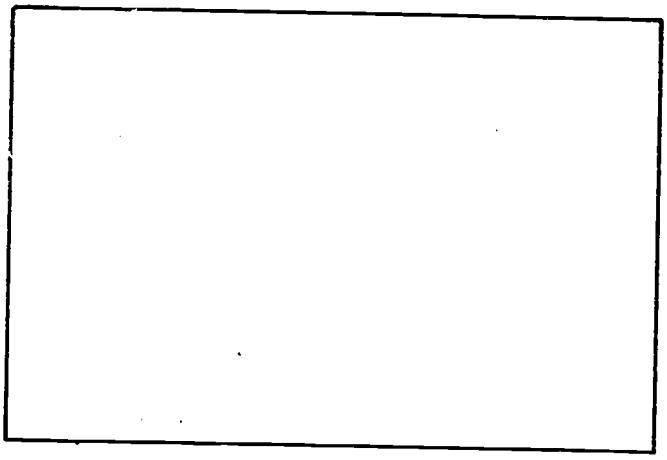


CAVEMAN'S QUESTIONS

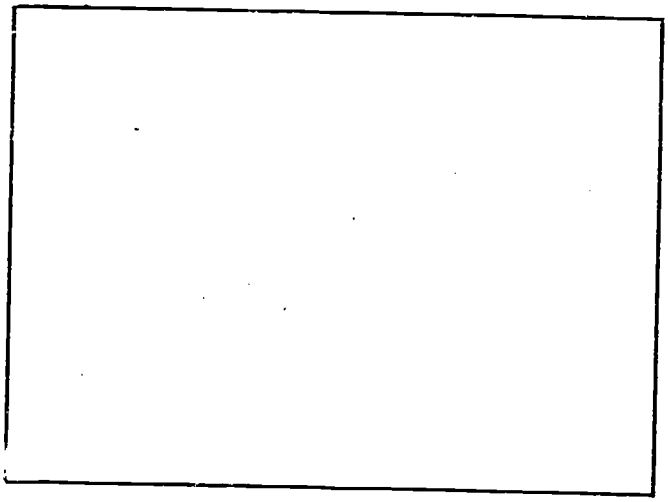
Caveman's Question:
How can I enjoy free time?
(Man paints, makes music, plays games, and dances.)
Kind of books:
Fine Arts and Recreation
Hundreds Number:
700's



Caveman's Question:
How can I give my children a record of interesting things?
(Man tells stories, has plays and writes poems.)
Kind of books:
Literature
Hundreds Number:
800's



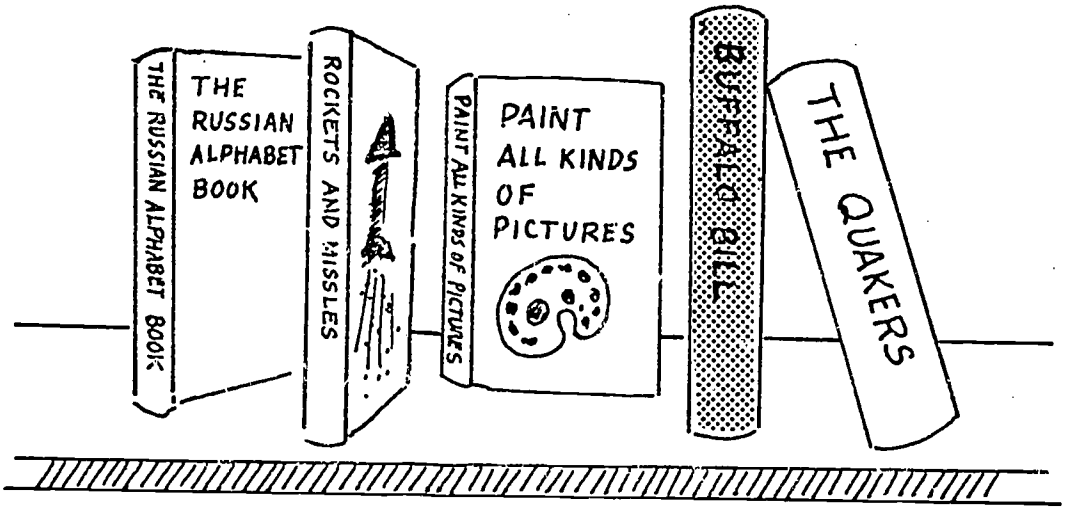
Caveman's Question:
How can I leave a record of great men and what they have done?
(Man tells about people, events, and travels.)
Kind of books:
History, Biography, Geography
Hundreds Number:
900's

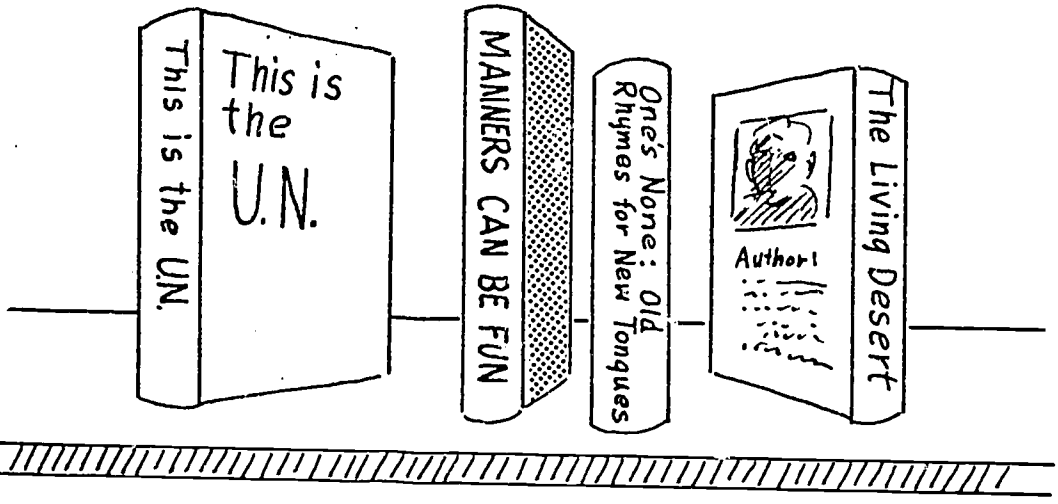


Adapted from: Guidebook for Teaching Library Skills, Book Two. Margaret V. Beck and Vera M. Pace, T. S. Denison & Co., Minneapolis, 1965, pp. 17-18.

WHAT'S MY NUMBER?

Read these book titles. Think of the hundreds number of the Dewey Decimal System. Put the first digit of the book's Dewey number on the line below the book. Answer the questions on the next page.





(over)

100's ?? 400's ?? 300's ??

900's ?? 200's ?? 500's ??

800's ?? 700's ?? 600's ??

1. The story of my life will be in the _____'s.

2. I learned to play soccer from the _____'s.

3. I found out about Pueblo Indian life in the _____'s.

4. The story of Ralph Bunche is in the _____'s.

5. I had to go to the hospital for stitches when I cut my hand. You can learn about layers of skin and your blood in the _____'s.

6. If you need to know about gravity look in the _____'s.

7. There are French and Spanish dictionaries in the _____'s

8. Bible stories are in the _____'s.

9. There are patterns for making kites in books in the _____'s.

10. Look in the _____'s for pictures of poisonous snakes.

PICKING AND CHOOSING

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *identify personal feelings about helping others.*

Attitudes and Appreciations Dimension

. . . *identify helping in book selection as a main task of librarians.*

Career Information Dimension

. . . *point out possible pleasant or unpleasant features of the librarian's job.*

Educational Awareness Dimension

. . . *help a classmate to find a book.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Individual characteristics
  - Values and purposes in behavior

Language Arts
- Reading
  - Library skills

Preplanning Suggestions

Slips of paper large enough to include the descriptions of a book from the library and a child's name
Box or basket to use for drawing names (See activity.)
Planned library period

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . *identify helping in book selection as a main task of librarians.* PPO

Librarians often help people find books. They know where things are in the library and they show others how to search for what they need. A librarian can help a small child to find a good book about turtles. A librarian can locate very special materials for advanced students doing research. Ask the children to tell about times when a librarian has helped them to find a book.

The individual worker determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

. . . *point out possible pleasant or unpleasant features of the librarian's job.* PPO

An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.

Self-Development

. . . *identify personal feelings about helping others.* PPO

So that the class can experience some of the feelings a librarian may have about helping in book selection, hold a book exchange. Organize this like a Christmas gift exchange. Ask each pupil to put his name and a description of the kind of book he wants on a slip of paper. Fold the slips. Stir them up in a basket. Let each child draw a slip. Children should keep the name of the person whose book request they draw a secret.

Learning achievement depends upon effort and ability.

Educational Awareness

. . . *help a classmate to find a book.* PPO

Spend a library period selecting books for others. When everyone is ready, present the books to the people who made the requests. Ask pupils to tell about feelings they had during the project. Discuss reactions of people

when they received their books. Help pupils to relate the feelings they discover to the librarian's work.

The REACT page asks children to recommend books to suit the feelings of fictional people.

SD/Level 3/6

"Readings for Feelings"

READINGS FOR FEELINGS

You know about lots of books and stories.

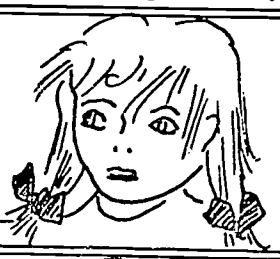
Pretend you are a librarian.

Suggest a book for these people.

David feels bored. He wants a scary and exciting story.
He could read _____

Mrs. Tibbet is a teacher. She wants to read a good animal story to her class.
This could be _____

Jane has been bothered and busy all day. She wants a book to help her rest.
She should try _____



Sue is angry with her best friend. She wants a story about feeling mad.
Sue would like _____

Jay found a fossil rock. He wants to know more about it. A good science book for him is _____

RELATED MATERIALS

At the Library (Book) L. Colonius. Childrens Press, 1224 West Van Buren, Chicago, Illinois 60607, 1967.

Beginning Responsibility: Learning to Follow Instructions (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1970.

Beginning Responsibility: Rules at School (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1964.

Behind the Scenes at the Library (Book) Edith Busby. Dodd, Mead and Company, 432 Park Avenue South, New York, New York 10003, 1960.

Community Helpers (Sound Filmstrip) McGraw-Hill Films, 330 West 42nd Street, New York, New York 10003, 1970.

Cooperation, Sharing, and Living Together (Multi-Media) Educational Projections Corporation, 1911 Pickwick Avenue, Glenview, Illinois 60025, 1971.

First Film on Our Library, A (Film, Color or B/W, 12-min.) Bailey Film Associates, 2211 Michigan Avenue, Santa Monica, California 90404, 1971.

How Do You Feel? (Filmstrips) Educational Reading Service, 320 Route 17, Mahwah, New Jersey 07430, 1972.

How I Feel (Book) June Behrens. Childrens Press, 1224 West Van Buren, Chicago, Illinois 60607.

I Want to Be a Librarian (Book) Carla Greene. Childrens Press, 1224 West Van Buren, Chicago, Illinois 60607, 1960.

Library, The: A Place for Discovery (Film, Color or B/W, 16-min.) Encyclopaedia Britannica Educational Films, Inc., 425 North Michigan Avenue, Chicago, Illinois 60611, 1973.

What About Me; Dimensions of Personality Series (Teacher's Guide and Pupil Workbook) Carl Fischer. Pflaum/Standard, 38 West Fifth Street, Dayton, Ohio 45402, 1971.

What Happens at the Library (Book) Arthur Shay. Reilly and Lee Books, 114 West Illinois Street, Chicago, Illinois 60610.

What I Like to Do (Interest Inventory) Science Research Associates, 259 East Erie Street, Chicago, Illinois 60611, 1972.

LIBRARIANS

Making information available is the job of librarians. Librarians select and organize collections of books, pamphlets, manuscripts, periodicals, clippings, and reports, and assist readers in their use. In many libraries, they also may make available phonograph records, maps, slides, pictures, tapes, films, paintings, and braille and talking books. In addition to classifying and cataloging books and other loan items, they publicize library services, study the reading interests of people served by the library, and provide a research and a reference service to various groups. Librarians also may review and abstract published materials and prepare bibliographies.

In a small library, a librarian performs a great variety of tasks. In a large library, each librarian may perform only a single function, such as cataloging, publicizing library services, or providing reference service, or he may specialize in a subject area such as science, business, and the arts, or medicine.

Public librarians serve all kinds of readers--children, students, teachers, research workers, and others. Increasingly, librarians are providing special materials and services to culturally and educationally deprived people. The professional staff of a large public library system may include the chief librarian, an assistant chief, and several division heads who plan and coordinate the work of the entire library system. This system also may include librarians who supervise branch libraries, and other librarians who are specialists in certain areas. The duties of some of these specialists are briefly described as follows: Acquisition librarians purchase books and other library materials recommended by staff members, keep a well-balanced library in quantity and quality, make sure that the library receives what it orders, and maintain close contact with book jobbers and publishers. Catalogers classify books under various subjects and otherwise describe them so they may be located through catalogs on cards or in other forms. Reference librarians aid readers in their search for information--answering specific questions or suggesting sources of information. This work requires a thorough understanding of bibliographic material and a general knowledge of library materials in various subject fields. Children's librarians plan and direct special programs for young people. Their duties include helping children find books they will enjoy, instructing them in the use and content of the library, giving talks on books, and maintaining contact with schools and community organizations. Often, they conduct regular story hours at the library and sometimes on radio or television. Adult services librarians may select materials for and advise mature readers. They are often asked to suggest reading materials, and to cooperate in or plan and conduct educational programs on such topics as community development, public affairs, creative arts, problems of the aging, or home and family life. Young adult services librarians may select books and other materials for young people of junior high school and high school age and guide them in the use of these materials. They may arrange book or film discussion groups, concerts of recorded popular and classical music, and other programs related to the interests of young adults. They also may help to coordinate the services of the school libraries and the local public library. Bookmobile librarians take library materials to people who live in areas where other public library services are nonexistent or inadequate.

School librarians instruct students in the use of the library and visit classrooms to familiarize students with library materials relating to the subjects being taught. They also work with teachers and school supervisors who plan the curriculum. They prepare lists of printed and audiovisual materials on certain subjects; meet with faculty members to select materials for school programs; and select, order, and organize library materials. Many school librarians are employed by school district central offices as supervisors to plan and coordinate library services for the entire school system, as catalogers and as librarians to administer professional libraries for teachers. Very large high schools may employ several professional librarians, each responsible for a special aspect of the library program or for special subject materials.

In 1968, about 106,000 people were employed as professional librarians. Most of them worked full time. School librarians accounted for about two-fifths of all librarians; public librarians represented one-fourth; librarians in colleges and universities and those employed in special libraries (including libraries in government agencies), each accounted for about one-sixth. A small number of librarians were employed as teachers and administrators in schools of library science.

Most librarians work in cities and towns. Those attached to book-mobile units serve widely scattered population groups, mostly in suburban or rural areas. Rural, suburban, and town public libraries are being organized increasingly into county and multicounty systems, including centralized reference and technical services.

To qualify as a professional librarian, one must ordinarily have completed a course of study in a graduate library school. This usually means at least five years of college--four to meet the requirements for a bachelor's degree and a fifth year or more of specialized study in library science, after which the master's degree is conferred. A growing proportion of the persons in administrative and other high-level library positions have this training. A Ph.D. degree is an advantage to those who plan a teaching career in library schools or who aspire to a top administrative post, particularly in a college or university library or in a large school library system. For those who are interested in the special libraries field, a doctorate in the subject of the library's specialization also would be highly desirable.

In addition to an appropriate educational background, a person interested in becoming a librarian should have above-average intelligence, an interest in people, intellectual curiosity, an ability to express himself clearly, a desire to search for and use recorded materials, and an ability to work harmoniously with others.

Experienced librarians may advance to administrative positions or to specialized work. Promotion to these higher positions may be limited, however, to those who have completed graduate training in a library school, or to those who have had specialized training.

The employment outlook for trained librarians is expected to be excellent through the 1970's. A nationwide shortage existed in 1968 and is expected to continue despite the anticipated rise in the number of library school graduates. The best opportunities probably will be in school and college and university libraries, especially in research, subject specialties, and some languages.

Persons who have only a bachelor's degree with a major in library science, probably will continue to find employment opportunities in libraries. Many part-time positions also will be available for persons trained in library work.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U. S. Department of Labor, Washington, D. C.
pp. 233-236

COFFEE, TEA, OR MILK?

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

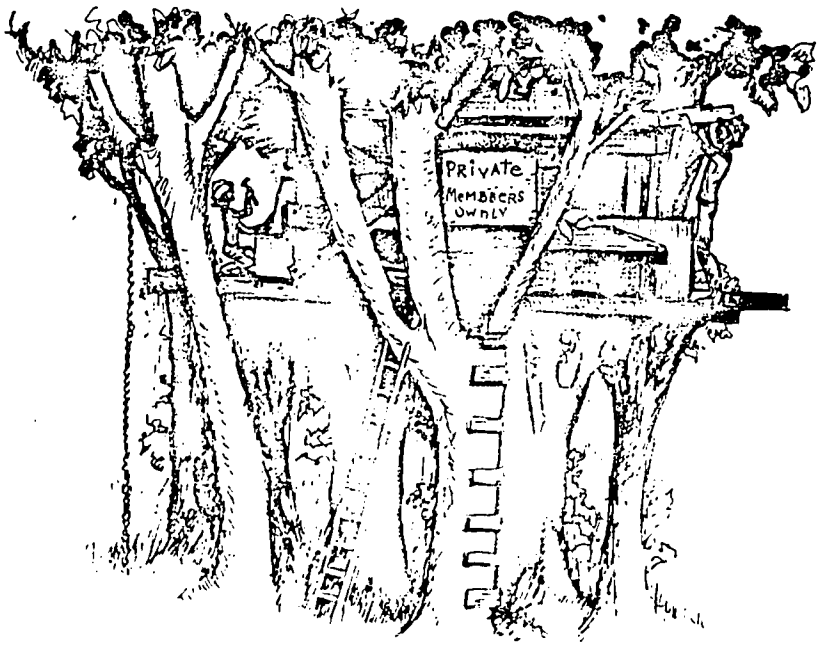
CAREER DEVELOPMENT FOCUS: Groups outside of school influence an individual's personal development.

OCCUPATIONAL FOCUS: Waiter/Waitress

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Writing Orders
2. Tipping
3. Doing for Others



Teacher Goals

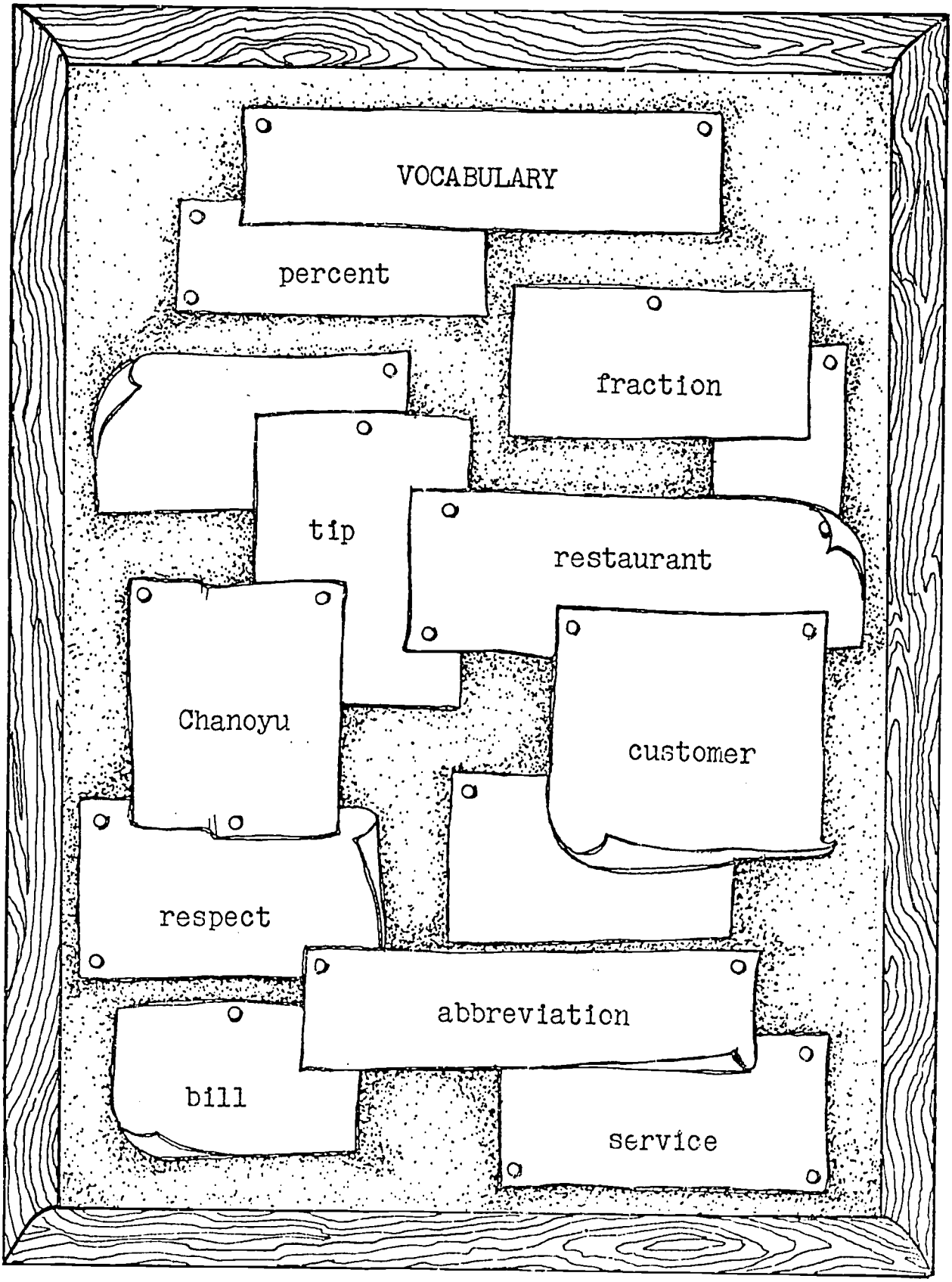
Teacher goals of this strategy combine a Self-Development Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Waiter/Waitress. In this perspective the teacher's goals are to:

Help pupils to relate academic and personal relations skills to the work of the waiter/waitress.

Provide opportunities for pupils to try out the occupational tasks of the waiter/waitress.

Guide the children to understand that sharing a meal draws people together in a group. By serving a meal the waiter/waitress helps to create and reinforce groups.

Increase the pupils' awareness of social groups and their purposes and interactions.


VOCABULARY
percent
fraction
tip
restaurant
Chanoyu
customer
respect
abbreviation
bill
service

233

WRITING ORDERS

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *identify cooks and customers as groups with whom the waiter/waitress must deal.*

Attitudes and Appreciations Dimension

. . . *write a meal order according to agreed upon abbreviations.*

Career Information Dimension

. . . *make up menu abbreviations.*

. . . *identify accurate service as an important skill for a waiter/waitress.*

Educational Awareness Dimension

. . . *tell why a waiter/waitress must be able to use abbreviations.*

Subject Matter Concepts

Language Arts
- Grammar and Usage
  - Abbreviations

Social Studies
- Sociology-Anthropology
  - Dependence on others

Preplanning Suggestions

Menus from nearby restaurants
Interview a waiter or waitress to show how to write orders.
Blank order forms for children to use in taking orders (These may be dittoed for class use.)
Food models or pictures of foods to be used in serving orders

Groups outside of school influence an individual's personal development.

Self-Development

. . . *identify cooks and customers as groups with whom the waiter/waitress must deal.* PPO

In school we learn to write. Out-of-school people read our writing. Ask the children to think of workers who do a lot of writing with paper and pencil. Focus in upon waiters and waitresses. What do these workers write down? Who must read it? Why?

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *tell why a waiter/waitress must be able to use abbreviations.* PPO

Obtain a menu from a nearby restaurant. Ask a waiter/waitress there to write out an order for you to show the children. Let the class compare the menu to the written order. It should be plain to see that the waiter/waitress does a lot of short, fast writing, thus letting just a few letters stand for whole words. Remind the children that this practice is called abbreviation.

Propose this question to the class: You are a customer in a restaurant. Why do you want the waiter/waitress to be able to write fast? Why do you want the cook to be able to read and understand the abbreviations?

Occupations have their own vocabularies.

Career Information

. . . *make up menu abbreviations.* PPO

. . . *write a meal order according to agreed-upon abbreviations.* PPO

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

Divide the class into several groups. Ask each group to make up a menu for their imaginary restaurant and decide upon abbreviations for their waiters/waitresses to use. Provide the children

with the blank order forms accompanying this activity. Give the groups a time limit in which to write out an order using their abbreviations. Exchange orders within the groups. Have the children now pretend they are cooks. Can the cooks read the orders back to the writers? Did the abbreviations work? The children may enjoy timing themselves and comparing the time needed to write the order using abbreviations with the time needed to write whole words.

A waiter/waitress usually serves more than one person at a time. Experienced waiters/waitresses can serve as many as 20 people at once. Ask the children to think about how the waiter/waitress can remember who ordered what.

Occupations require special personal characteristics.

Career Information

. . . *identify accurate service as an important skill for a waiter/waitress.* PPO

Often the waiter/waitress will quickly write up a second order to match the one they turn in to the cook. They make up a code to go on this one such as colors of clothing. They keep this order to help them remember which customer gets what food. Good waiters/waitresses always bring the right food to the right people.

Should there be time and interest, this simulation activity could be greatly expanded by the class. Food models of the menu items could be made. Cooks could fill the plates according to orders submitted. Children role playing waiters/waitresses could deliver plates to children role playing customers. The project could include practice in writing and remembering orders, table setting, tallying checks, and receiving payment.

The REACT page is a matching exercise for common abbreviations.

SD/Level 3/7

"Abbreviations"

Alexander's

RESTAURANT LOUNGE
PHONE 672-4120
967 W. LINCOLN AVENUE • MILWAUKEE, WIS.

DATE	SERVER	TABLE	PERSONS	CHECK NO. 20028
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

CHECK NUMBER 20028

Alexander's
967 W LINCOLN AVE. • MILWAUKEE, WIS. • 672-4120

AMOUNT

DATE

"THE TOWER"

SUPPER CLUB

CHECK NO. 20009	WAITER	PERSONS	DATE / /

	TOTAL	

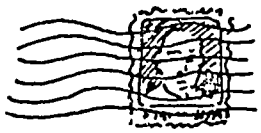
546 47 4

ABBREVIATIONS

Write the number of the word that is abbreviated on the line.

PLACES

Jeff Pitman
706 43rd St. ____
Dover, Del. ____



Mark Burdett
17 7th Ave. ____
Chicago,
Ill. ____

1. avenue
2. street
3. District of Columbia
4. Illinois
5. Delaware

The capital of our country is Washington, D.C. ____

FAMOUS BIRTHDAYS

Queen Elizabeth II, ____Apr. 21, 1926
George Washington, ____Feb. 22, 1732
Jane Addams, ____Sept. 6, 1860
Abraham Lincoln, ____Feb. 12, 1809
Mohandas Gandhi, ____Oct. 2, 1869
Martin Luther King, Jr., ____Jan. 15, 1929

6. January
7. October
8. February
9. April
10. September

NATIONAL ORGANIZATIONS

Y.M.C.A.	_____	11. Young Women's Christian Association
Y.W.C.A.	_____	12. Girl Scouts of America
B.S.A.	_____	13. Young Men's Christian Association
G.S.A.	_____	14. Boy Scouts of America

DIFFERENT KINDS OF DOCTORS

M.D.	_____	15. Doctor of Philosophy
D.D.S.	_____	16. Medical Doctor
D.V.M.	_____	17. Doctor of Veterinary Medicine
Ph.D.	_____	18. Doctor of Dental Surgery

TIME

A.D.	_____	19. before Christ
B.C.	_____	20. post meridian
a.m.	_____	21. month
p.m.	_____	22. Anno Domini
mo.	_____	23. ante meridian
yr.	_____	24. year

MATHEMATICS

mi.	_____	25. pint
cm.	_____	26. pound
lb.	_____	27. mile
kg.	_____	28. centimeter
pt.	_____	29. kilogram
kl.	_____	30. kiloliter

TIPPING

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *identify two or three ways customers influence a waiter/waitress.*

. . . *give an example of an award from an out-of-school group.*

Career Information Dimension

. . . *tell how a waiter/waitress's earnings may vary.*

Educational Awareness Dimension

. . . *tell when a waiter/waitress needs to add.*

Subject Matter Concepts

Mathematics
- Facts and Operations
  - Addition and division of money
  - Understanding of 1/5

Social Studies
- Economics
  - Earning money

Preplanning Suggestions

Menu with prices listed
Blank order forms for ordering at a restaurant

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *tell when a waiter/waitress needs to add.* PPO

Assign prices to the items on the menus which class groups made up in the previous activity. Ask the children to make up two customer orders, including prices, and total the bills. Use blank order forms from the previous activity if you have some left. Ask the children to explain what the customer pays for--not just food but food plus the services of the restaurant workers.

Groups outside of school influence an individual's personal development.

Self-Development

. . . *identify two or three ways customers influence a waiter/waitress.* PPO

Earnings vary with occupations.

Career Information

. . . *tell how a waiter/waitress's earnings may vary.* PPO

Explain that a waiter/waitress's hourly wage is very small--maybe less than a dollar an hour. This is because customers are expected to pay the waiter/waitress directly through tips. In this way they can earn much more than their hourly wage. The amount of the tip depends on the total bill and on how much the customer likes the service. Today, customers should try to leave tips amounting to 15 percent to 20 percent of the total bill. Give children examples of this on the chalkboard. Ask them to tell stories of their own experiences of tipping. Did they ever come to a restaurant and find money left on the table? Ask the children to think about how a waiter/waitress might influence a customer favorably--by being quick, correct, polite, and available should the customer want to make additional orders.

Groups outside of school influence an individual's personal development.

Self-Development

. . . *give an example of an award from an out-of-school group.* PPO

Tipping is like an award in recognition of the waiter/waitress's good work. Children often receive recognition from out-of-school groups. This may be for sporting events, Cub or Brownie Scout badges, county fair awards, etc., depending on your area. Ask for volunteers to tell why they enjoy participating in out-of-school groups.

The REACT page is a lesson in figuring tips. It includes discussion of percents and fractions.

SD/Level 3/8

"Figuring Tips"

FIGURING TIPS

PERCENT is thinking about something as if it had 100 equal parts.

A dollar is an easy way to see percents because it has 100 equal parts.

$ .01 = 1% of one dollar
.02 = 2% of one dollar
.10 = 10% of one dollar
.50 = 50% of one dollar
1.00 = 100% of one dollar

A waitress should be paid a TIP by the customer. The tip should be 20% of the customer's bill. If the customer's food costs $1.00, he should leave 20% of $1.00 or $.20 for the waitress.

Problem: How would you figure the tip if your bill is $2.50?

You need to know 20% of $2.50.

Think: How many 20%'s are in 100%? _____

20%	20%	20%	20%	20%	= 100%

What fraction of 100% is 20%? _____

To find 20% of something divide it into _____ equal parts.

$2.50 ÷ 5 = _____

Answer: I should give the waitress _____ for a tip.

(over)

Figure out these problems:

The customer whose bill is $10.00 should pay the waitress _____.

The customer whose bill is $15.00 should pay the waitress _____.

The customer whose bill is $20.00 should pay the waitress _____.

The customer whose bill is $25.00 should pay the waitress _____.

DOING FOR OTHERS

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *name three or four local groups who help others.*

. . . *describe how family customs may influence the waiter/waitress.*

. . . *give an example of how a person can influence a group and how a group can influence a person.*

. . . *tell the purpose of the Japanese tea ceremony.*

Attitudes and Appreciations Dimension

. . . *participate in a waiter/waitress role to benefit an out-of-school group.*

. . . *set a table according to an established pattern.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Groups within the community
  - Cultural diversity

Language Arts
- Listening and Speaking
  - Developing discussion skills

Preplanning Suggestions

List of service organizations in the area
Resource people to visit school from service groups
Literature, pamphlets, etc. from service groups
Participation by class members in serving food to others
Table service for practicing correct table setting (Accept settings which might be different from the conventional one.)
Materials for a Tea Ceremony (See REACT page--"Chanoyu.")

Groups outside of school influence an individual's personal development.

Self-Development

. . . name three or four local groups who help others. PPO

Children are probably aware of many outside-of-school groups who help others. Perhaps some have participated in group service activities at the "Y," in scouting, or 4-H. Gather some literature or invite a panel of representatives of out-of-school groups who could discuss ways their own members influence others. If you are able to present a panel, plan with the children ahead of time. Involve class members in the inviting. Discuss in advance questions children would like to ask the visitors. Make it clear, either in the literature you gather or to those on the panel, that the class is studying ways out-of-school groups influence other people as well as their own members.

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . participate in a waiter/waitress role to benefit an out-of-school group. PPO

With the class aware of the influence and value of a variety of non-school group activities, interest the children in serving a meal to benefit a worthy out-of-school group. Class members would be waiters and waitresses for the meal.

Plan:
1. Which group you wish to benefit
2. Date, time, and place
3. Menu and cost
4. Number of tickets to be sold and the cost
5. Help for cooking
6. Advertising

To simplify matters for the children, tables can be set in advance. Food could be served buffet style with the waiters and waitresses responsible

for beverage refills, second portions, desserts, and clearing tables.

If the serving of a benefit meal is inconvenient, perhaps a substitute arrangement could be made. Maybe your school holds an annual chili supper in which the class could participate. A local institution such as a home for the aged may be willing to train groups of children to help serve one of their regular meals, especially regarding table setting and clearing. Perhaps there are waiter/waitress activities in the school cafeteria which the children could assume for a time.

Throughout preparations for your benefit supper, gather and share children's experiences of special dinners.

Groups outside of school influence an individual's personal development.

Self-Development

. . . describe how family customs may influence the waiter/waitress. PPO

. . . set a table according to an established pattern. PPO

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

Invite children to describe their family dinner times. Pay special attention to who sets the table, who serves the food, and who clears the table, as these are waiter/waitress duties. Ask the children to suggest how family customs may influence the waiter/waitress.

Stress the need for careful organization of the waiter/waitress's duties, the need for courtesy, and cleanliness. Teach the table setting pattern you will use for the benefit meal. Teach the etiquette of service such as right or left side, asking whether a diner would like more, or whether he is finished, etc.

Groups outside of school influence an individual's personal development.

Self-Development

. . . give an example of how a person can influence a group and how a group can influence a person. PPO

Before concluding the project give class members an opportunity to reflect upon the way helping an out-of-school group has influenced them and how they suspect they have influenced others.

One REACT page shows several possible table settings.

Groups outside of school influence an individual's personal development.

Self-Development

. . . tell the purpose of the Japanese tea ceremony. PPO

The second REACT page describes a very special occasion for being a waiter or waitress--the Japanese tea ceremony. Designate interested children to be hosts or hostesses. These children will, in turn, choose friends and dramatize the ceremony.

The final REACT page seeks to broaden the pupils' understanding of our social life in groups. You will need to read over the groups listed with the children and explain their functions. Groups listed should help stimulate discussion of related groups in your local community. Encourage children to list groups within their experience. Remind the children that the groups closest to us and which may influence us the most are our family, friends, and neighbors.

SD/Level 3/9

"Table Settings"

SD/Level 3/10

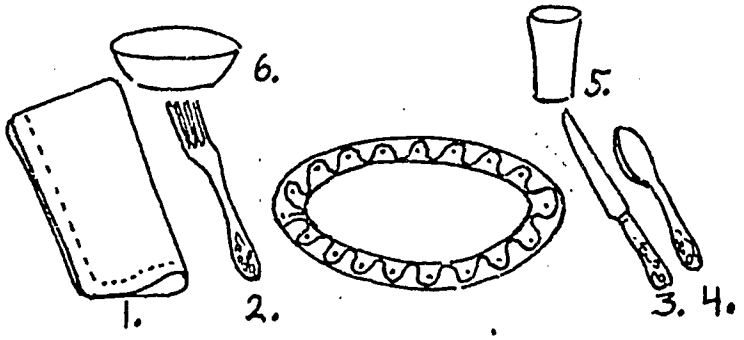
"Chanoyu"

SD/Level 3/11

"People Like Groups"

TABLE SETTINGS

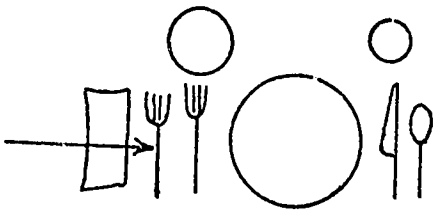
Get dishes and silverware. Practice setting each place at the table like this.

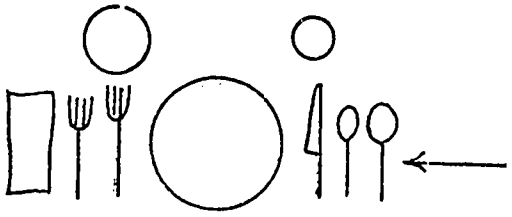


Rules:

1. napkin on the left
2. fork tines up
3. knife on the right, cutting edge toward the plate
4. spoon on the right
5. glass or cup opposite the knife
6. salad bowl or bread and butter plate opposite the fork

If a salad is served, put the salad fork here.





If soup is served before dinner, put the soup spoon here.

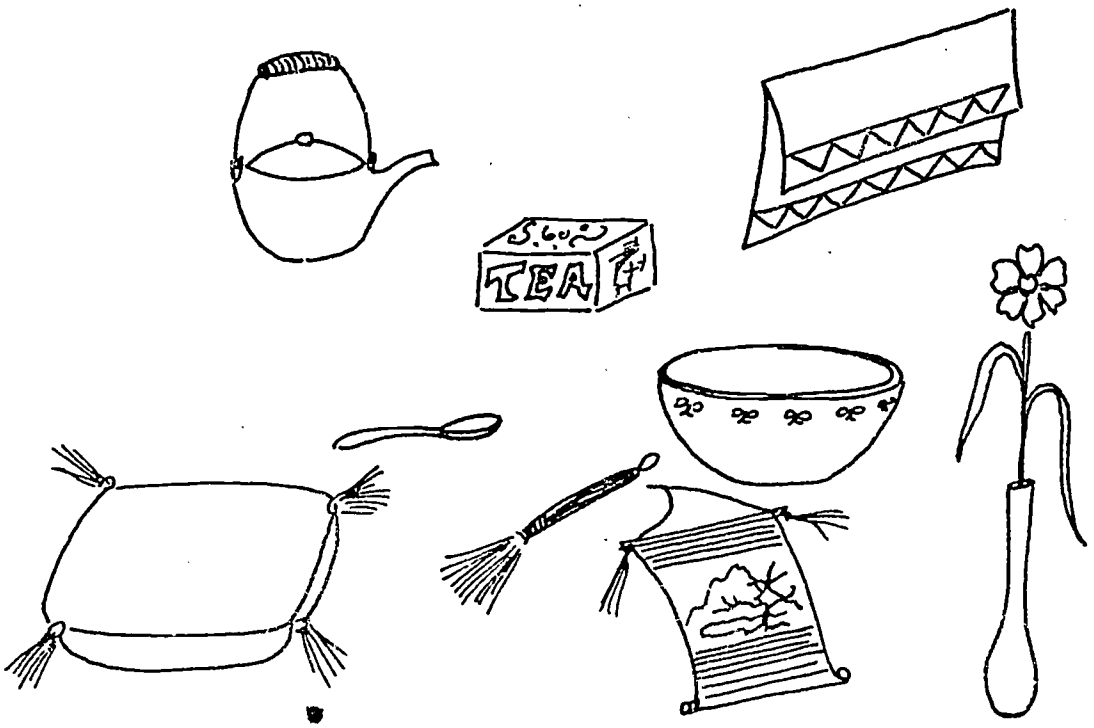
CHANOYU

Vocabulary: Chanoyu, ceremony, honor, respect, ladle, whisk

The people of Japan show respect for their friends by serving them tea. The tea is served in a quiet and beautiful ceremony called Chanoyu. For Chanoyu the host or hostess serves the guests. Here is a way for you to try out the tea ceremony. If you can't make real tea, just pretend.

I. Invite a few special friends whom you wish to honor.

II. Mark off a square area, 10 feet on each side. This is the size of the tea room. Make a small door. Tea room doors are only 3 feet high. The guests must bow down to get in and this is a sign of respect. Decorate the room with pillows for the guests to sit on, a vase or bowl of flowers, and a Japanese picture.



III. Have these things ready: a kettle of water, a small box of powdered tea, a bowl, a small spoon, a small whisk--like a tiny broom, a cloth napkin, and small sweets.

IV. The host or hostess follows old rules for serving the tea. It can take seven years to learn all the special hand movements for Chanoyu!

This is what is done:

1. Put a spoonful of powdered tea into the bowl.
2. Pour hot water over the tea.
3. Whip the tea with the little whisk.
4. Pass the bowl of tea and the napkin to the first guest.
5. The guest drinks from the bowl, wipes the place where he drank with the napkin. Then he passes the bowl and the napkin to the next guest.
6. A small piece of sweet cake is served to each guest.

PEOPLE LIKE GROUPS

People like to do things together. They form groups for religion, for government, for protection, for business, for learning, and for recreation.

Here are the names of some well-known groups. See if you can find the names of two groups of each kind. Write their names on the lines. Add names of groups which you know.

The Dupont Corporation

National Educational Television (NET)

The United Nations

The University of Colorado

The American Federation of Labor (AFL)

The Environmental Protection Agency (EPA)

Jews

The Green Bay Packers

District Courts

The Fire Department

The Roman Catholic Church

The Boston Symphony Orchestra

Groups for Religion	Groups for Learning
_____	_____
_____	_____
_____	_____

(over)

Groups for Protection

Groups for Government

Groups for Business

Groups for Recreation

RELATED MATERIALS

Career Mothers (Sound Filmstrip) Valiant, Inc., 237 Washington Avenue, Hackensack, New Jersey 07602, 1972.

Cooperation, Sharing, and Living Together (Multi-Media) Educational Projections Corporation, 1911 Pickwick Avenue, Glenview, Illinois 60025, 1971.

Developing Understanding of Self and Others (Multi-Media) American Guidance Services, Inc., Publishers' Building, Circle Pines, Minnesota 55014, 1970.

Earning Money (Book) Frederick Rossomando, et. al. F. Franklin Watts, Inc., 575 Lexington Avenue, New York, New York 10022, 1967.

Focus on Self Development; Stage Two: Responding (Multi-Media) Science Research Associates, 259 East Erie Street, Chicago, Illinois 60611, 1970.

Our Class Works Together (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1970.

Popeye and Hospitality and Recreation Careers (Comic Book) King Features Syndicate, 235 East 45th Street, New York, New York 10017, 1973.

School Problems: Getting Along With Others (Film, Color, 12-min.) Bailey Film Associates, 11559 Santa Monica Boulevard, Los Angeles, California 90025, 1972.

What About Me? (Worktexts and Activity Sheets) George A. Pflaum, Publisher, 38 West Fifth Street, Dayton, Ohio 45402, 1971.

Why People Have Special Jobs (Film, Color, 7-min.) Learning Corporation of America, 711 Fifth Avenue, New York, New York 10022, 1972.

Will I Have a Friend? (Book) Miriam Cohen. The Macmillan Company, 866 Third Avenue, New York, New York 10022, 1969.

WAITERS AND WAITRESSES

Whether they work in small lunchrooms or fashionable restaurants, all waiters and waitresses have jobs that are essentially the same. They take customers' orders, serve food and beverages, make out customers' checks, and sometimes they take payments as well. The manner in which waiters and waitresses go about their work may vary considerably, however, because food service in very small eating places differs from that in large ones; and service in restaurants that emphasize speed and efficiency is different from that where dining is formal and leisurely. (This statement covers the work of table waiters and waitresses employed in restaurants, hotels, and other eating places. Workers employed in private homes or counter waiters and waitresses in restaurants, hotels, and other establishments are not covered.)

Many thousand of eating places, such as those which often are patronized by working people on their lunch hours, emphasize quick service and a minimum of frills. In addition to waiting on tables, the waiters and waitresses in these establishments usually perform a variety of other duties associated with food service. Often, they set up and clear tables and carry dishes back to the kitchen. Sometimes, when the establishment is very small, they may combine waiting on tables with counter service, preparing sandwiches, or cashiering.

However, in most large restaurants and in places where meal service is formal, waiters and waitresses are relieved of most of these additional duties associated with serving. In such establishments, busboys and busgirls often set up tables, keep water glasses filled, and perform other routine tasks, leaving the waiters and waitresses free to devote practically all of their time to taking guests' orders and seeing that meals are properly served.

In those eating places where meals are served elaborately and a great deal of emphasis is placed on the satisfaction and comfort of each guest, a waiter may be called upon to advise about the choice of a wine or answer questions about the preparation of items on the menu. Sometimes, from a side table, he may prepare and serve salads to guests or flame certain dishes such as crepes suzettes.

More than 960,000 waiters and waitresses were employed in early 1968. The great majority--about 7 out of every 8--were women. The proportion of part-time workers was high. About 2 out of 5 were employed fewer than 35 hours a week. Approximately four-fifths of all workers in this occupation were employed in restaurants and other retail establishments that serve food. Hotels and educational institutions of all kinds also employ many waiters and waitresses. Jobs for waiters tended to be concentrated in those restaurants, hotel dining rooms, private clubs, and other establishments where meal service is formal.

Although this occupation includes many workers who do not have extensive schooling, more and more employers prefer that beginners have at least 2 or 3 years of high school. Home economics courses and special courses for waiters and waitresses which are offered by some public and private schools provide good preparation. Restaurant associations also offer training in this field. In addition, programs to train unemployed and underemployed workers for jobs

as carhops, waiters, and waitresses were operating in several cities in 1968 under provisions of the Manpower Development and Training Act.

Practically all newly hired workers without previous experience as a waiter or waitress undergo a period of on-the-job training, during which they learn about the type of food service offered in their employer's establishment. Sometimes they work as busboys or busgirls before being assigned a station as a waiter or waitress.

Waiters and waitresses must be able to make the calculations necessary to total guests' checks and compute taxes. Personal appearance, a pleasant manner, an even disposition, and the ability to cope with the rush of business that usually occurs at mealtimes are very important. In a few restaurants, knowledge of foreign language may be desirable. Waiters and waitresses often are required by state law to obtain health certificates to assure that they are free of communicable diseases. Physical stamina also is needed because they are on their feet during their working hours.

In many small eating places, opportunities for promotion are limited. However, after gaining experience, a waiter or waitress who starts in a job of this kind may transfer to a larger restaurant where earnings and prospects for advancement are likely to be better. Advancement may be to a position as cashier or to supervisory work as a headwaiter or hostess. Some supervisory workers eventually advance to managerial positions in restaurant operation.

Employment opportunities for waiters and waitresses are expected to be good throughout the 1970's. Most of the openings will occur as workers retire or leave their jobs for other reasons; retirements and deaths alone will create an estimated 44,000 openings each year. Turnover is particularly high in the many eating places which employ waitresses because many women leave their jobs to take care of family responsibilities.

In addition to the vacancies that occur because of turnover, thousands of jobs will be created by employment growth, as the number of eating places increases to meet the needs of the country's growing population. Also contributing to an increased need for restaurant services are factors such as rising income levels; more travel, both for business and pleasure; and the expected increase in the number of housewives employed outside the home. Eating places which employ waiters and waitresses probably will share only part of the additional business created. Some of it will be handled by the growing number of vending machines dispensing prepared foods, and some of it will go to the drug stores, limited price variety stores, and cafeterias where meal service is provided by counter and fountain workers. Nevertheless, the number of waiters and waitresses probably will rise rapidly through the 1970's.

Most of the job openings that arise because of growth and turnover will be for waitresses. The number of men in this occupation have been diminishing for some years, while at the same time jobs for waiters have become more concentrated in formal dining establishments; these trends are expected to continue. As in the past, both waiters and waitresses seeking employment in restaurants of this kind will find competition keen for the jobs that become available. Since there are relatively few such positions, hiring standards are high and turnover is usually very low. Beginners will continue to find their best opportunities for employment in the thousands of establishments where food service is less elaborate.

Because most waiters and waitresses receive tips from the guests they serve, as well as wages paid by their employers, estimating average weekly earning is difficult. Wages generally are lower than in other occupations, and the amount received in tips is usually somewhat greater than the wages paid. Tips vary greatly in amount, however, depending on the skill of the waiter or waitress, the tipping customs in the community, and especially on the type of restaurant. Because tips often average between 10 and 15 percent of guests' checks, earnings from tips are usually highest in restaurants where prices are also highest.

Limited wage data obtained from union-management contracts, in effect in 1969, covering eating and drinking places in large metropolitan areas on the East and West Coasts and in the Midwest, provide an indication of earnings for waiters and waitresses. In these contracts, straight-time hourly pay rates generally ranged from $.82 to $2.14 for waiters and waitresses. Many waiters and waitresses are not covered by union-management contracts. Wages in this occupation also vary greatly according to geographical location and type of establishment.

In addition to wages and tips, the majority of waiters and waitresses receive free meals at their place of work. Many also are furnished with uniforms. Paid vacations, after qualifying periods of service, are customary and various types of health insurance and pension plans also may be offered.

Waiters and waitresses often work split shifts--that is, they work for several hours during the middle of the day, take a few hours off in the afternoon, and then return to their jobs for the evening hours. Scheduled hours include some work on holidays and weekends. Large restaurants and dining rooms usually are furnished comfortably with convenient working areas and are often air conditioned. Workers in other eating places--particularly small ones--may find working conditions less desirable and the pace of work very rushed at times. In restaurants of all types, workers often spend long periods on their feet and may be required to lift heavy trays. Work hazards include the possibility of burns and cuts.

The principal union organizing waiters and waitresses is the Hotel & Restaurant Employees and Bartenders International Union.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U. S. Department of Labor, Washington, D. C.
pp. 328-330.

FASTER, SLOWER, HIGHER, LOWER

THIRD EXPERIENCE LEVEL INFUSION STRATEGY

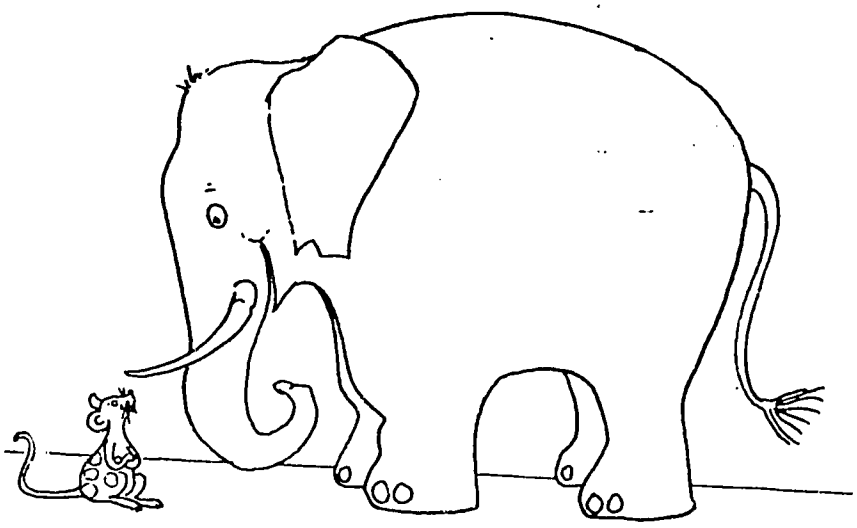
CAREER DEVELOPMENT FOCUS: Individuals differ in their physical characteristics.

OCCUPATIONAL FOCUS: Day Care Worker

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Numbers Are Needed
2. Rest Time
3. Everything In Its Place



Teacher Goals

Teacher goals of this strategy combine a Self-Development Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Day Care Worker. In this perspective the teacher's goals are to:

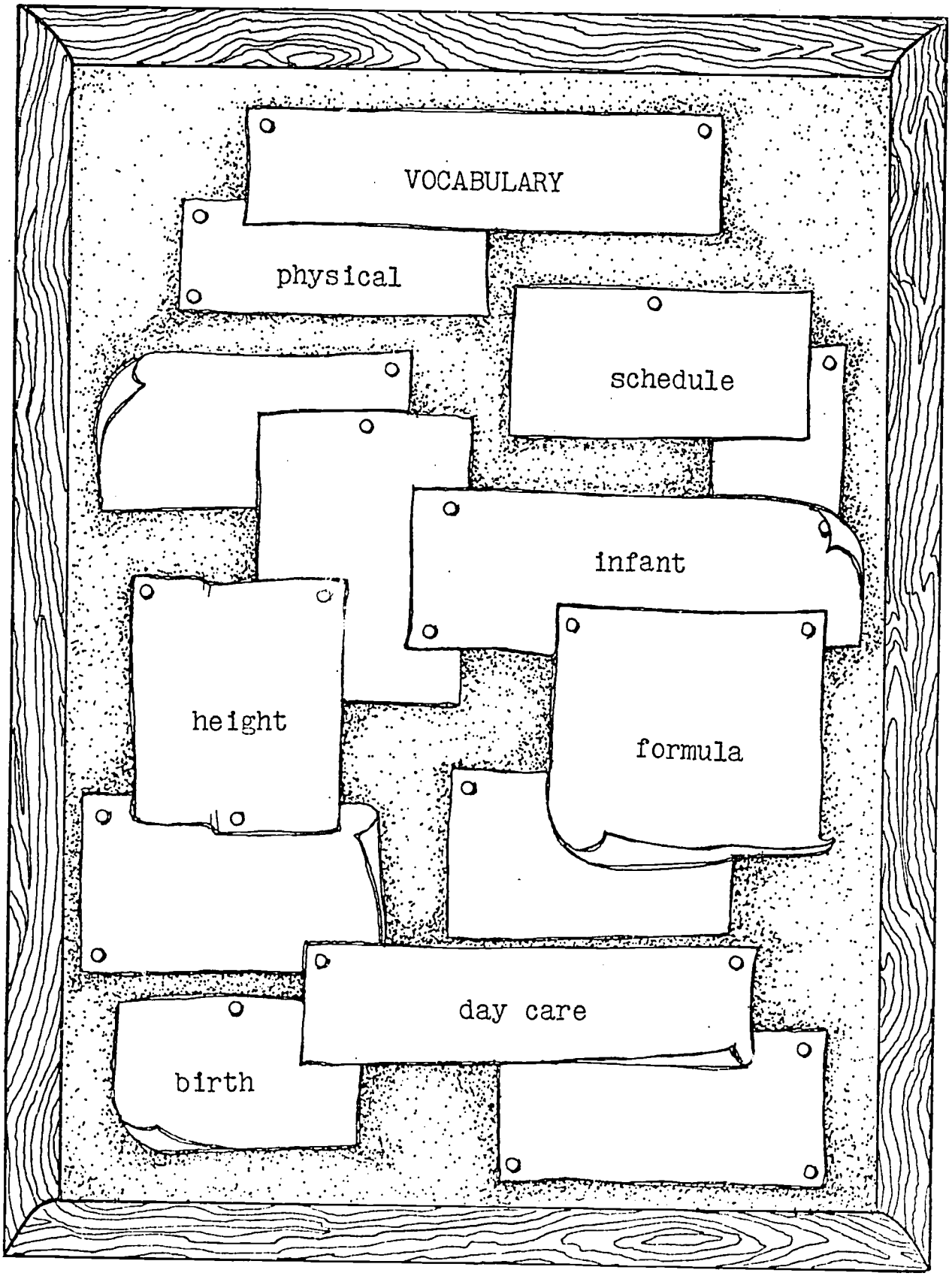
Create a classroom atmosphere of respect for all physical differences.

Offer opportunities for children to simulate the activities of the day care worker which deal with individual differences.

Broaden pupil understanding of the role of mathematics in child care.

Expand pupil understanding of ways physical characteristics vary and change in themselves and others.

Emphasize the difference between one's total and one's physical makeup.


VOCABULARY
physical
schedule
infant
height
formula
day care
birth

NUMBERS ARE NEEDED

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *give an example of different eating routines for babies of the same age.*

. . . *make a chart comparing infant eating schedules of class members.*

. . . *compare infant and present measurements of classmates.*

. . . *explain why fingerprints are a good means of identification.*

Attitudes and Appreciations Dimension

. . . *tell who day care centers help.*

. . . *identify parents as those who give directions to day care workers.*

Educational Awareness Dimension

. . . *explain how mathematics helps in the care of babies.*

Subject Matter Concepts

Mathematics
- Measurement
  - Time
  - Quantity
  - Temperature
- Figural
  - Reading simple charts

Science
- Biology
  - Living things change as they grow.
  - Animals differ in size.
- Scientific Method
  - Things can be compared by measuring.

Social Studies
- Sociology-Anthropology
  - Community's wants and needs
  - Dependence on others
  - Individual characteristics

Preplanning Suggestions

Materials for making written charts for the classroom
Babies' nursing bottles marked in ounces
Thermometer to measure water or other heated liquids
Individual's height and weight charts or ways to measure height and weight of class members
Height and weight chart--probably available in the health book or from a nurse or doctor
Paint suitable for making thumbprints

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . *tell who day care centers help.* PPO

Invite the children to tell about their own knowledge of and experience with day care centers. What are they? Why do we have them? What work do people do there?

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *explain how mathematics helps in the care of babies.* PPO

Interest the children in the fact that very small babies are often cared for at day care centers. The worker who is in charge of infants must be smart and careful. Ask why. Throughout the day, workers in infant care use mathematics. Ask the children how many ways they can think of to use mathematics to take care of babies. They may mention that weight gain or loss means the baby is doing well or poorly; that a baby's day is scheduled and the person in charge needs to be able to tell time; and a baby's formula is given in a measured amount at a certain temperature.

Individuals differ in their physical characteristics.

Self-Development

. . . *give an example of different eating routines for babies of the same age.* PPO

Ask the children to check with their parents to find out how much they ate and how often when they were three months old.

Individuals differ in their physical characteristics.

Self-Development

. . . *make a chart comparing infant eating schedules of class members.* PPO

Make this information available to the class in a list or chart. The chart

can show how much the baby drank and how often. Bring standard nursing bottles to school. Let the children practice measuring in ounces the amounts various classmates drank when they were babies. Should the children show interest, demonstrate sterilizing the bottle and arranging the nipple for storage or use.

Heat a bottle filled with water to about 98°F. This will be near body temperature and acceptable for 3-month-olds. Provide a thermometer so the children can measure the temperature. Let the children try the old-fashioned way to check temperature by shaking the water on the insides of their wrists. Ask them to comment about why that temperature seems good for babies.

Typical infant feeding is as follows:

up to 3 months--every 3 hrs./day
every 4 hrs./night
up to 6 months--every 4 hrs./day
solid food is
introduced
after 6 months--every 5 hrs./day
routine includes
meals and snacks.

Present story problems such as the following to the class:

Baby Wilma is on three-hour feedings. If she is fed at 9:00 a.m., she should also be fed at _____p.m. and _____p.m.

Baby Johnny is on four-hour feedings. If he is fed at 12:00 noon, when was his earlier feeding?

Brian was fed at 1:30 p.m. His feeding schedule is once every four hours. When will Brian be fed again?

Little Sandy needs her formula every three hours. She stays at the day care center from 9:00 a.m. until 4:00 p.m. Estimate how many times she might have her bottle at the day care center.

Mrs. Shoemaker asked the day care worker to feed George at 10:00 a.m. George is fed every four hours. How early was it when George drank his first bottle this morning?

Juanita is an older baby. She eats meals and snacks. She drinks her milk every five hours. If Juanita stays at the day care center from 12:00 noon until 4:00 p.m., will the day care worker need to prepare a bottle for her?

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . identify parents as those who give directions to day care workers. PPO

Discuss the foregoing activities from the point of view of the day care worker.

Remind the children of the importance of following directions in day care work. The care and feeding of each infant is different. The day care worker must follow the directions of the parents for the care of their children. Think of other workers who care for children according to their individual needs.

Individuals differ in their physical characteristics.

Self-Development

. . . compare infant and present measurements of classmates. PPO

The first REACT page asks boys and girls to find their baby measurements and compare these with present day measurements for themselves and others. You may want to make a more elaborate chart including eye color, length of hair, etc.

Individuals differ in their physical characteristics.

Self-Development

. . . explain why fingerprints are a good means of identification. PPO

The second REACT page will enable children to compare something which is uniquely their own--thumbprints. Fingerpaint or tempera will provide a satisfactory and washable medium for making the prints. Be sure to have the children practice making prints with just the right amount of paint on scrap paper before using their REACT page.

SD/Level 3/12

"All Kinds of Babies"

SD/Level 3/13

"Thumbprint Patterns"

ALL KINDS OF BABIES

Every baby in the day care center is different. Every boy and girl is different. Find out about yourself and nine other boys and girls in the class when they were babies. Fill in this chart.

Name	Weight at birth	Length at birth	Weight now	Height now

What is a normal weight for a newborn? _____

What is a normal length for a newborn? _____

What is a normal weight for an 8-year-old? _____

What is a normal height for an 8-year-old? _____

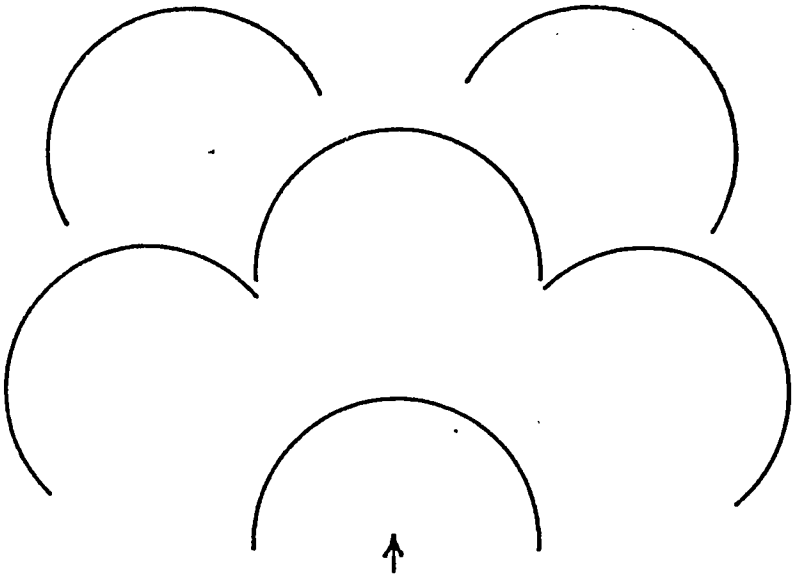
See if your chart is like others in the class.

THUMBPRINT PATTERNS

You have little lines on your fingertips.

No one else in the whole world has lines like yours.

Get some paint from your teacher. Practice making prints on another paper. After practice, ask five of your friends to make their thumbprint in these spaces.



Put your own thumbprint here.

Tell how the prints are different.

Other people may look like you.

No one in the whole world has fingerprints like yours.

REST TIME

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *describe how individuals differ in the amount of sleep which they need.*

. . . *cooperate in the organization of a group rest period and participate in it.*

. . . *match the names of acquaintances to a list of certain physical characteristics.*

Attitudes and Appreciations Dimension

. . . *tell why a rest time is part of the day care center routine.*

Career Information Dimension

. . . *name three different workers who help others to rest and relax.*

Educational Awareness Dimension

. . . *explain why rest is essential for good health.*

Subject Matter Concepts

Language Arts
- Writing Skills
  - Composition of short poems

Science
- Biology
  - Different environments support different forms of life.

Social Studies
- Sociology-Anthropology
  - Dependence on others
  - Individual characteristics

Preplanning Suggestions

Charts which suggest amount of sleep needed for children at various ages
Visit a day care center or interview a day care worker

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . tell why a rest time is part of the day care center routine. PPO

Most children at day care centers are between the ages of 3 months and 4 years. An important part of the day care center program for these children is the rest period or nap time. Ask the class why sleeping is especially important for young children.

Individuals differ in their physical characteristics.

Self-Development

. . . describe how individuals differ in the amount of sleep they need. PPO

Ask the children how amounts of sleep needed change with age and between individuals.

The day care worker must arrange a rest time for all the children. She does this by using a special room with sleeping cots for each child. The room needs to be quiet, at a comfortable temperature, and the windows need shades. Older children rest on mats, perhaps in the regular playroom but with shades pulled, noise controlled, and distracting toys put away.

Ask the class to discuss what they consider necessary for a good rest time. How would the day care worker get the little children to relax? What about children who couldn't sleep? When would the rest time end? Perhaps a class member could telephone a day care worker and ask her how rest time is organized.

Better yet, an interested group of pupils could visit a day care center, interview the day care worker, and report back to the class. The committee should include in their report

their observations of differences in sleeping routines of day care children.

. . . cooperate in the organization of a group rest period and participate in it. PPO

According to the routine of your own school day, ask class members individually when they feel most tired. Divide the class into groups according to those who have tired times in common. Invite the groups of children to find a way to relax during their tired time. Maybe they need to put heads down, have someone read a story to them, lie down, listen to relaxing music with headphones, draw, or read. Groups could consult the physical education teacher for ideas about relaxing muscles.

Make it possible for the groups to try out the plans they make for tired time. Discuss and compare the results.

Individuals differ in their physical characteristics.

Self-Development

. . . explain why rest is essential for good health. PPO

Help the children to find a scientific explanation for this question.

"Why is rest necessary for good health?"

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . name three different workers who help others to rest and relax. PPO

What workers besides the day care worker are responsible for helping others rest and relax? Children may suggest hospital workers, recreation workers, homemakers, etc.

Occupations require special personal characteristics.

Career Information

Individuals differ in their physical characteristics.

Self-Development

. . . match the names of acquaintances to a list of certain physical characteristics. PPO

The first REACT page asks children to reflect upon individual differences among their acquaintances.

The second REACT page is a language arts activity. Children are asked to find rhymes for a poem about physical differences.

SD/Level 3/14

"People I Know"

SD/Level 3/15

"Ring a Rhyme"

PEOPLE I KNOW

Fill in the blanks with names of people you know.

_____ is very young.

_____ is old.

_____ is a great cook.

_____ is someone you can laugh with.

_____ likes to read.

_____ looks colorful.

_____ likes to run.

_____ sleeps late.

_____ seems sad.

_____ always picks hamburgers.

_____ would rather eat hot dogs.

_____ gets up early.

_____ is a cookie monster.

_____ always thinks of something to d

_____ has silky hair.

_____ is afraid of the dark.

_____ is a great catcher.

RING A RHYME

Human bodies are different from each other in many ways. You may be able to guess the rhymes to put in the blanks. If you need help, look at the word list below. Ring the rhyming words that are best for the poem. Write them in the blanks.

PEOPLE

Some are brown, some are whiter,

Some are heavy, some are _____.

Some are fast, some are slower,

Some are high, some are _____.

Some have whiskers, some have curls,

Some are boys, some are _____.

Some are babies, some are older,

Some like it hot, others _____.

In valley, or desert, or mountains, or plain,

Russian, African, Spaniard, or _____,

Each has special style and grace,

Together we are the human _____.

blower	colder	face
pearls	girls	lower
lighter	Dane	brighter
bolder	grain	race

EVERYTHING IN ITS PLACE

Third Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *describe the young child's ability to keep order.*

. . . *discuss how one's physical characteristics are related to good health habits.*

Attitudes and Appreciations Dimension

. . . *list three or four procedures which workers and children at the day care center may follow so that toys and materials can be found by those who need them.*

Educational Awareness Dimension

. . . *give a reason why the day care worker teaches young children to keep order.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Values and purposes in behavior
  - Individual characteristics
  - Contact with others is needed.

Preplanning Suggestions

Materials for making charts of activities
Oak tag or other lightweight cardboard

Individuals differ in their physical characteristics.

Self-Development

. . . describe the young child's ability to keep order. PPO

Anyone who has a little brother or sister will be able to verify that preschool children are mess makers. They are very good at getting things out. They are not so good about getting things back in their place. Explain to the class that getting things out is a way for young children to learn. But it is a problem.

Describe the dilemma of the day care worker. The center needs to provide lots of interesting toys to amuse the children and help them to learn. But think of the chaos if twenty little children get things out and don't put them away. What can the day care worker do?

Learning achievement depends upon effort and ability.

Educational Awareness

. . . give a reason why the day care worker teaches young children to keep order. PPO

The worker will teach the children to put things away. They will enjoy doing this because:

1. It makes them feel grown-up.
2. Some order in the room helps the children feel peaceful and happy.
3. When you put something away you know where to find it.
4. Things put away aren't so likely to get broken or lost.

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . list three or four procedures which workers and children at the day care center may follow so that toys and materials can be found by those who need them. PPO

Day care centers have shelves, drawers, hooks, and boxes in different colors and with labels so little children can quickly learn how to store their materials. They feel big when they know how to find things. Each child has his own locker or cubby hole for his coat and hat and other personal things. Children are taught to use sponges, mops, and brooms so they can clean up after themselves.

If possible, contact a day care center in your area. Arrange for class members to visit there to observe the order of the day care center. You may have to observe very carefully! Ask the director whether there are any needed containers which the class could make or repair.

Compare the day care center with your own classroom. Ask the children to reflect upon how order is kept. Would they like to make any improvements?

Individuals differ in their physical characteristics.

Self-Development

. . . *discuss how one's physical characteristics are related to good health habits.* PPO

Draw the pupils' attention to personal neatness and health. Order about oneself can result in physical changes. Cleanliness, rest, exercise, and good diet promote good health and an attractive appearance. Day care children are taught how to keep themselves clean. Suggest that each pupil pick out a physical characteristic which he would like to maintain or improve. Pupils could decide on a daily routine and report on its effect at a later date.

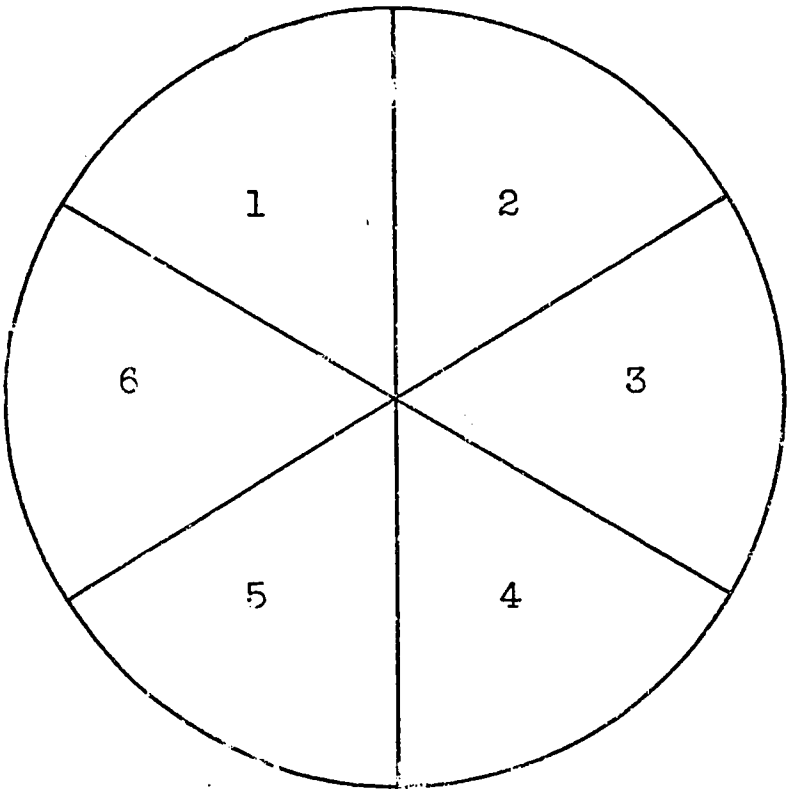
The REACT page suggests a way to illustrate that each individual has special appeal because he or she is different from everyone else. Should you be able to visit a day care center, each class

member could take heavy backing paper and a pencil and teach a day care child how to make a colorwheel of himself.

SD/Level 3/16

"A Colorwheel of Myself"

A COLORWHEEL OF MYSELF



Color the sections of the wheel. Use bright colors.

Color section 1 the color of your eyes.
Color section 2 a color you are wearing.
Color section 3 the color of your skin.
Color section 4 another color you are wearing.
Color section 5 the color of your hair.
Color section 6 another color you are wearing.

Cut out the wheel. Paste it on heavy backing paper.

Spin it on a pencil. The colors will look pretty together. Does anyone else have a colorwheel like yours?

RELATED MATERIALS

Beginning Responsibility: Learning to Follow Instructions (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1970.

Color of Man, The (Book) Robert Cohen. Random House, 457 Madison Avenue, New York, New York 10022, 1968.

Crow Boy (Book) Taro Yashima. Viking Press, 625 Madison Avenue, New York, New York 10022, 1955.

Everything Changes (Book) Morris Philipson. Pantheon Books, Inc., Division of Random House, 201 East 50th Street, New York, New York 10022, 1972.

Recipes for Busy Little Hands (Book) Doreen Craft. Day Care and Child Development Council of America, Inc., 1401 K Street, N.W., Washington, D. C. 20005.

Smallest Boy in the Class, The (Book) Jerrold Beim. William Morrow and Company, Inc., 425 Park Avenue South, New York, New York 10016, 1949.

Suzy Prudden's Creative Fitness for Baby and Child (Book) Suzy Prudden and Jeffrey Sussman. Day Care and Child Development Council of America, Inc., 1401 K Street, N.W., Washington, D. C. 20005, 1972.

Tall Tina (Book) Muriel Stanek. Albert Whitman and Company, 560 West Lake Street, Chicago, Illinois 60606, 1972.

Things I Like to Do (Book) Bowmar, 622 Rodier Drive, Glendale, California 91201, 1969.

Very Tall Little Girl, The (Book) Phyllis Kraselovsky. Doubleday and Company, Inc., 432 Park Avenue, New York, New York 10017, 1969.

What About Me? (Worktexts and Activity Sheets) George A. Pflaum, Publisher, 38 West Fifth Street, Dayton, Ohio 45402, 1971.

DAY CARE WORKER

Millions of our children from infancy to early adolescence are being cared for by persons other than their parents for much of each day. More and more, these children are having important formative experiences in day care programs outside their homes. The quality of these programs determines their value to the children, and a vital contribution to that quality is trained personnel. Youngsters from low-income families, in particular, can profit from programs which provide good health care and food, mental stimulation and the warm interest of adults who are not too busy with the demands of running a home or too poor or ill to manage.

Reasons for the growth of day care programs in recent years are varied. Since World War II women have been taking jobs in increasing numbers. For many of these women, work for pay is essential. Some, through divorce or desertion, are the heads of the households, while others have never been married. Also the federal government is currently setting up training programs to help mothers receiving welfare payments develop job skills. Subsequently, the children of these women must be cared for.

The large increase in day care programs of all kinds presents an equally great opportunity to develop career positions that reward competencies, regardless of how or where they have been gained. Competencies are skills, abilities, knowledge and attitudes that can be practiced, observed and measured on the job. They can be used as criteria for job placement and promotion and as goals for training.

Most of the people who are expected to staff day care facilities in the years ahead--parents and community residents--will not have been prepared for this type of work through the usual channels of university and college courses that result in accreditation. This traditional method of training and advancement, by itself, is no longer sufficient. It should be a part of a flexible approach that takes maximum advantage of an individual's own life experiences.

A number of models for career development are currently in use in the larger day care centers supported by public funds. Generally, these models are based on a career ladder with steps from aide to supervisor in each category. Progression up the ladder normally depends on the number of training courses completed, as well as on-the-job performance.

In education, new career programs are customarily founded on job descriptions that set out in detail the duties of each worker. Books have been filled with descriptions of precisely what was expected of teachers or teachers' aides or day care teachers. Yet, seldom have these specifications been conceived in terms that permit a person to climb to another position--or to a higher level of the same position--primarily because he or she demonstrated the right competencies.

But if training, job status and salaries are geared to competencies, it may be possible to move away from the confines of formal job descriptions

and academic courses. It may be possible to allow persons to move more freely within the field while, at the same time, removing some of the pressure on them to "move up" should they prefer to remain in certain positions. When a career ladder is used effectively in day care, satisfaction in the job is more likely to follow. The stability of the staff as a whole helps the children, who rely on continuity in their day care "mothers" and "fathers," as they do in their parents.

The selection of an appropriate staff is of vital concern in all day care programs. The ideal staff member, of course, is someone who is already trained and who knows and understands the children and families with whom he may work. In the most ideal circumstance, that person would belong to the same ethnic group as those being served. But it is unlikely that a day care program will find many people who meet both of those standards, or who meet the first standard immediately.

There are several possible approaches to selecting a staff under less than ideal circumstances. One is to choose a professional and provide training that would acquaint him with the community. This professional might also need training in other aspects of the program, such as the curriculum. Another approach is to choose a person who already knows and understands the community, who is probably of the same ethnic group, and give him professional and specialized training. Either way, intensive pre-service training may be called for.

While some persons might be chosen because they lack certain skills but can learn them, others might be selected because they are already qualified for positions. On still other occasions, it might be desirable to give someone a job no matter what his skills.

Competencies needed by day care worker at full responsibility level are:

An understanding of the relationship between the daily program of activities, and the choice or placement of materials and equipment;

A recognition that young children learn through discovery and action, through use of materials and interacting with both adults and peers;

An appreciation that the demands of the long day care day require a carefully planned schedule that permits children to move at their own pace;

An ability to interact with each child and establish a relationship with each one;

An ability to accept each child and plan a way of treating him that fosters his successful social adjustment in harmony with the philosophy of the facility;

A belief that praise and encouragement are more effective in promoting desirable behavior than negative or punitive techniques;

An ability to plan and provide activities and situations that encourage children to relate to each other;

An ability to provide and arrange appealing material and encourages children to use them in an individual and creative way;

The possession of a healthy self-concept.

Adapted from: Day Care, Child Development Series #5
Ronald R. Parker, Ph. D., and Laura L. Dillman.
U. S. Government Printing Office, Publication No. 1791-0163.

CB - COPING BEHAVIORS
DM - DECISION MAKING
LS - LIFESTYLE
SD - SELF-DEVELOPMENT

Fourth Experience Level

LANGUAGE ARTS

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(Writing Skills Cont'd)					
DM	Risks in Newspaper Reporting	Newspaper Reporter	Rewriting and Headlining	Paragraphing Putting ideas in order	[illegible]
DM	Risks in Newspaper Reporting	Newspaper Reporter	Printing Machines	Spelling Putting ideas in order	388
LS	Tellers, Like It Is	Bank Teller	Field Trip	Note-taking	447

Fourth Experience Level

MATHEMATICS

(Facts and Operations)					
CB	Efficient Assistance	Dental Assistant	Dental Office Procedures	Addition of money	307
CB	Efficient Assistance	Dental Assistant	Demonstrating Toothbrushing	All addition facts	15
LS	Tellers, Like It Is	Bank Teller	Checking Accounts	Addition and subtraction	430
(Figural)					
SD	Space for Special People	Architect	Language of the Draftsman	Scale drawings	464
(Measurement)					
DM	Curiosity Created the Curator	Curator	Curator's Helper	Metric	406
SD	Space for Special People	Architect	Language of the Draftsman	Map scale	464
SD	Attendant Economics	Service Station Attendant	Money and Measures	Precision to nearest unit Factional parts	486
(Problem Solving)					
LS	Tellers, Like It Is	Bank Teller	Checking Accounts	Earning, spending, saving money Multi-step problems	430
LS	Tellers, Like It Is	Bank Teller	Savings Accounts	Earning, spending, saving money Two-step problems	435
SD	Attendant Economics	Service Station Attendant	Money and Measures	Two-step problems Averages Comparisons Saving and spending money	486

Fourth Experience Level

SCIENCE

(Biology)					
CB	Efficient Assistance	Dental Assistant	Battle Against Bad Bacteria	Different environments support different forms of life.	300
CB	Clear the Air	Air Pollution Control Engineer	Town Meeting	Man can choose and change his habitat. Living things depend upon environment.	338
CB	Clear the Air	Air Pollution Control Engineer	The Air Cycle	Living things need air.	343
DM	Curiosity Created the Curator	Curator	Museums Protect and Preserve	Different environments support different forms of life.	419
SD	Fish Fry Anyone?	Fish Hatcher	Underwater Adventure	Different environments support different forms of life.	510
SD	Fish Fry Anyone?	Fish Hatcher	Aquarium Care	Man can control the environments of living things.	516
SD	Fish Fry Anyone?	Fish Hatcher	Keeping the Balance	Man can control the environments of living things.	523
(Chemistry)					
DM	Curiosity Created the Curator	Curator	Museums Protect and Preserve	Chemical changes involve rearrangement of atoms and molecules.	419
(Earth and Sky)					
CB	Clear the Air	Air Pollution Controll Engineer	The Air Cycle	Atmosphere affects sun's radiation. Descriptions of atmosphere Water and air interactions	343

Dimension	Infusion Strategy	Occupation	Activity	Subject Matter	Page
(Physics)					
SD	Attendant Economics	Service Station Attendant	Workers' Viewpoints	Forces move things. Tools and utensils Functions of shape Energy can change form.	492
SD	Fish Fry Anyone?	Fish Hatcher	Aquarium Care	Forces move things.	516
(Scientific Method)					
CB	Efficient Assistance	Dental Assistant	Battle Against Bad Bacteria	Ask questions, find answers Famous scientists have made historic discoveries.	300
CB	Efficient Assistance	Dental Assistant	Fit for a Filling	Describe, find similarities and differences Classification	320
CB	Clear the Air	Air Pollution Control Engineer	Town Meeting	Special instruments Investigative and evaluative techniques	338
CB	Clear the Air	Air Pollution Control Engineer	The Air Cycle	Investigative and evaluative techniques. Special instruments Comparisons	343
DM	Risks in Newspaper Reporting	Newspaper Reporter	Printing Machines	Famous scientists have made historic discoveries.	388
DM	Curiosity Created the Curator	Curator	Curator's Helper	Comparisons are made by careful measurements.	406
DM	Curiosity Created the Curator	Curator	A Few of My Favorite Things	Things are classified according to likenesses.	411
SD	Attendant Economics	Service Station Attendant	Money and Measures	Evaluative techniques Special instruments to observe	486
SD	Fish Fry Anyone?	Fish Hatcher	Underwater Adventure	Things are classified according to likenesses.	510

Fourth Experience Level

SOCIAL STUDIES

(Economics)					
CB	Efficient Assistance	Dental Assistant	Dental Office Procedures	Division of labor	307
DM	Risks in Newspaper Reporting	Newspaper Reporter	Read All About It!	Supply and demand	358
DM	Risks in Newspaper Reporting	Newspaper Reporter	Rewriting and Headlining	Transportation of information	369
LS	Tellers, Like It Is	Bank Teller	Checking Accounts	Banks Difference between goods and services	430
LS	Tellers, Like It Is	Bank Teller	Savings Accounts	Banks Difference between goods and services	435
LS	Tellers, Like It Is	Bank Teller	Banks from the Beginning	Banks Governments influence economic development.	441
SD	Attendant Economics	Service Station Attendant	Workers' Viewpoints	Population influences demand. Division of labor Production of goods and services	492
SD	Attendant Economics	Service Station Attendant	From There to Here to There	Transportation of goods Using natural resources.	497
SD	Fish Fry Anyone?	Fish Hatcher	Keeping the Balance	Using natural resources Different uses of environments	523
(Geography)					
SD	Space for Special People	Architect	Designing for Group Needs	Modification of environments	458
SD	Attendant Economics	Service Station Attendant	From There to Here to There	Site helps to determine character of locale. Interaction of people and environments	497
(History)					
CB	Efficient Assistance	Dental Assistant	Battle Against Bad Bacteria	Changes in ways of living result in changed expectations.	300
DM	Risks in Newspaper Reporting	Newspaper Reporter	Heroes and Heroines of the Press	Great Americans in history Acts and events have consequences.	374

	Risks in Newspaper Reporting	Newspaper Reporter	Freedom of the Press	Modern life has roots in the past.	381
DM	Curiosity Created the Curator	Curator	Mini-Museum	Human experience is continuous. Modern life has roots in past.	400
LS	Teller, Like It Is	Bank Teller	Banks from the Beginning	Modern life has roots in the past. Societies have changed and are changing. American values and traditions	441
SD	Space for Special People	Architect	Architect's License	Before and after relationships	471
SD	Attendant Economics	Service Station Attendant	From There to Here to There	Modern life has roots in the past. Consequences in other times and places	497

(Political Science)

CB	Clear the Air	Air Pollution Control Engineer	Law and Lingo	Rules for interaction Government services Laws regulate behavior. Community rights and requirements	332
CB	Clear the Air	Air Pollution Control Engineer	Town Meeting	Laws regulate behavior. Community rights and requirements	338
DM	Risks in Newspaper Reporting	Newspaper Reporter	Freedom of the Press	Rules for interaction needed by groups U. S. Constitution as basis for laws	381
SD	Space for Special People	Architect	Architect's License	Rules for interaction needed by groups	471

(Sociology-Anthropology)

CB	Efficient Assistance	Dental Assistant	Battle Against Bad Bacteria	Technology produces changes in ways of living.	300
CB	Efficient Assistance	Dental Assistant	Dental Office Procedures	Community needs a variety of services.	307
CB	Clear the Air	Air Control Polution Engineer	Town Meeting	Values and purposes in behavior Individuality and responsibility	339
DM	Risks in Newspaper Reporting	Newspaper Reporter	Read All About It!	Community wants and needs Newspapers	358
DM	Risks in Newspaper Reporting	Newspaper Reporter	Reporting	Contact with others is needed. Newspapers	364
DM	Risks in Newspaper Reporting	Newspaper Reporter	Printing Machines	Technology produces changes in ways of living.	388
DM	Curiosity Created the Curator	Curator	Mini-Muse[illegible]	Culture interrelationship: People have similar basic needs.	400
DM	Curiosity Created the Curator	Curator	Curator's Helper	Dependence upon others	406
DM	Curiosity Created the Curator	Curator	Sharing Culture Through Language	Culture interrelationships	415
LS	Tellers, Like It I	Bank Teller	Checking Accounts	Community needs variety of services.	430
LS	Tellers, Like It Is	Bank Teller	Savings Account	Community needs variety of services.	435
LS	Tellers, Like It Is	Bank Teller	Banks from the Beginning	Lifestyles differ with time and place. Values and purposes in behavior Community's wants and needs	441
SD	Space for Special People	Architect	Designing for Group Needs	Community wants and needs Housing	458
SD	Attendant Economics	Service Station Attendant	Money and Measures	Values and purposes Individuality and responsibility	466
SD	Attendant Economics	Service Station Attendant	Workers' Viewpoints	Community wants and needs Individual characteristics Values and purposes	492
SD	Attendant Economics	Service Station Attendant	From There to Here to There	Community needs variety of services. Community reflects assumptions and values. Neighborhoods have character.	497
SD	Fish Fry Anyone?	Fish Hatcher	Underwater Adventure	Differences due to [illegible]mate, resources, locations	510
SD	Fish Fry Anyone?	Fish Hatcher	Aquarium Care	Values and purposes in behavior	516

EFFICIENT ASSISTANCE

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

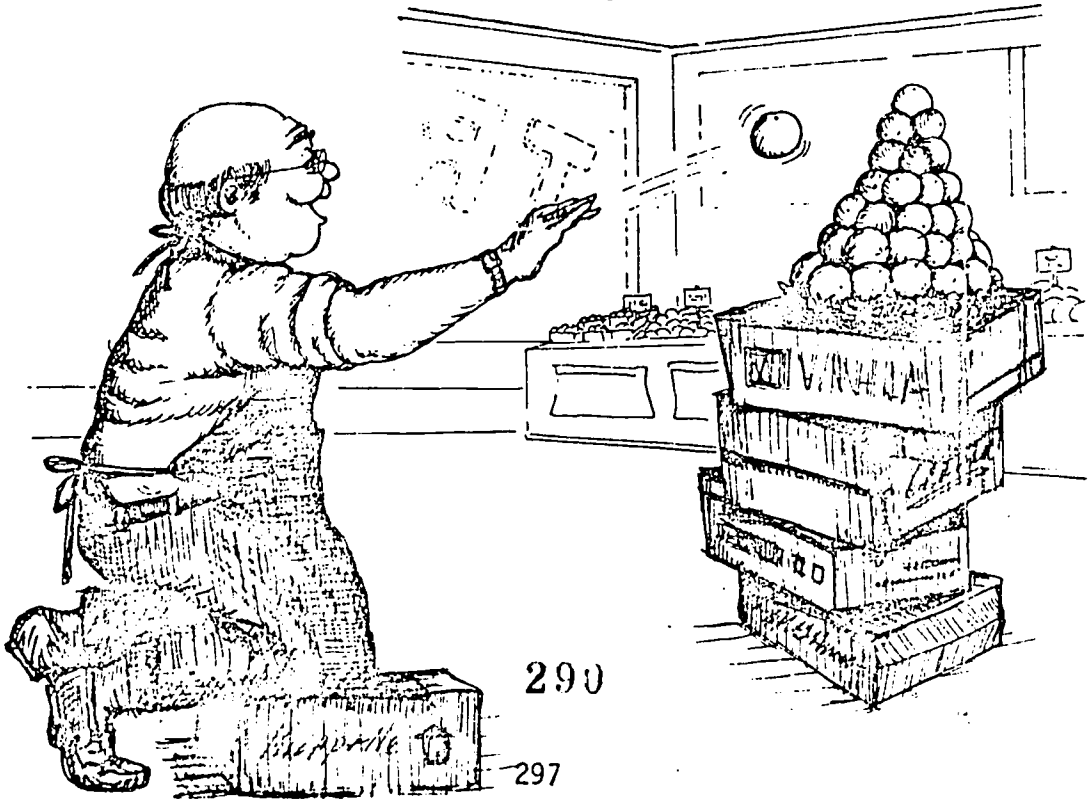
CAREER DEVELOPMENT FOCUS: Certain behaviors are appropriate to specific job settings.

OCCUPATIONAL FOCUS: Dental Assistant

ACTIVITIES

IN THIS INFUSION STRATEGY

1. The Battle Against Bad Bacteria
2. Dental Office Procedures
3. Demonstrating Toothbrushing
4. Fit for a Filling



Teacher Goals

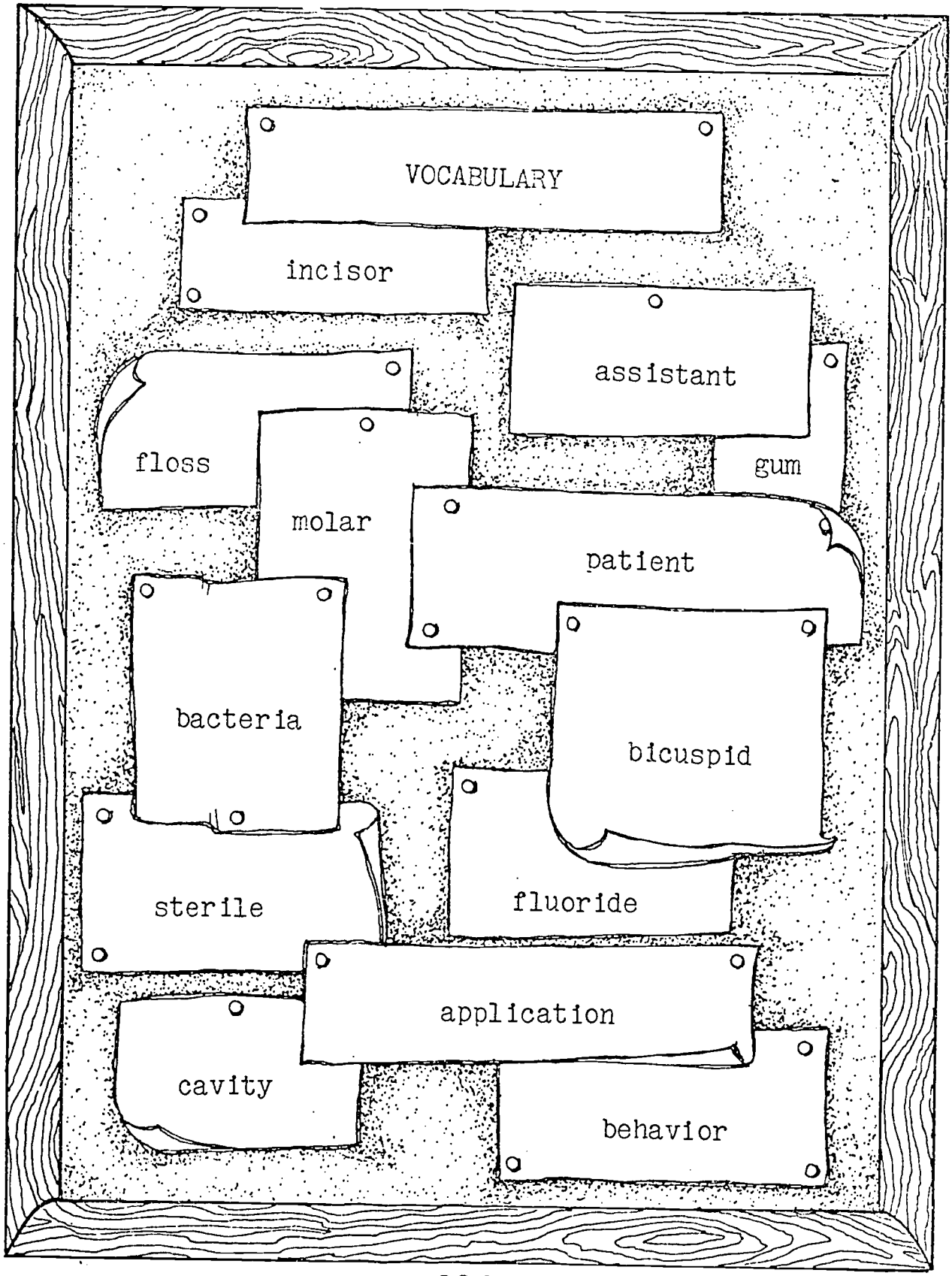
Teacher goals of this strategy combine a Coping Behavior Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Dental Assistant. In this perspective the teacher's goals are to:

Help pupils specify behaviors appropriate to the dental assistant's job setting and relate these to their own job settings.

Structure experiences to simulate the knowledge and skills of the dental assistant.

Guide pupils in understanding reasons for the procedures of sterilization and personal cleanliness, especially tooth-brushing.

Offer information about workers who perform in ways similar to the dental assistant.


VOCABULARY
incisor
assistant
floss
molar
gum
patient
bacteria
bicuspid
sterile
fluoride
application
cavity
behavior

THE BATTLE AGAINST BAD BACTERIA

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *state reasons for sterilizing procedures in a dentist's office.*

. . . *tell why teeth need care.*

. . . *identify personal cleanliness as a necessary physical requirement for a dental assistant.*

Attitudes and Appreciations Dimension

. . . *recount a brief history of bathing.*

Career Information Dimension

. . . *tell a way the dental assistant sterilizes dental instruments.*

Educational Awareness Dimension

. . . *tell how Joseph Lister saved lives.*

. . . *tell a way the dental assistant sterilizes dental instruments.*

Subject Matter Concepts

Science
- Biology
  - Different environments support different forms of life.
- Scientific Method
  - Ask questions, find answers
  - Famous scientists have made historic discoveries.

Social Studies
- History
  - Changes in ways of living result in changed expectation
- Sociology-Anthropology
  - Technology produces changes in ways of living.

Preplanning Suggestions

Several Petri dishes and nutrient agar
Filter paper
Small amounts of sterilizing chemicals: iodine, alcohol, etc.
Magazine pictures of modern baths, toothbrushes, etc.

Learning is a lifelong process.

Educational Awareness

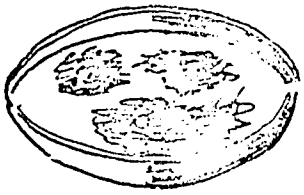
. . . *tell how Joseph Lister saved lives.* PPO

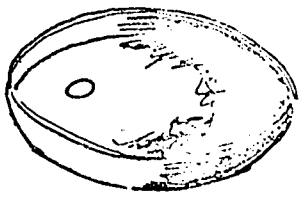
Tell the children that in the air all around them are tiny living things--about 100 of them for every cubic foot of air. Do they know what these could be? If no one volunteers, explain that these invisible creatures are one-celled organisms called bacteria. Some kinds of bacteria are helpful to man. Others cause terrible infections and disease. Men have not always known that bacteria caused disease. Nor have they known how to fight bacteria. Briefly tell the story of Joseph Lister and his discovery of sterilization.

Obtain several Petri dishes from the high school biology teacher or a science supply. Also obtain nutrient agar to put in the dishes. Explain to the children that bacteria will grow on the agar if you let them into the Petri dishes. However, the Petri dishes and the agar are sterile. No bacteria are now growing in them. Leave one Petri dish with agar closed up tight for a control sample. Expose another to the air for several minutes. Put a drop of pond water in one. Put some dirt from under a fingernail in another. Use a toothpick and expose another with tooth scrapings. Someone could sneeze on an agar plate. Bacteria will multiply so fast after exposure that you will have visible colonies of them growing in a day or two. What do the children think about these little beasties that were so close to them?

To show that some chemicals sterilize, punch little discs of filter paper with a paper punch. Soak a disc in chlorox, one in iodine, one in alcohol, one in a mouth wash, etc. Lay these discs on agar in new Petri dishes and again expose them to several bacteria-

filled environments. A way to provide even exposure would be to open and use the already growing cultures. Close the new plates. What happens? Explain that heat and sunlight can also kill bacteria.





Something sterilized is extremely clean. Sterilization prevents the growth of bacteria and the spread of disease.

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

. . . state reasons for sterilizing procedures in a dentist's office. PPO

Ask the children to speculate about why dentists must use sterile tools in their work.

Occupations require the use of specific materials and equipment.

Career Information

. . . tell a way the dental assistant sterilizes dental instruments. PPO

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Sterilizing dental tools is part of the work of the dental assistant. Some tools are put in cold chemical solutions. Others are sterilized in a steam heat device called an autoclave.

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

. . . tell why teeth need care. PPO

Explain that most bacteria in our mouths are good. They help us to digest food. However, some people have diseases which could easily be given to someone else if the dentist did not use

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

Most occupations include common expectations such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

sterilized tools. When teeth are not brushed, mouth bacteria cause food left on the teeth to ferment. This makes an acid that eats through tooth enamel and causes decay.

. . . *identify personal cleanliness as a necessary physical requirement for a dental assistant.* PPO

Ask the children why body cleanliness would promote good health. Keeping clean means leaving no dirty places on our bodies where harmful bacteria could grow. Ask the children why the dentist and the dental assistant would keep face, hands, hair, and uniforms clean. What other workers sterilize their tools?

. . . *recount a brief history of bathing.* PPO

The REACT page can be cut apart and reassembled in a strip to show the history of bathing. Pictures to show modern showers and baths, toothbrushes, soaps, etc., should be provided by pupils.

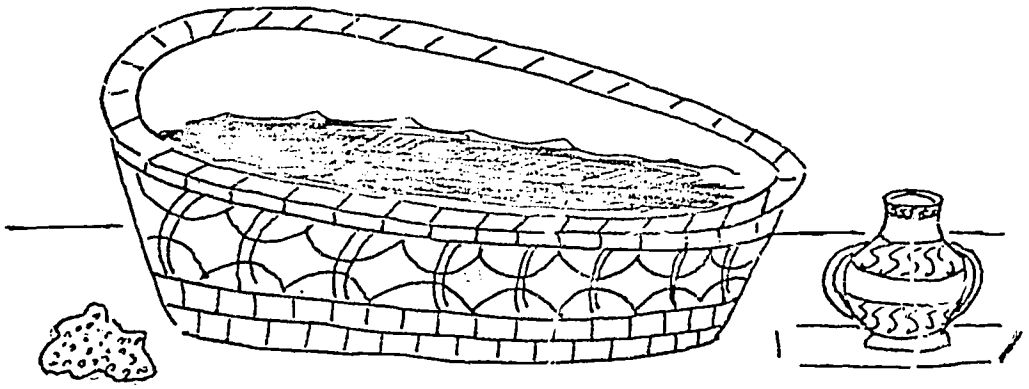
CB/Level 4/1

"History of Cleanliness"

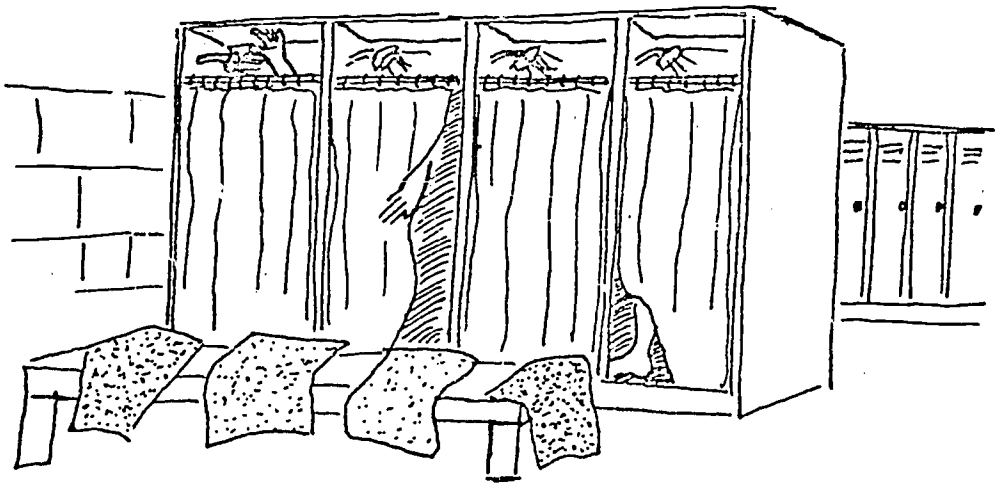
HISTORY OF CLEANLINESS

Cut out these pictures. Arrange them in a time line to show past and present events in keeping clean. Add pictures of modern tubs, showers, brushes, and soaps. Show astronauts brushing their teeth in a space ship. If you like, put in other pictures to show ways of bathing in history.

1600 Queen Elizabeth kept her mouth closed when her picture was painted. Her teeth were black.

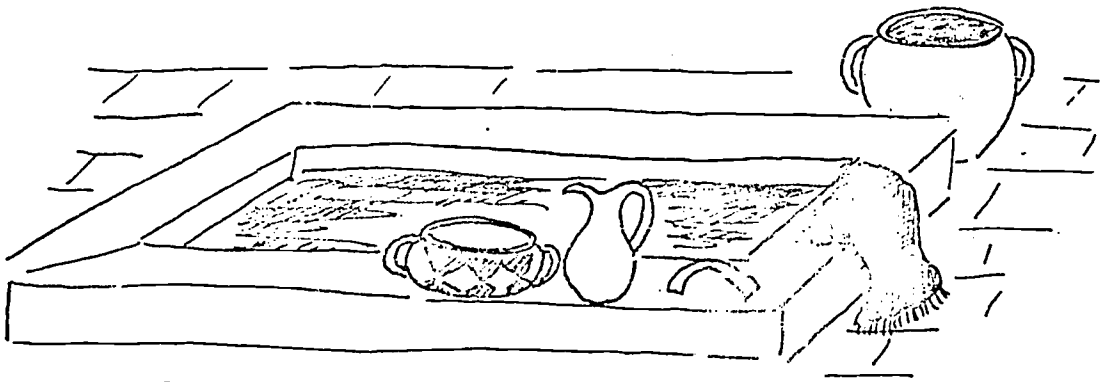


1000 B.C. The bathtub of King Nestor of Greece



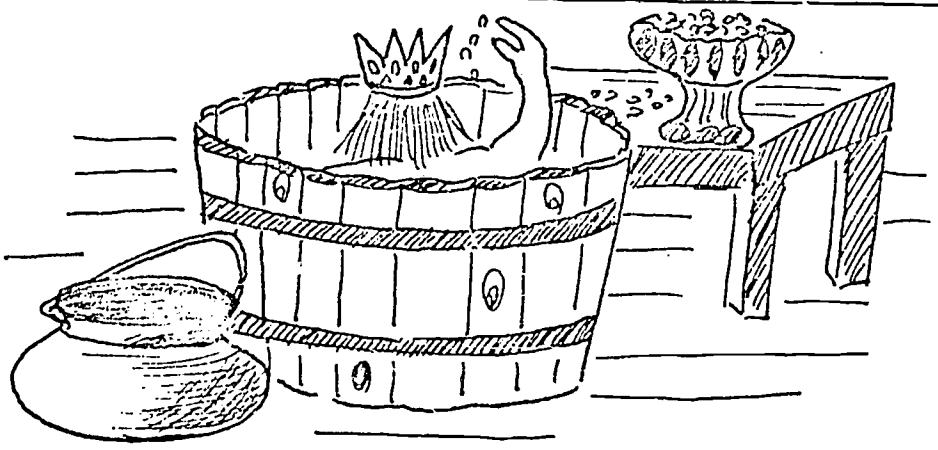
1950 Football players shower after a game.

HISTORY OF CLEANLINESS



100 B.C. A public bath in Rome. An attendant uses oil, sand, and a scraper because they had no soap.

1565 The Siege of Malta was won by the Knights of St. John. The knights knew how to use soap and water to clean their wounds and get well. Their enemies, the Turks, died from wounds because they didn't know how to clean them.



1200 King John used rose petals but no soap to bathe once every three weeks.

DENTAL OFFICE PROCEDURES

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *identify greeting patients and following directions as social behaviors required of the dental assistant.*

. . . *identify record keeping as an intellectual behavior required of the dental assistant.*

. . . *take part in a dramatization of the work of the dental assistant.*

. . . *discuss the differences among acceptable and unacceptable behaviors in the dental assistant's work setting and in others.*

Attitudes and Appreciations Dimension

. . . *take part in a dramatization of the work of the dental assistant.*

Career Information Dimension

. . . *point out potentially pleasant or unpleasant features of the dental assistant's work.*

Subject Matter Concepts

Language Arts
- Listening and Speaking
  - Giving and taking directions
  - Stress and feeling in speech
- Writing Skills
  - Alphabetical order
  - Putting ideas in order

Mathematics
- Facts and Operations
  - Addition of money

Social Studies
- Sociology-Anthropology
  - Community needs a variety of services.
- Economics
  - Division of labor

Preplanning Suggestions

Pages from an appointment book
Blank card for each child to use as an account card
White towel, other pretend dental equipment
Toy telephone, toy clock
Price list of simple dental services
Box for file cards of patients

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

. . . identify greeting patients and following directions as social behaviors required of the dental assistant. PPO

. . . identify record keeping as an intellectual behavior required of the dental assistant. PPO

The dentist's assistant is often responsible for the smooth operation of the dental office. This worker:

1. greets patients
2. keeps dental records and accounts
3. arranges instruments and hands them to the dentist as he works
4. prepares the patients to see the dentist
5. makes appointments on a schedule and handles cancellations
6. follows the directions of the dentist

To give the class a feel for this type of office procedure, divide the children into groups. In each group let children rotate so all have an opportunity to play the roles of dentist, dental assistant, and patient. A sample list of materials for use in this simulation activity follows:

1. a paper (page from an appointment book) showing hours of the working day
2. a card for each person in the group with his name on the top, last name first, on which to keep his account
3. chairs arranged for the waiting room, a chair apart for the patient being seen by the dentist, another chair at the dental assistant's desk
4. white towel with clasp or safety pin
5. sterilizing jars for make-believe instruments
6. basin for washing hands

7. toy clock and toy telephone
8. simple price list of dental services

. . . take part in a dramatization of the work of the dental assistant. PPO

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

Patient children call the dental assistant for an appointment which he notes in the book. Patients appear at the office on time. Children are encouraged to assume roles of different aged patients with a variety of needs. Since this simulation intends to demonstrate office procedures, underplay time spent with the dentist unless children are unusually interested. Have the dental assistant greet the patient, put him in the chair with the white towel around his neck, put sterile instruments on a tray for the dentist to use, record the dental work performed on the patient's record card, receive payment, make the next appointment, and file the record cards alphabetically. This activity could be carried out in great detail, depending on time, resources, and enthusiasms.

Help the children to consider other times when they participate in a routine having many steps--maybe dinnertime chores, caring for a baby, or painting. Ask the children what other workers they know who are responsible for office routines.

The individual worker determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

. . . point out potentially pleasant or unpleasant features of the dental assistant's work. PPO

Ask the children to give personal reactions from their dramatization. In their opinion, what would be nasty or nice about a dental assistant's work?

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

On the first REACT page children can complete a sample application form for the job of dental assistant. Explain that college training is not a requirement for this work, though the children may realize ways it would be helpful.

. . . *discuss differences among acceptable and unacceptable behaviors in the dental assistant's work setting and in others.* PPO

The second REACT page asks the children to consider proper ways of behaving in various work settings.

CB/Level 4/2

"Whom Would You Hire?
Model Job Application Form"

CB/Level 4/3

"Don't Do That Here!"

WHOM WOULD YOU HIRE?

MODEL JOB APPLICATION FORM

Some of the things the dental assistant must be willing and able to do are follow directions, make schedules, keep records, receive payments, be clean, and be courteous. Pretend you are grown up and applying for a job as a dental assistant.

Fill out the application form with as many facts as you can. You will need to make up some replies.

- -

George Berry, D.D.S.
Crestline Dental Clinic
Chicago, Illinois

Name _____ Date _____

Address _____
Street City State Zip

Telephone _____ Birthdate _____

Sex _____ Children _____

Married _____ _____

Social Security Number _____

Job Experience (list places of work and dates)

_____

_____

Education (list schools and dates of graduation)

_____

_____

Letters of reference are attached from:

_____

_____

_____

Briefly tell why you are interested in working at the Crestline Dental Clinic.

_____

_____

_____

_____

Signature _____

- -

Share your application with your classmates. Answer these questions together:

Would an application form help a dentist who is hiring an assistant?

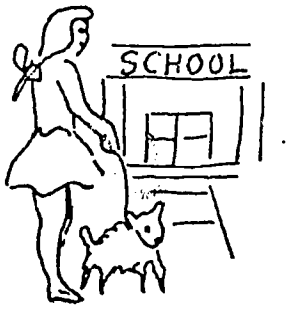
How?

Do you think the dentist would interview applicants before choosing the one for the job?

Why?

DON'T DO THAT HERE!

Look for the behavior that is out of place in these work settings. Think of a worker you know about. Draw a funny picture of him or her on the back of this page. Show something out of place for the work setting.



DEMONSTRATING TOOTHBRUSHING

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *tell when the dental assistant is a teacher.*

. . . *tell why toothbrushing is a social as well as a personal advantage.*

Attitudes and Appreciations Dimension

. . . *describe a contribution the dental assistant makes to society.*

Subject Matter Concepts

Language Arts
- Reading
  - Finding information
- Listening and Speaking
  - Giving and taking directions

Mathmatics
- Facts and Operations
  - All addition facts

Preplanning Suggestions

Pamphlets from Dental Association
Library books about dentists
Other information about dental workers
Posters or models of teeth, toothbrushes

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

. . . *tell when the dental assistant is a teacher.* PPO

The children can probably think of how the dental assistant is also a teacher. This worker often helps the dentist and the patient by teaching the technique of toothbrushing. Provide pamphlets obtained from the dentist's office, American Dental Association literature, encyclopedias, or library books from which the children can train themselves in the several steps of good toothbrushing.

Invite groups of children to assume the role of a team of dental assistants who will teach toothbrushing to the class. The children may want to make posters and models to use in their demonstrations. They might want to prepare a pamphlet of questions and answers about tooth care. Details such as hardness of the brush, gum massage, and use of dental floss could be included.

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . *describe a contribution the dental assistant makes to society.* PPO

Remind the teaching teams to inspire the learners by telling about the dividends of dental hygiene for later life. If possible, invite a dental assistant to listen to the children's demonstrations and comment.

After the demonstrations have the class discuss which teaching techniques were easy to learn from.

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

. . . *tell why toothbrushing is a social as well as a personal advantage.* PPO

Invite the class members to tell when and how they usually brush their teeth. Help the class to reach some conclusions about social, as well as personal, advantages of toothbrushing.

The REACT page is a checklist which children can use to evaluate their dental practice.

CB/Level 4/4

"Checklist for Dental Health"

CHECKLIST FOR DENTAL HEALTH

Directions: Put the number (3, 2, or 1) of your answer beside the questions.

___3___ always ___2___ sometimes ___1___ never

_____ Do you brush your teeth after all eating, even snacks?

_____ Do you brush your teeth after meals?

_____ Do you brush your teeth morning and night?

_____ Do you rinse your mouth with water if you can't brush?

_____ Do you use a toothbrush that is clean and has straight bristles?

_____ Do you brush with toothpaste?

_____ Do you brush with baking soda?

_____ Do you use dental floss when you brush?

_____ Do you use a mouth wash?

_____ Do you massage your gums?

_____ Do you chew sugared gum?

_____ Do you choose raw fruit and vegetables for snacks?

_____ Do you drink three glasses of milk a day?

_____ Do you drink fluoridated water?

_____ Do you visit your dentist once every six months?

_____ Do you brush your teeth in the correct way?

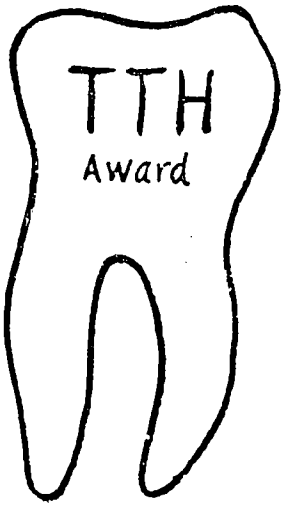
Add your answer numbers together. Put the total here. [ ]

Look on the back of this paper.

If your total is from 35-39, you can wear the Expert Tooth Care award.

If your total is from 30-34, you can wear the Promising Dental Practice award.

If your total is from 24-29, you can wear the Ticket to Try Harder award.



FIT FOR A FILLING

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *identify greeting patients and following directions as social behaviors required of the dental assistant.*

Educational Awareness Dimension

. . . *learn the names and positions of a normal adult's teeth.*

Subject Matter Concepts

Language Arts
- Reading
  - Finding information

Science
- Scientific Method
  - Describe, find similarities and differences
  - Classification

Preplanning Suggestions

Modeling clay, soap, or other modeling material to make a model of a tooth
Supplies for each child
Plaster of Paris for fillings

FIT FOR A FILLING

One of the tasks of the dental assistant is preparation of the filling material for the dentist to use. The majority of fillings are made of silver. The dental assistant must follow directions, putting the right number of mercury drops in with the silver in a small mixing machine. The machine mixes automatically. Consistency of the filling mixture is important.

To simulate this activity, ask the children to make fist-sized models of molars. They should take care to shape the tooth and its roots as accurately as possible. Use a convenient molding material such as modeling clay, balsa, or soap.

When the models are made, put a cavity in each of them. This could be dramatized--Dastardly Decay Strikes Again, etc. Each child could make up a reason to explain why his tooth was not protected against decay.

Certain behaviors are appropriate to specific job settings.

Coping Behaviors

. . . *identify greeting patients and following directions as social behaviors required of the dental assistant.* PPO

Explain to the children that the dentist carefully cleans out all decay and prepares the cavity before filling it. As the dental assistant would follow directions, ask a group of children to follow closely directions for mixing plaster of paris. Use the plaster to fill cavities in the model molars. As the children fill their cavities, ask them to explain why the filling mixture would need to be just the right consistency and amount for each cavity.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *learn the names and positions of a normal adult's teeth.* PPO

On the REACT page is a chart of upper and lower teeth. Pupils can look up their names and label them correctly. Ask for comments regarding the difficulty of this occupational learning. How many permanent teeth do the children now have?

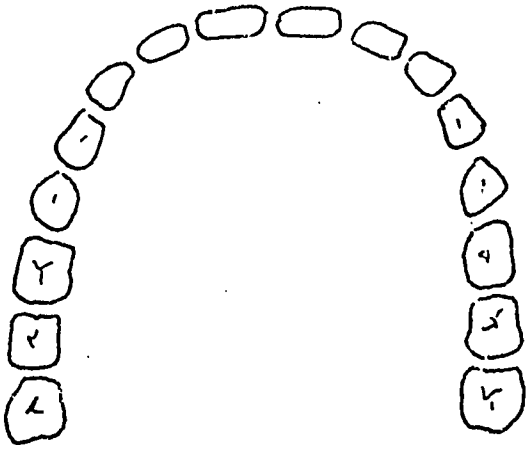
CB/Level 4/5

"Name the Teeth"

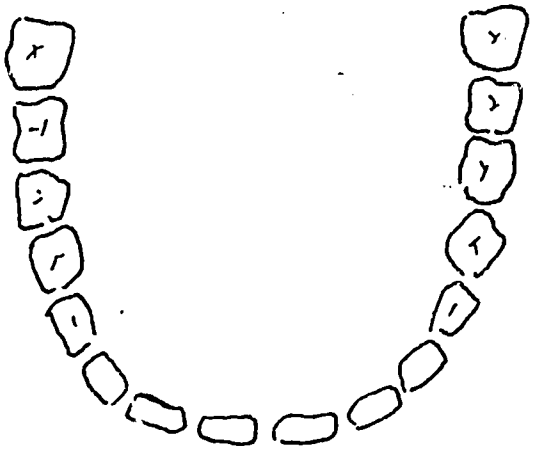
NAME THE TEETH

As the dentist checks a person's teeth, the dental assistant marks teeth with cavities on a chart like this one. The dental assistant must know the names of all the teeth. Look up the correct names for all the teeth. When you know them test yourself by drawing a line from each tooth to its name.

UPPER TEETH



Canines
Second molars
Central incisors
First molars
First bicuspids
Third molars
Lateral incisors
Second bicuspids



Canines
Second molars
Central incisors
First molars
First bicuspids
Third molars
Lateral incisors
Second bicuspids

LOWER TEETH

RELATED MATERIALS

About Jack's Dental Checkup (Book) R. Jubelier. Childrens Press, 1224 West Van Buren, Chicago, Illinois 60607, 1959.

Beginning Responsibility: Learning to Follow Instructions (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 E. South Water Street, Chicago, Illinois 60601, 1970.

Being Responsible: Good Health (Film, Color, 12-min.) Bailey Film Associates Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404.

Courtesy at School (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 E. South Water Street, Chicago, Illinois 60601, 1969.

Everyday Courtesy (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 E. South Water Street, Chicago, Illinois 60601, 1967.

Fresh As a Daisy, Neat As a Pin (Book) William Wise. Parents Magazine Press, 52 Vanderbilt Avenue, New York, New York 10017, 1970.

I Want To Be a Dentist (Book) Carla Greene. Childrens Press, 1224 W. Van Buren, Chicago, Illinois 60607, 1960.

Popeye the Sailor and Health Careers (Comic Book) King Features Syndicate, 235 E. 45th Street, New York, New York 10017, 1973.

DENTAL ASSISTANTS

Dental assistants work with dentists as they examine and treat patients. The assistant makes the patient comfortable in the dental chair, prepares him for treatment, and obtains his dental records. As the dentist works, the assistant hands the proper instruments and materials to him and keeps the patient's mouth clear by using suction or other devices. Dental assistants may prepare impression and restorative materials for the dentists' use, and also may expose X-rays and process dental X-ray film as directed by the dentists. In addition, they sterilize and care for dental instruments.

Although dental assistants spend most of their time at chair-side, they also perform a variety of other duties that do not require the dentist's professional knowledge and skill. Some assistants perform simple technical work in the office laboratory such as making casts of the teeth and mouth from impressions taken by the dentist. These casts are used by dentists and dental laboratory technicians to make prosthetic devices. Some dental assistants are responsible for managing the office, and may arrange and confirm appointments, receive patients, keep treatment records, send statements and receive payment, and order dental supplies and materials.

The work of the dental assistant should not be confused with that of the dental hygienist. Dental assistants do not, for instance, perform work in the patient's mouth, such as oral prophylaxis (scaling and cleaning the teeth); this is done by hygienists.

Nearly 100,000 persons were employed as dental assistants in 1968; practically all were women. About one out of five assistants was employed part time.

Most dental assistants worked in private dental offices, either for individual dentists or for groups of dentists. Many of the remainder were employed in dental schools, hospital dental departments, state and local public health departments, or private clinics.

The federal government employed about 2,000 dental assistants in 1968, chiefly in the Public Health Service, the Veterans Administration, and the Department of the Army.

Most dental assistants employed in 1968 learned their skill on the job. In recent years, however, an increasing number of dental assistants have entered the occupation through formal post high school dental assisting programs. About 130 such programs were accredited by the Council on Dental Education of the American Dental Association (ADA) in mid-1968. Some of these were supported under federal legislation, including the Manpower Development and Training Act of 1962, the Vocational Education Act of 1963 and the Allied Health Professions Personnel Training Act of 1966.

Most post high school courses in dental assisting are given in junior

and community colleges or in vocational or technical schools. More than two-thirds of these programs provide a full academic year of training leading to a certificate or diploma. Graduates of 2-year programs--offered only in junior and community colleges--earn an associate degree upon completion of specialized training and 1 year of liberal arts courses. A few schools provide both 1- and 2-year programs. Completion of high school or its equivalent is the standard admission requirement of all the approved schools that offer courses in dental assisting. Some schools also may require typing or a science or business course.

Approved dental assisting curriculums include instruction in both skills and related theory--in laboratory and classroom--and usually a general occupational orientation. Trainees receive practical experience in an affiliated dental school, in local clinical facilities, or in selected dental offices.

Two American Dental Association approved correspondence courses are available for employed dental assistants who are learning on the job, or who otherwise are unable to participate on regular dental assisting programs on a full-time basis. The correspondence programs are equivalent to 1 academic year of study but generally require about 2 years to complete. Some proprietary schools also offer a 4- to 6-month course in dental assisting, but these are not accredited by the dental profession.

Graduates of approved dental assisting programs who meet certain experience requirements and who successfully complete an examination administered by the American Dental Assistants Association may become Certified Dental Assistants. Certification is acknowledgements of an assistant's qualifications but is not a general prerequisite for employment.

After working 1 or 2 years, dental assistants sometimes seek to further their skills by becoming dental hygienists. Prospective dental assistants who forsee this possibility should plan carefully, since credit earned in a dental assistant program usually is not applicable toward requirements for a dental hygiene certificate.

Employment opportunities for dental assistants are expected to be excellent through the 1970's, especially for graduates of academic programs in dental assisting. Part-time opportunities also will be very favorable.

Growing awareness of the importance of regular dental care and the increasing ability of persons to pay for care are among the factors underlying an anticipated rapid growth in the demand for the services of dental assistants. Other factors affecting demand are an increased participation in dental prepayment plans, and the expansion of public programs such as Medicaid and Head Start, which extend dental care services to the disadvantaged. Another important factor in the growing need for more dental assistants is the slow increase in the supply of dentists in proportion to population growth, resulting in the greater use of auxiliary workers.

In addition to the rapid growth of the occupation, many assistants also will be needed each year to replace the large number of women who leave the

field for marriage and family responsibilities.

Although the 40-hour workweek prevails for dental assistants, the schedule is likely to include work on Saturday. A 2- or 3-week paid vacation is common. Sick leave and other benefits are dependent on the individual dentist. Dental assistants employed by the federal government receive the same employee benefits as other workers.

Dental assistants generally work in a well-lighted, clean environment. They must exercise caution in handling X-ray and other equipment, where strict adherence to proper procedure is indispensable for safety.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U. S. Department of Labor, Washington, D. C.
pp. 86-88.

CLEAR THE AIR

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

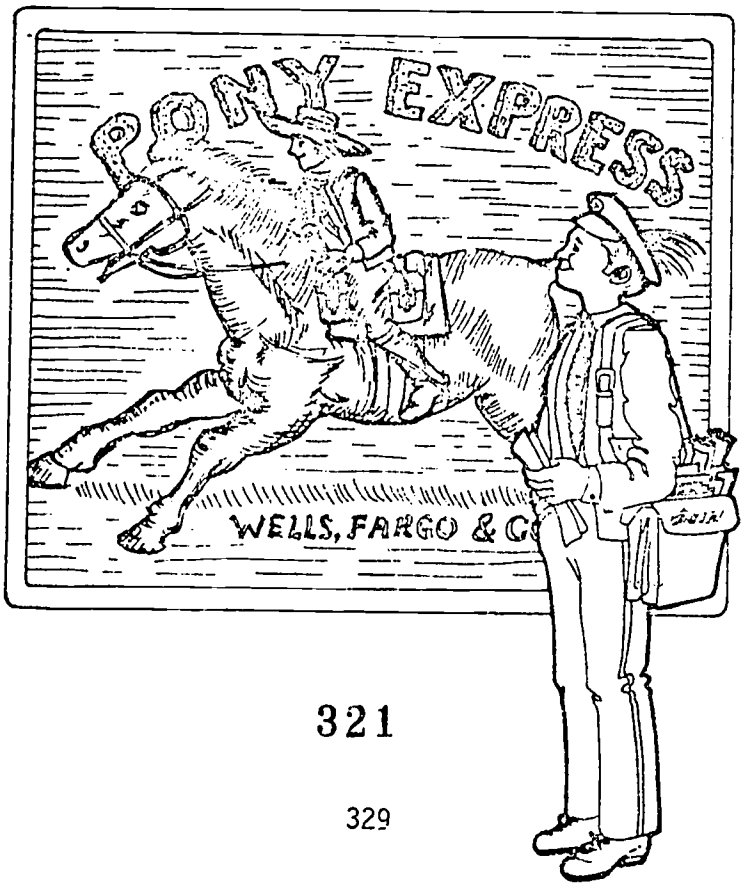
CAREER DEVELOPMENT FOCUS: Performance requirements for a job may change with time.

OCCUPATIONAL FOCUS: Air Pollution Control Engineer

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Law and Lingo
2. Town Meeting
3. The Air Cycle
4. Imagine That!



Teacher Goals

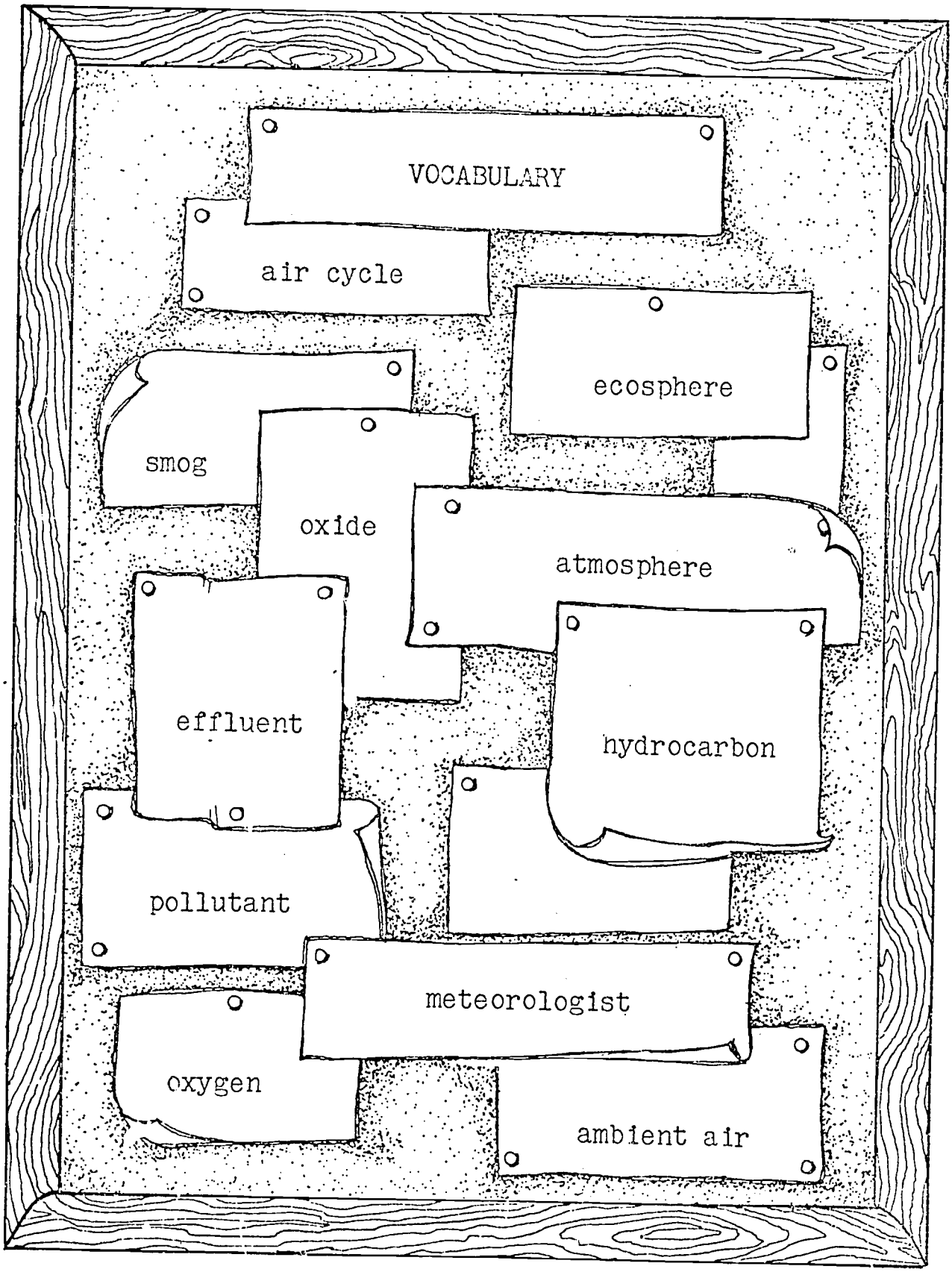
Teacher goals of this strategy combine a Coping Behaviors Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Air Pollution Control Engineer. In this perspective the teacher's goals are to:

Encourage appreciation of pollution control as a recently developed occupation.

Structure experiences to help pupils relate air quality to other facets of life.

Provide bases for understanding the roles of government agencies in pollution control.

Help pupils relate the concept of job performance requirements to changing conditions.


VOCABULARY
air cycle
ecosphere
smog
oxide
atmosphere
effluent
hydrocarbon
pollutant
meteorologist
oxygen
ambient air

LAW AND LINGO

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *explain how modern technology has made the air pollution control engineer necessary.*

Attitudes and Appreciations Dimension

. . . *identify a given number of contributions made to society by the air pollution control engineer.*

. . . *discuss air pollution control as an occupation suitable for both men and women.*

Career Information Dimension

. . . *describe at least one each of physical, social, and intellectual characteristics needed by an air pollution control engineer.*

. . . *define a given number of vocabulary terms dealing specifically with air pollution.*

Educational Awareness Dimension

. . . *explain the need for continued learning in the work of an air pollution control engineer.*

. . . *identify a given number of academic skills and knowledge used by an air pollution control engineer.*

Subject Matter Concepts

Language Arts
- Reading
  - For information
  - Special vocabulary
- Listening and Speaking
  - Discussion skills

Social Studies
- Political Science
  - Rules for interaction
  - Government services
  - Laws regulate behavior.
  - Community rights and requirements

Preplanning Suggestions

Supplies to reproduce a page of the materials to give to each child
Information about local air pollution regulations

The air pollution control engineer helps to enforce the standards set by the Environmental Protection Agency. This activity looks into some laws and regulations that define air quality standards and controls.

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . *identify a given number of contributions made to society by the air pollution control engineer.* PPO

Learning is a lifelong process.

Educational Awareness

. . . *explain the need for continued learning in the work of an air pollution control engineer.* PPO

Reproduce the accompanying outline of The Clean Air Amendments of 1970. Use it as the basis for a discussion about air quality control--particularly from the standpoint of governmental standards and enforcement. Why do we need laws and government regulations to clean up our air? How can individual citizens or organizations help? What items about air pollution have been in the local papers lately?

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *identify a given number of academic skills and knowledge used by an air pollution control engineer.* PPO

Occupations require special personal characteristics.

Career Information

. . . *describe at least one each of physical, social, and intellectual characteristics needed by an air pollution control engineer.* PPO

Performance requirements for a job may change with time.

Coping Behaviors

. . . *explain how modern technology has made the air pollution control engineer necessary.* PPO

A great many tasks can be performed by men or women.

Attitudes and Appreciations

. . . *discuss air pollution control as an occupation suitable for both men and women.* PPO

Occupations have their own vocabularies.

Career Information

Discuss the subconcept of changing performance requirements to focus on the air pollution control engineer as an extreme case--the position did not even exist until very recent years. What kind of skills and knowledge would an air pollution control engineer need? What kind of person would want to be an air pollution control engineer? What kind of person would not want to be an air pollution control engineer? Is it possible that the job of the air pollution control engineer may become obsolete--why, or why not?

What are some other jobs of recent origin? What are some jobs that have changed because of environmental concerns?

. . . *define a given number of vocabulary terms dealing specifically with air pollution.* PPO

The REACT page takes advantage of current interest in environmental concerns to study several of the terms that have come to be a part of this new consciousness. Further additions from current periodicals and other media should be encouraged. Individual notebooks and/or a class bulletin board could be used to organize a continuing glossary--possibly including pictures and articles cut from newspapers and magazines.

CB/Level 4/6

"A Wordy Business"

THE CLEAN AIR AMENDMENTS OF 1970

The states and cities are responsible for the prevention and control of air pollution at its source. The federal Environmental Protection Agency (EPA) sets standards of air quality and can enforce pollution controls.

Air Quality Control Regions

The country has been divided into about 250 regions in which pollution control takes place.

Air Quality Standards

Notices are issued to tell the levels at which major pollutants can be dangerous. Some major pollutants are dust and dirt particles, sulfur oxide, hydrocarbons, and carbon monoxide. Standards are set to protect the public health and welfare.

Controls

Each state must make a plan to carry out the EPA air quality standards.

EPA may require records and reports of pollutants.

EPA oversees state plans and can enforce pollution controls. It can sue for restraint of any pollutant source endangering people's health if the state or local authorities fail to do so.

Any citizen may sue against a person or corporation violating a standard set by the EPA.

A WORDY BUSINESS

Scientists sometimes think of our earth as divided into three "spheres." These are not globes, but are the three main parts of our planet.

The atmosphere is the air all around the planet.

The lithosphere is the rock and land.

The hydrosphere is the water.

Air pollution control and other ideas about ecology have put many new words into our everyday speech. For example, the thin layer of earth and air that makes life possible is called the ecosphere.

Make yourself a notebook of words about different kinds of pollution and pollution control.

Here are some words you can use for starters:

SMOG (the haze made when the sun shines on pollutants in the air)

CARBON MONOXIDE (a pollutant from automobile exhaust)

FOSSIL FUELS (coal, oil, and natural gas; when burned they may send pollutants into the air)

PARTICULATES (solid or liquid bits of matter in the air)

INCINERATOR (a furnace or other container for burning waste materials)

Look through books, newspapers, and magazines for more examples. Pictures and drawings can make your notebook even better.

TOWN MEETING

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *distinguish group and individual responsibilities with respect to local environmental conditions.*

Attitudes and Appreciations Dimension

. . . *relate the services of an air pollution control engineer to the citizens and industries of the local community.*

Educational Awareness Dimension

. . . *apply one's own observation and discussion abilities to local environmental considerations.*

Subject Matter Concepts

Language Arts
- Listening and Speaking
  - Discussion skills
  - Interviewing

Social Studies
- Political Science
  - Laws regulate behavior.
  - Community rights and requirements
- Sociology-Anthropology
  - Values and purposes in behavior
  - Individuality and responsibility

Preplanning Suggestions

Resource person for local environmental planning
Local regulations for environmental planning
Empty jar, tape, screws, lacquer (See REACT page, "Particles in the Air.")

TOWN MEETING

This activity considers air quality (and other environmental conditions as time may permit) from the perspective of local responsibility. Format may be a simulated town meeting or simply a general class discussion.

If possible, invite a local government official and/or other individuals who are conversant in specific matters of environment in the community (e.g., sanitary engineers, maintenance personnel, and industrial engineers). If such resource people are available, structure the meeting to revolve around their contributions either via panel presentation, questions from the class, or both.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Performance requirements for a job may change with time.

Coping Behaviors

. . . apply one's own observation and discussion abilities to local environmental considerations. PPO

. . . relate the services of an air pollution control engineer to the citizens and industries of the local community. PPO

. . . distinguish group and individual responsibilities with respect to local environmental conditions. PPO

The discussion could include the following topics:

- What areas of the community have air pollution problems?
- What are specific sources of air pollution?
- How could an air pollution control engineer help our situation?
- Do we have, or can we hire, an air pollution control engineer?
- What other pollution problems are apparent besides air?

How is our school involved with pollution--as cause, as effect?
What is being done by the local government? By private groups?
What can each individual citizen do to help?

Be careful not to let this meeting deteriorate into a gripe and pass-the-buck session. Concentrate on specific conditions and possibilities for individual efforts toward improvement. Stress how even the requirements for everyday citizenship have changed due to environmental concerns.

The REACT page directs the pupils to collect samples of particulate matter in the air. Remind children to exercise care in bringing back their samples. Probably one can of lacquer can take care of the whole class's needs.

The experiment may be repeated at different times of the year for a long-range comparison of data.

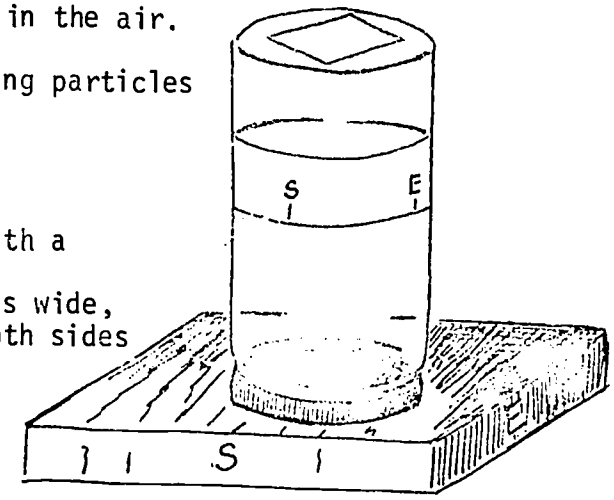
CB/Level 4/7

"Particles in the Air"

PARTICLES IN THE AIR

This experiment will help you check the tiny bits of matter that are in the air.

To make an instrument for gathering particles from the air, you will need:



- a pint-sized glass jar with a screw-on lid
- white tape, about 2 inches wide, that is sticky on both sides
- a piece of wood to mount the jar
- a spray can of clear lacquer
- nails or screws

Fasten the jar lid to the wood base with nails or screws.

Attach the jar to its lid.

Put a piece of tape across the bottom of the jar.

Wrap a long piece of tape around the outside of the jar.

Set your instrument where you want to take a sample of particles in the air. Be careful to place it so that it cannot be disturbed and will allow the air to reach the sticky tape easily.

Label compass directions on the wood base and on the tape around the side of the jar.

Leave your instrument for two or three days.

After collecting the sample, record when and where you collected it.

Bring your instrument, with the sample particles, back to school. Be careful not to smudge any of the particles.

Spray the samples with clear lacquer.

(over)

Observe your collection of particles carefully.

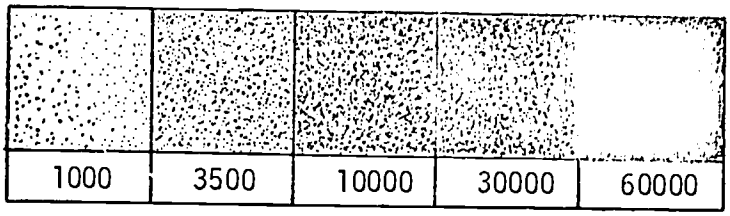
Divide the tape around the jar according to the four compass directions.

How does the tape on top differ from each of the side sections?

NORTH	SOUTH
EAST	WEST

What kinds of particles appear in your samples?

Compare your samples with this chart.



(Adapted from: Cincinnati Visual Aids Chart)

What is the highest number of particles you collected?

From what direction did they come?

What is the smallest number of particles you collected?

From what direction did they come?

Compare your samples with those collected by your classmates.

THE AIR CYCLE

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *describe at least one technological change which has affected man's use of the air.*

Career Information Dimension

. . . *identify the condition and behavior of the atmosphere as part of the air pollution control engineer's work setting.*

. . . *tell about a machine devised specifically to treat particular air conditions.*

Educational Awareness Dimension

. . . *relate knowledge of air cycles to the work of the air pollution control engineer.*

Subject Matter Concepts

Science
- Earth and Sky
  - Atmosphere affects sun's radiation.
  - Descriptions of atmosphere
  - Water and air interactions
- Biology
  - Living things need air.
- Scientific Method
  - Investigative and evaluative techniques
  - Special instruments
  - Comparisons

Preplanning Suggestions

Visuals and other materials about earth's atmosphere
Materials to make charts or drawings of air recycling
Measures used by weathermen (See REACT page, "The Weatherman's Role.")

THE AIR CYCLE

This activity seeks an understanding of the continuous recycling of oxygen and carbon dioxide as major components of the earth's atmosphere. Use selected films, filmstrips, and/or printed materials to supply information on the subject.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . relate knowledge of air cycles to the work of the air pollution control engineer. PPO

Occupations have their own work settings.

Career Information

. . . identify the condition and behavior of the atmosphere as part of the air pollution control engineer's work setting. PPO

Use this study to distinguish two viewpoints regarding the atmosphere. First, the natural condition of the air is a continuous cycle among all living things and the atmosphere. Charts or other drawings may be made to show oxygen as exhaled by plants and inhaled by animals, with the reverse order for carbon dioxide. The idea of a balanced aquarium can help illustrate the same concept as an underwater phenomenon, with gases dissolved in water rather than being part of the air. Imagination might trace the adventures of a molecule of oxygen, or of carbon dioxide, as it travels through the cycle once or twice. The balanced aquarium idea can be enlarged into a "balanced planet" perspective.

Performance requirements for a job may change with time.

Coping Behaviors

. . . describe at least one technological change which has affected man's use of the air. PPO

Occupations require the use of specific materials and equipment.

Career Information

. . . tell about a machine devised specifically to treat particular air conditions. PPO

Second, man has deliberately changed the conditions of his air in positive ways. Skip over pollution for a while and concentrate on efforts to improve the various conditions of the air. For example, allergies and general cleanliness can be treated with electronic air cleaners. Comfort, efficiency, and well-being can be enhanced with air conditioning. Damaging effects of excess or lack of moisture can be controlled by humidifiers and dehumidifiers.

The REACT page presents a simple matching exercise of definitions with names of a weatherman's instruments. In addition, a suggestion is made to keep track of whatever pollution index a weatherman might report regularly. For this, pupils will probably need help in developing the concept of micrograms per cubic meter and in understanding the names of particular pollutants.

More capable pupils may be encouraged to construct a cube measuring a meter in each dimension. This could be a skeleton made from soda straws or wire, a "solid" made from sheets of cardboard or wood, or some other kind of representation. The concept of a microgram is more obscure. One possible means is to identify objects that weigh about one gram, then work "back" by considering objects that weigh progressively less. Ten objects totaling one gram represent one decigram. A thousand objects totaling one gram represent a milligram. When you reach "a million of these objects together would weigh a gram," you've got a microgram!

CB/Level 4/8

"The Weatherman's Role"

THE WEATHERMAN'S ROLE

The work of the air pollution control engineer is related to that of the meteorologist. (We call him the weatherman!) Pollution measurement and control depend upon knowing the natural conditions of the air.

A weatherman uses certain instruments to measure different things about the air. Look up the names of these instruments and match them with what they measure. The thermometer is already done for you.

A. RAIN GAUGE	C. THERMOMETER	E. ANEMOMETER
B. WIND VANE	D. PSYCHROMETER	F. BAROMETER

___C___ It is used to measure the heat of the air.

_____ It is used to measure the water (humidity) in the air.

_____ It is used to measure how fast the wind is blowing.

_____ It is used to show the direction the wind is blowing.

_____ It is used to measure how much rain has fallen.

_____ It is used to measure air pressure.

The weatherman usually reports the temperature, humidity, rainfall, air pressure, and the wind conditions.

He may also give a pollution index of some kind.

If he does give a pollution index, find out what it means and keep track of it for a week, two weeks, or a month to see whether or not it changes.

IMAGINE THAT!

Fourth Experience Level Activity

Performance Objectives

Coping Behaviors Dimension

. . . *discuss how skill and knowledge requirements for an air pollution control engineer may change within a given period of time.*

. . . *report on an adult acquaintance's description of how the skill or knowledge requirements have (or have not) changed since he began his present job.*

Attitudes and Appreciations Dimension

. . . *take part in a dramatization involving the work of an air pollution control engineer.*

Career Information Dimension

. . . *describe at least two different work settings for an air pollution control engineer.*

Educational Awareness Dimension

. . . *explain how changes in technology or the environment may require new knowledge or skills for most people.*

Subject Matter Concepts

Language Arts
- Listening and Speaking
  - Role playing
  - Interviewing
  - Giving and taking directions
- Reading
  - For information
  - Special vocabulary

Preplanning Suggestions

Pictures of pollution control and pictures of buildings and equipment that cause pollution

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

Occupations have their own work settings.

Career Information

Learning is a lifelong process.

Educational Awareness

Performance requirements for a job may change with time.

Coping Behaviors

To help reinforce learnings and/or motivate further study, lead pupils to consider different ways to use role playing, monologues, debates, or other forms of presentations to illustrate their knowledge of air pollution control. The following objectives include one from each dimension as "starters." Since many ideas for possible skits, debates, etc., will come from the children, the ideas finally used may or may not match the objectives noted here or possibly those in the dimension frameworks. In any case, have some fun and learning!

. . . *take part in a dramatization involving the work of an air pollution control engineer.* PPO

. . . *describe at least two different work settings for an air pollution control engineer.* PPO

. . . *explain how changes in technology or the environment may require new knowledge or skills for most people.* PPO

. . . *discuss how skill and knowledge requirements for an air pollution control engineer may change within a given period of time.* PPO

Any choice of subject for presentation, of course, implies a good bit of research and preparation.

These topics may help to get things started:

Depict an air pollution control engineer getting complaints from citizens, then inspecting the industrial plant in question.

Dramatize a courtroom scene in which a suit concerning air pollution is being tried.

Simulate a city council meeting in which an air pollution problem is being considered.

Have a real or simulated debate about the advantages and disadvantages of fossil fuels versus atomic fuels.

Have a monologue by a chimney of an industrial plant before and after being brought up to air quality standards.

Stage a real or simulated interview with an air pollution control engineer concentrating especially on how he got his job and why he chose it.

Performance requirements for a job may change with time.

Coping Behaviors

. . . report on an adult acquaintance's description of how the skill or knowledge requirements have (or have not) changed since he began his present job.
PPO

The REACT page deals directly with the coping behaviors subconcept regarding performance requirements. The pupil is directed to interview briefly two adults concerning their job conditions. Discuss the basic courtesies purposes, and methods of interviewing beforehand. Stress the need to choose subjects who have held their present job for at least a year--preferably much longer. Help with comparisons of knowledge and skill changes (or lack of changes) as the results come back to the classroom.

CB/Level 4/9

"Have Things Changed?"

HAVE THINGS CHANGED?

When a person has the same job for a while, it may be that some of the things he needs to know or be able to do will change.

Choose two adults that have had their same jobs for at least a year. Ask each one of them these questions:

What is your job?

Where do you work?

How long have you had your job?

What new things have you had to learn since you began this job?

Write down their answers to your questions.

Compare those answers with the ones your classmates bring back.

Which kinds of jobs had changes?

Which kinds of jobs did not have changes?

Would you like to have a job that changes as time goes by?

RELATED MATERIALS

Air (Filmstrip) BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404, 1972.

Air and Life (Sound Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Air Pollution and You (Overhead Transparency) Creative Visuals, Box 1911-3, Big Spring, Texas 79720.

Community Keeps House, A (Film, Color, 11-Min.) BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404, 1971.

Learning to Live With Others (Sound Filmstrip) Society for Visual Education Inc., 1345 Diversey Parkway, Chicago, Illinois 60614, 1971.

Our Ocean of Air (Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Our Working World (Multi-Media) Lawrence Senesh. Science Research Associate 259 East Erie Street, Chicago, Illinois 60611, 1972.

Pollution: The Cities' Air (Sound Filmstrip) BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404, 1972.

Rules We Follow, The (Filmstrip) Curtis A-V Materials, Division of Curtis Publishing Company, Independence Square, Philadelphia, Pennsylvania 19105, 1966.

AIR POLLUTION CONTROL ENGINEER

The air pollution control engineer can be a city, state, or regional officer. He has specialized scientific training at the college level and may hold a graduate degree. In addition to scientific training, the air pollution control engineer needs to understand the governmental structure under which he is employed. A large portion of his work may consist of making inspections to see that governmental controls and specifications for air quality are met by regional industries. He must understand legal procedures and be willing and able to deal effectively with many kinds of people.

Tasks of the air pollution control engineer include the following: collecting air samples on a regular basis, performing chemical laboratory analyses, doing field inspections, designing and developing instruments, tests, and methods, studying factors that affect vegetation, making investigations to determine the effectiveness of control, helping identify sources of contamination, enforcing laws and regulations, compiling data, submitting reports, and supervising subordinates.

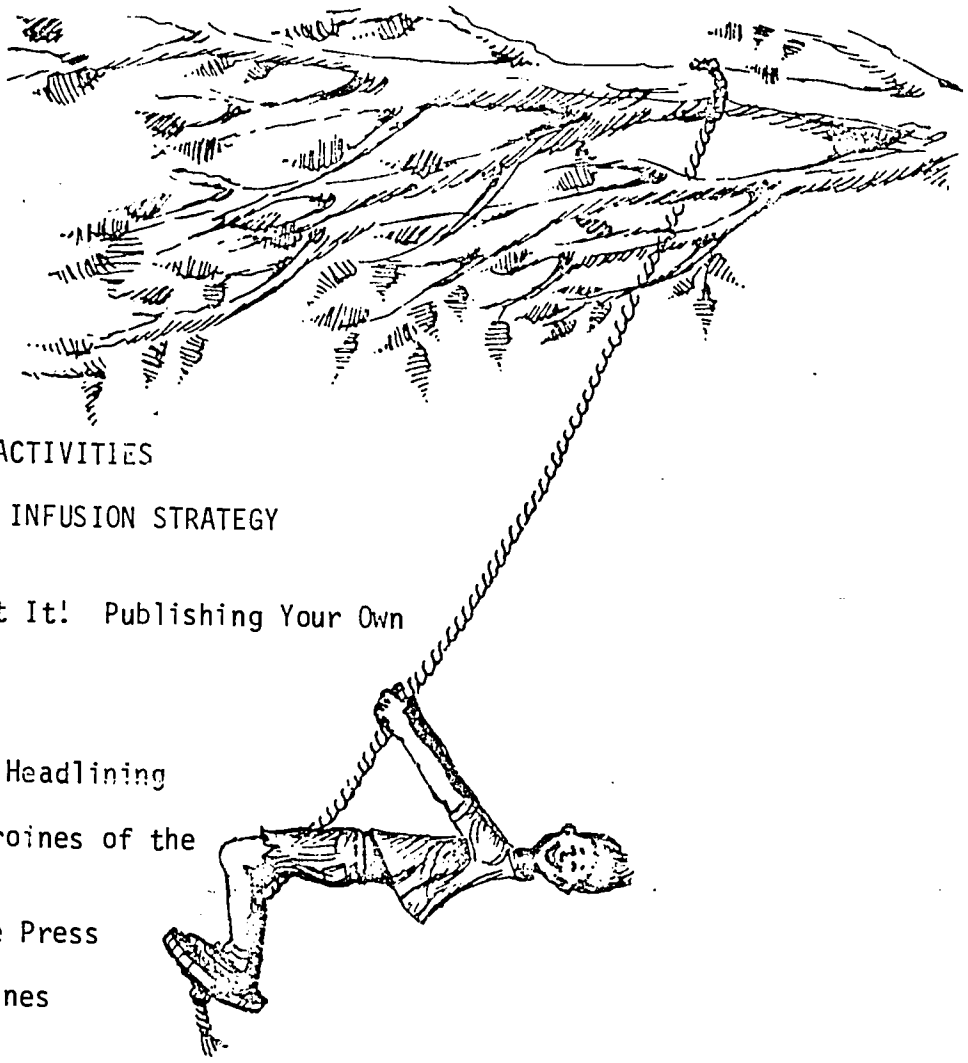
The air pollution control engineer works in the present to insure a safe and healthy environment for the future. Though trained in physics and chemistry, he is in a real sense a life scientist. Needs for air pollution control engineers will increase.

WHAT'S NEWS: RISKS IN NEWSPAPER REPORTING

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

CAREER DEVELOPMENT FOCUS: Decision making involves risks.

OCCUPATIONAL FOCUS: Newspaper Reporter



ACTIVITIES

IN THIS INFUSION STRATEGY

1. Read All About It! Publishing Your Own Newspaper
2. Reporting
3. Rewriting and Headlining
4. Heroes and Heroines of the Press
5. Freedom of the Press
6. Printing Machines

Teacher Goals

Teacher goals of this strategy combine a Decision Making Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Newspaper Reporter. In this perspective the teacher's goals are to:

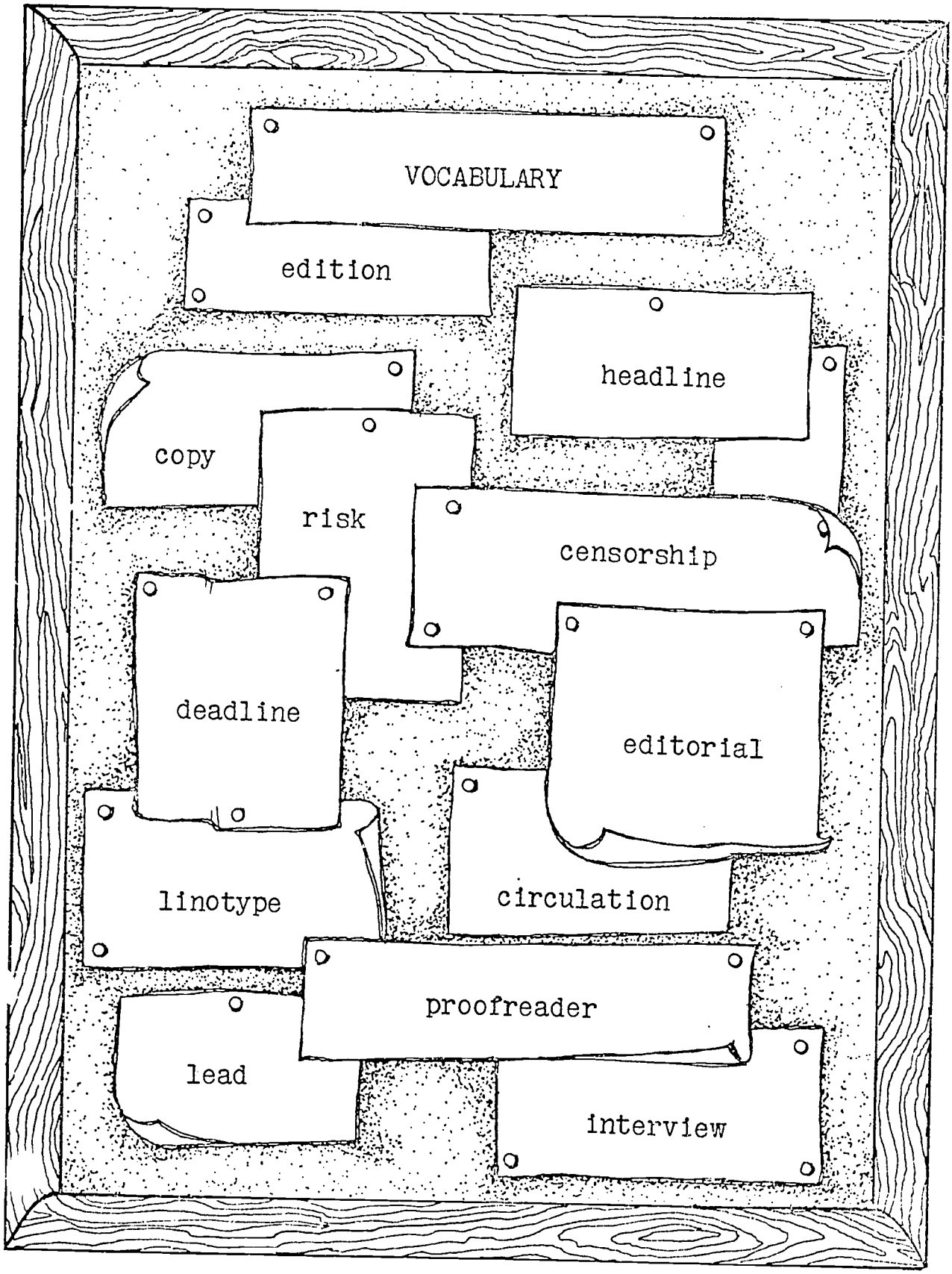
Increase the pupils' understanding of the function of the newspaper in a community.

Provide opportunities for pupils to use language arts skills in simulating the work of a newspaper reporter.

Assist pupils in explaining how, in a democracy, the value of a free press overrides the risks.

Acquaint pupils with the results of risks taken by newspapers and reporters.

Help pupils develop the skill of making personal decisions by considering the risks involved.


VOCABULARY
edition
headline
copy
risk
censorship
deadline
editorial
linotype
circulation
proofreader
lead
interview

READ ALL ABOUT IT! PUBLISHING YOUR OWN NEWSPAPER

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *identify two kinds of risks newspapers take when deciding what to print.*

. . . *explain how two responsibilities of reporters involve risks.*

Attitudes and Appreciations Dimension

. . . *tell three ways in which the newspaper serves the community.*

. . . *cooperate in the production of a school or class newspaper.*

. . . *explain the dependence of other newspaper workers upon the reporter.*

. . . *describe the possible effects on other newspaper workers should the reporter fail to perform his task.*

Subject Matter Concepts

Language Arts
- Grammar and Usage
  - Uses of language
- Writing Skills
  - Paragraphing
  - Putting ideas in order
- Listening and Speaking
  - Interviewing

Social Studies
- Sociology-Anthropology
  - Community wants and needs
  - Newspapers
- Economics
  - Supply and demand

Preplanning Suggestions

Accumulate copies of area newspapers.
Materials for advertising posters to be made by the class
Determine if ditto materials are available to the class for publishing a paper.
Arrange with other teachers and administrative personnel for interview possibilities.

READ ALL ABOUT IT!
PUBLISHING YOUR OWN NEWSPAPER

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Discuss with the children one of the biggest language activities in their community--their local newspaper.

. . . *tell three ways in which the newspaper serves the community.* PPO

Begin to list together what the newspaper offers the people of the town: news stories, editorials, sports news, features, advertisements, classifieds, comic strips, local movies, announcements of local activities, recipes, puzzles, horoscopes, etc. Ask the children what their family's favorites are.

The class could put these items into three service categories:

1. Making the news available to all the people
2. Assisting businesses and civic organizations
3. Entertaining

Decision making involves risks.

Decision Making

. . . *identify two kinds of risks newspapers take when deciding what to print.* PPO

Which service category seems most important? Does the paper take any chances or risks when it decides to print these things? Among other thoughts, lead the children to recognize the risk of reader appeal. What might the paper do to reduce the risk that what it chooses to print may not be interesting?

Encourage the children to decide whether or not the publication of a school or classroom newspaper would be a good risk. What has been happening? How could they find out about it? Who would want to read about it? Could they sell the paper? For how much? How could they organize workers to put out the paper? What would the goals of their paper be? (Decide upon an editorial policy.

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . *cooperate in the production of a school or class newspaper.* PPO

Have them name their paper and make posters advertising its publication. Plan a weekly edition for two or three weeks. Take orders for the first edition. To see whether the paper is a good business risk, have them check the increases or decreases in orders during the second and third weeks.

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

. . . *explain the dependence of other newspaper workers upon the reporter.* PPO

Ask for volunteers to be reporters. They will go out to get the stories. Other volunteers may want to be cartoonists, editors, advertising managers, artists, rewrite people, proofreaders, or circulation managers. Decide upon the easiest way to print the paper. Set a copy deadline. Deliver to the subscribers on schedule.

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *describe the possible effects on other newspaper workers should the reporter fail to perform his task.* PPO

Decision making involves risks.

Decision Making

Discuss the risks of working in a group. What would happen to the paper if someone did not do his work? How does the reporter depend upon other newspaper workers? How do they depend upon the reporter?

. . . explain how two responsibilities of reporters involve risks. PPO

As the pupil volunteers carry out their special news tasks, keep them alert to any risks their decisions might involve. Examples for the reporters could be:

Did I get an important story?
Did I interview the best source?
Is my story truthful? Complete? Easy to read and understand?

Examples for the editors:

What effect is our paper likely to have on the readers?
Can we help anyone by printing a certain story?
Are we hurting anyone by printing a certain story?

Have the children interview readers after the first issue and consider the following questions: Did they like what you thought they would like? Will you change any of your decisions to reduce the risk of lack of reader appeal? Will you risk offending some readers in order to meet the goals of your paper?

The REACT page shows two stories containing names and statements of persons interviewed by a reporter. Help children with vocabulary before they read the articles. Using these as examples, the children may collect additional articles written with the help of interviews.

DM/Level 4/1

"Reporting Interviews"

REPORTING INTERVIEWS

Underline the names of the persons reporters interviewed for these stories.

Underline what the person said.

Giant Parakeets May Threaten Illinois Crops

SPRINGFIELD (UPI) – Giant South American parakeets which can cause substantial damage to corn and other grain crops have been spotted flying wild in Illinois, the state Department of Agriculture has reported.

The birds, known as monk parakeets, are parrot-sized and have a long bluish-green tail and grey head. Agriculture Director Robert "Pud" Williams said. Their bodies normally are green, with blue and yellow highlights.

They originally were imported into North American as pets, agriculture officials said, but escaped and have multiplied to form wild flocks.

If they become established in large enough numbers, the birds could pose a serious threat to grain production.

Illinois officials are working with federal agencies to develop an eradication program, the director said.

He cited other animal and insect pests which could have been controlled if programs had been started when they first were observed. Among those pests, Williams said, are the English sparrow, the starling and the face fly, an insect which causes millions of dollars of damage annually in the cattle and horse industries.

Agriculture officials said they would not specify which areas of Illinois had reported the parakeets because they feared an adverse public reaction.

Besides corn, the parakeets are known to eat sorghum, millet, sunflowers and fruit, Williams said.

Finish Delayed for Superdome

NEW ORLEANS, April 28 (AP)—Construction of the [illegible] Superdome has reached the halfway point, but a new delay has removed any possibility that the New Orleans Saints will open their 1974 National Football League home season there.

Ben Levy, executive director of the Superdome, said that contractors had revised their estimate of when construction will be completed, now setting an Oct. 17, 1974, target date. That would be several weeks into the Saints' season.

Levy said that the new delay —the original completion date was June 1974—was due in part to a series of labor-management disputes that resulted in three to four weeks' lost work time.

Look through old newspapers.

Find two or three stories naming people who have been interviewed and telling what they said.

Look for quotation marks. These may be clues to help you find an interview.

Do you know what the reporter means when he uses quotation marks?

See how long it takes your friends to find the names of persons interviewed and what they said in the articles you find.

REPORTING

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *explain how two responsibilities of reporters might involve risks.*

. . . *cite an example of plans for reporting a story which did not work out.*

Attitudes and Appreciations Dimension

. . . *discuss the common expectations involved in reporting a story.*

Educational Awareness Dimension

. . . *describe the language skills used by a newspaper reporter.*

. . . *name two other occupations which require skills in reporting.*

Subject Matter Concepts

Language Arts
- Writing Skills
  - Paragraphing, topic sentences
  - Putting ideas in order
- Listening and Speaking
  - Interviewing
- Reading
  - Understanding quote marks

Social Studies
- Sociology-Anthropology
  - Contact with others is needed.
  - Newspapers

Preplanning Suggestions

Make arrangements for children to be out of the classroom to interview, collect data, etc., for a paper.
Assemble a library corner about writing and writers.
Camera, if feasible, for the group to use
Bulletin board area for a variety of current headlines from local papers

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Most occupations include common expectations such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

Decision making involves risks.

Decision Making

Can the children recall some events which have happened recently in their home, school, or neighborhood? Did others find out about those events? How? Define a reporter as a person who wants to find out about things that happen and write up a report or story so that the news can be distributed to others.

. . . *describe the language skills used by newspaper reporters.* PPO

Interest the children in playing the role of reporters to see how much news the class can gather together before an agreed deadline. Reporting will involve interviewing persons in the news event, making observations, gathering facts, making notes, and writing the story.

Encourage pupils to find and write stories about things important to their peers, such as new pets, moving, sports, awards, new babies, coming events, accidents, changes in rules, sickness, or club activities.

Several children may need to go out of the classroom to get their stories.

. . . *discuss the common expectations involved in reporting a story.* PPO

. . . *explain how two responsibilities of reporters might involve risks.* PPO

Before going after the stories, the reporters will need to make several decisions: Is this event really news? Which persons would be best

to interview for information? What questions should I ask? What should I look at? Read? Is any information likely to be private? Will my story be complete? Honest? Will my story be fair to all sides? Can I get it finished before the deadline? Do I need my camera?

Ask the children to consider whether their plans to report a story involve risks such as not being able to find enough information, being unfair, or being late.

Stress that news means the facts, not the reporter's opinion.

The reporter will use straightforward language so that his write-up is easy and quick for the reader to understand.

News reports usually have their vital information in a first paragraph called the "lead." The following paragraphs of the report describe and develop. Note that the reporters need oral as well as written language skills.

Decision making involves risks.

Decision Making

. . . cite an example of plans for reporting a story which did not work out. PPO

Compare the completed stories and add headlines. Are the leads clear? Are the stories easy to understand? Why must some stories be long and some be short? Did anyone take a chance in getting his story that did not work out? Did anyone need to change his plans?

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . name two other occupations which require skills in reporting. PPO

What work besides newspaper work needs the services of reporters? Provide the class with information about reporting for television newscasting, news magazines, and radio news. Also pertinent is public relations work. Explain public relations people as "on-the-scene" reporters who work with all kinds of industries and institutions to get the news from their organization out to the press.

The REACT page illustrates a reporter's notes beside the printed story. Persons who need to write quickly need abbreviations or shorthand. Notes contain important ideas from which to write. Ask the children what risk there would be in leaving the notes for a long time before finishing the story.

DM/Level 4/2

"Writing from Notes"

WRITING FROM NOTES

Here are a reporter's notes. Below is a story written from them.

Miss. R. marched S 2. &
H_2O slow fall
Mo. Crested night more
than 13' above flood stage.
1000's of homes &
bus. were vacated &
muddy H_2O – Dozens
levees crumbled & others
were flowed. H_2O backed
trib. & they flooded
residential 300
Guardsmen were on duty
Meredosia Ill.
crest was expected
Sun.

Directions:

Work backwards--cover these notes and make your own notes from the news story. Write down only the most important information.

Work frontwards--using only your notes, write your own story.

Compare your own story with the paper's. Are they different? Do they mean the same?

River Crest Marches South

By United Press International

The historic crest of the Mississippi River marched steadily southward Sunday and the water began a slow fall at St. Louis, Mo., where the river crested overnight more than 13 feet above flood stage.

Along the mighty river's path, thousands of homes and businesses were vacated and had muddy water standing in them. Dozens of levees crumbled and others were overflowed. And the Mississippi's waters backed into tributaries, forcing them out of their banks and into residential areas.

About 300 National Guardsmen were on duty near Meredosia, Ill., where the crest was expected Sunday.

REWRITING AND HEADLINING

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *identify two risks in headlining and rewriting news stories.*

Educational Awareness Dimension

. . . *describe the language skills used by newspaper workers.*

Subject Matter Concepts

Language Arts
- Writing Skills
  - Paragraphing
  - Putting ideas in order
- Grammar and Usage
  - Labeling and classifying
- Reading
  - Topics and subtopics

Social Studies
- Economics
  - Transportation of information

Preplanning Suggestions

Assemble copies of many different newspapers. (City children would be interested in weekly papers from small communities.)
Plan for a field trip to a local newspaper; a small group might be most acceptable to the paper.
Ask a local paper for the old wire services reports that are used by the paper.

REWRITING AND HEADLINING

Often a reporter will give a rough draft of her story to a rewrite person. Or if she is in a rush, she may telephone a story to the rewrite person. Can you imagine what the rewrite person might do to put a news story in final form? Children may suggest writing a lead paragraph, putting the information in order, writing a headline, making complete sentences, shortening the story.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *describe the language skills used by newspaper workers.* PPO

Provide copies of several different newspapers. Ask the children to look them over, choose and cut out a 4 to 6 inch column length news story to use in this activity. Ask pupils to assume the role of rewrite people who must shorten the story by one inch column length. Rewrite the story cutting out the least important information. Suggest another headline.

Decision making involves risks.

Decision Making

. . . *identify two risks in headlining and rewriting news stories.* PPO

What risks does the newspaper worker take when he shortens a story? When he writes a headline? What makes a good headline?

Perhaps class members can recall personal and family occasions when written messages were not correct or clear. What were the results?

Three wire services stories from United Press International appear on the REACT page. Describe the wire services for the class, and explain that papers which subscribe to them headline and sometimes re-write wire stories for local use. If a newspaper office is close by, children could visit and obtain yards and yards of wire reports. Children may need help with difficult vocabulary in the stories.

DM/Level 4/3

"Working with the Wire Services"

WORKING WITH THE WIRE SERVICES

Attached are some wire services stories from United Press International from May 1, 1973. The stories have been cut out of the ticker tape for these pages. To put them back into ticker tape form as they would come out of the wire service machine, cut down the center line and glue the stories end to end. The strange groups of letters and numbers are a UPI code.

In the margin, write headlines for these stories.

What risks do newspapers take when they decide upon a headline?

Compare your headlines with those of your friends.

What headlines interest you in reading the story? Why?

---

czcryrzyr

jewels 5-1

NEW YORK UPI - Three gunmen forced a worker at an Air India warehouse near Kennedy Airport Monday night to open a vault, then escaped with diamonds worth $500,000, detectives reported.

Detectives early today said some of the diamonds were uncut and consisted of "high value and semiprecious jewels."

They said the gunmen entered the warehouse at about 9:45 p.m. and told six workers there, "We want diamonds We know you got them in today."

The robbers forced one of the workers to open the safe and then handcuffed five of the workers and tied up the sixth and left them in a washroom, police said.

---

upi 05-01 11:53 aed

436L

7 5 fvy.tto Casts R 5-1

CHICAGO UPI - Weather:

Illinois: Occasional periods of showers and thunderstorms north and showers and thunderstorms likely south tonight; chance of possible flooding of small streams and roads; cooler north. Wednesday rain ending northwest, occasional showers and thunderstorms south and east; cooler north and turning cooler south. Low tonight 43-55 north, 56-62 south. High Wednesday 53-66 north, 67-72 south.

082

czcryrbyl

defoliate 5-1

with viet

SAIGON UPI - A new controversy over the use of defoliants by the United States during the Vietnam war stirred today with a Tokyo newspaper report of contaminated marine life in the South China Sea.

The news hit Saigon after a Japanese cabinet minister's announcement that he impounded 24 tons of frozen shrimp from South Vietnam pending scientific tests.

The action apparently was based on reports in Japanese newspapers quoting a South Vietnamese botanist, Pham Hoang Ho, as saying marine life in the South China Sea was contaminated by d e f o l i a n t chemicals dropped on forests by U.S. warplanes.

Ho, a sanitary engineer employed by the agriculture ministry, could not be reached for comment.

At least 20 firms have gone into the frozen shrimp and sea food business in South Vietnam in the past year or so.

Economic studies of the war-battered economy showed that export of marine and forest products are among the fastest means of providing billions of dollars in foreign exchange needed to rebuild the country.

A finding by Japan that the shrimp are unfit for human consumption would all but rule out foreign markets for shrimp, crab and fish.

HEROES AND HEROINES OF THE PRESS

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *explain how the responsibilities of reporters involve risks.*

Attitudes and Appreciations Dimension

. . . *give two examples of risks taken by a woman reporter and two examples of risks taken by a man reporter.*

Educational Awareness Dimension

. . . *cite a risky decision in the life of a famous reporter which resulted in continuing learning.*

Subject Matter Concepts

Social Studies
- History
  - Great Americans in history
  - Acts and events have consequences.

Language Arts
- Reading
  - Reading for information

Preplanning Suggestions

Library books with stories of reporters
Television programs to watch for evidences of risks taken by reporters, particularly new shows, explorer shows, etc.

HEROES AND HEROINES OF THE PRESS

Getting the news has often been a difficult and dangerous task, especially during war time and times of social stress. The greatest stories have come to us from courageous reporters who have been willing to take great risks. Provide pupils with access to information about the adventurous lives of reporters such as:

George R. Kendall
Walt Whitman
Stephen Crane
Nellie Bly
Ernest Hemingway
Ernie Pyle
Henry M. Stanley
Richard Harding Davis
(For fun--Clark Kent and Lois Lane!)

Decision making involves risks.

Decision Making

. . . *explain how two responsibilities of reporters involve risks.* PPO

A great many tasks can be performed by men or women

Attitudes and Appreciations

. . . *give two examples of risks taken by a woman reporter and two examples of risks taken by a man reporter.* PPO

Learning is a lifelong process.

Educational Awareness

. . . *cite a risky decision in the life of a famous reporter which resulted in continuing learning.* PPO

Discuss important decisions in the lives of famous reporters. What were their goals? What risks did they take to reach their goals? Do you think it was good to take these risks? Why? Have women and men been equally brave in getting news to the people?

What risks do you take? y? Are there any risks you wou take again? Is a dare a goc son to take a risk?

Children are asked to find and underline risky decisions in the biographie on the REACT pages.

DM/Level 4/4

"Famous Risks in Reporting"

FAMOUS RISKS IN REPORTING

Underline the parts of the three stories which appear on this page and the following two pages of famous reporters which refer to risky decisions they made. Then complete the questions which follow concerning the decisions you have made.

ERNIE PYLE

Vocabulary: columnist, front, Ie Shima, Okinawa

Ernie Pyle studied at Indiana University and worked on papers in Indiana and Washington, D. C., and New York City before becoming a columnist in 1935. During World War II, he traveled with American troops on nearly every front in Europe and Africa. He sent back hundreds of warm and touching stories about now the soldiers lived and fought. These stories were carried in newspapers all over the United States. He won the Pulitzer Prize for reporting in 1944. He was killed by Japanese machine gun fire on Ie Shima island in 1945 while reporting the Battle of Okinawa.

NELLIE BLY

Vocabulary: pen name, expose, sweat factory, cruelties

In 1885 few careers were open to women, least of all in the newspaper world. Elizabeth Cochrane became America's first woman reporter at age 18 and under the pen name of Nellie Bly thrilled the nation. She risked her life to expose crime and her reputation as a lady by going into the slums, prisons, and sweat factories to get her stories first hand. She got herself committed to Blackwell's Island, pretending insanity in order to investigate and report on cruelties and bad treatment to mental patients. Many disliked her but millions read her stories in New York's famous paper, The World.

HENRY M. STANLEY

Vocabulary: Wales, assignment, missionary, Zanzibar, Ujiji, Tanganyika

Sir Henry Morton Stanley spent most of his youth in a work house in Wales. When he was 18 he sailed as a cabin boy on a ship to New Orleans, Louisiana. When the Civil War began in 1861 he joined the Confederate Army, but was captured. Then he joined the Union Navy. After the war he became a reporter for the New York Herald and in 1869 he accepted the paper's assignment to go to Africa to find the famous missionary explorer, David Livingston. No one had heard from Dr. Livingston for a long time. Some worried that he was lost in the jungle or even dead. Knowing that Dr. Livingston had gone to search for the source of the Nile River, Stanley started his search west from Zanzibar. Traveling in the unexplored areas was slow, dangerous, and difficult. Stanley finally reached the town of Ujiji on Lake Tanganyika. He met Dr. Livingston there on October 28, 1871. Instead of rushing up to him in excitement, Stanley walked forward calmly and said, "Dr. Livingston, I presume."

Tell one of your important decisions which did not involve great risks.

Tell one of your decisions which did involve great risks.

Was it a good decision? _____

Why? _____

FREEDOM OF THE PRESS

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *support freedom of the press with at least two arguments.*

Career Information Dimension

. . . *explain how political factors have influenced publication of newspapers.*

Subject Matter Concepts

Social Studies
- History
  - Modern life has roots in the past.
- Political Science
  - Rules for interaction needed by groups
  - U. S. Constitution as basis for laws

Preplanning Suggestions

Acquire a copy of the Bill of Rights to the U. S. Constitution.
Local papers with stories about current events

FREEDOM OF THE PRESS

Decision making involves risks.

Decision Making

Technological, economic, social, and political factors influence the supply and demand of jobs.

Career Information

Freedom of the press is an aspect of our right to free speech. Provide children with a copy of the First Amendment to the U. S. Constitution:

> Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof, or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

Discuss the importance of the freedom of the press in our democracy.

> . . . *support freedom of the press with at least two arguments.* PPO

> . . . *explain how political factors have influenced publication of newspapers.* PPO

Interest groups of children in researching and then giving brief impromptu skits to illustrate events in the history of freedom of the press. Suggested scenes to dramatize would be:

> --suppression of Ben Harris' first American newspaper, "Publick Occurences both Forreign and Domestick" because it did not have a license.
>
> --the trial of John Peter Zenger.

--voting on the Bill of Rights, especially the discussion of the freedom of the press clause.

--a reading of John Milton's "Areopagitica" (attached) in which he makes a famous plea for freedom of the press. (The children may be curious about why the language is so different from ours.)

Guide the class in understanding that political situations have made free newspapers risky business. Introduce the idea of censorship. Do we have censorship laws today?

The REACT page offers a suggestion for a "Go Slow" booklet which pupils could make for practice in assessing risks in their personal decision making.

DM/Level 4/5

"A 'Go Slow' Booklet"

From the AREOPAGITICA

If we think to regulate printing, thereby to rectify manners, we must regulate all recreations and pastimes, all that is delightful to man. No music must be heard, no song be set or sung, but what is grave and Doric . . .

Who shall regulate all the mixed conversation of our youth, male and female together, as is the fashion of this country? Who shall still appoint what shall be discoursed, what presumed, and no further? Lastly, who shall forbid and separate all idle resort, all evil company? These things will be, and must be; but how they shall be less hurtful, how less enticing, herein consists the grave and governing wisdom of a State.

Lords and Commons of England, consider what a nation it is whereof you are the governors: a nation not slow and dull but of quick, ingenious and piercing spirit, acute to invent, subtle and sinewy to discourse, not beneath the reach of any point the highest that human capacity can soar to.

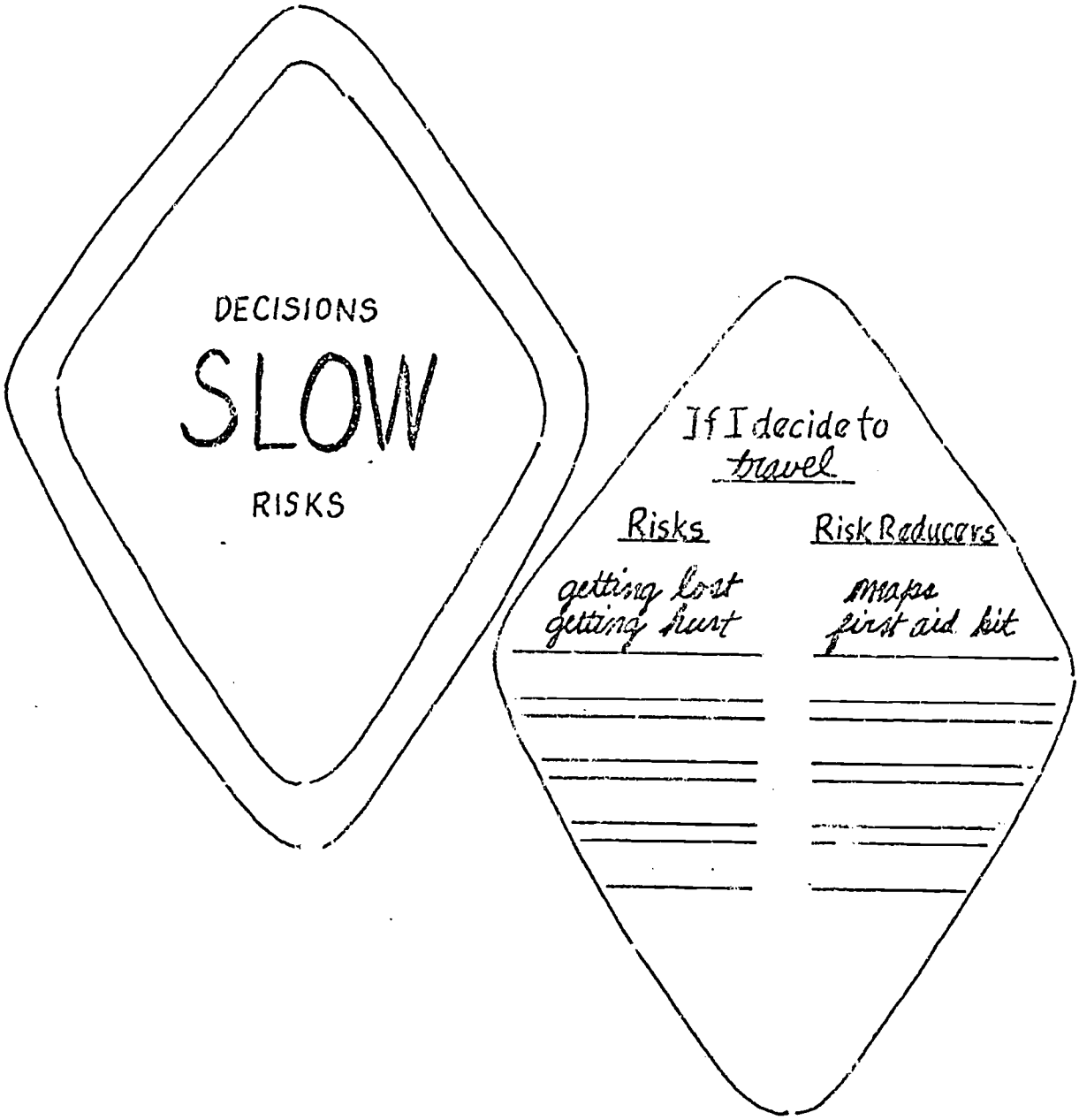
John Milton

Methinks I see in my mind a noble and puissant nation rousing herself like a strong man after sleep, and shaking her invincible locks . . . What should ye do then? Should ye suppress all this flowery crop of knowledge and new light sprung up and yet still springing daily in this city? Should ye set an Oligarchy of twenty engrossers over it, to bring a famine to our minds again, when we shall know nothing but what is measured to us by their bushel?

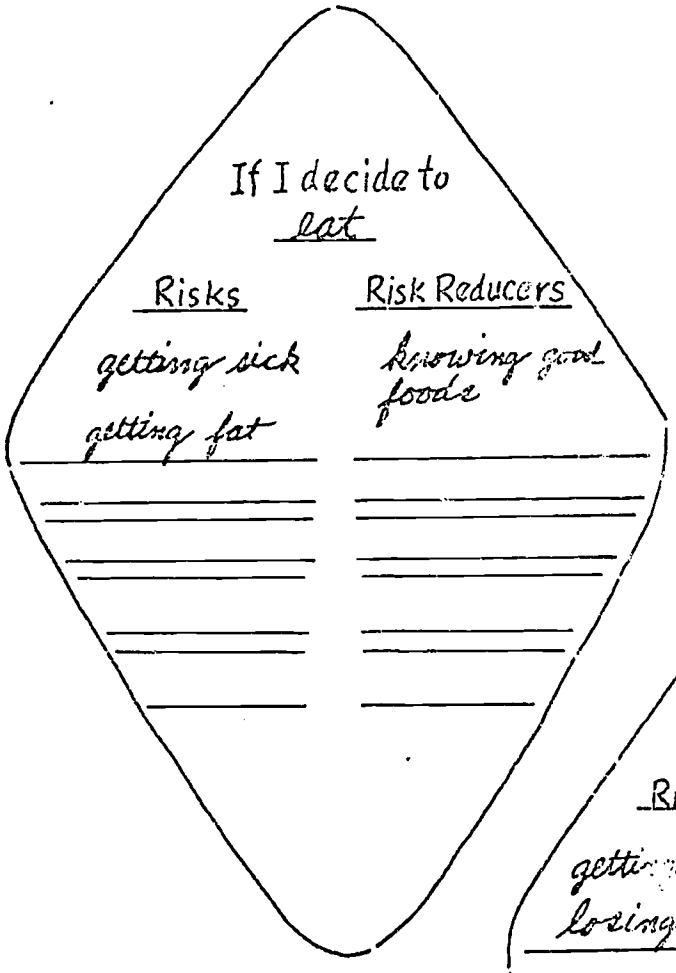
Believe it, Lords and Commons, they who counsel you to such a suppressing, do as good as bid you suppress yourselves.

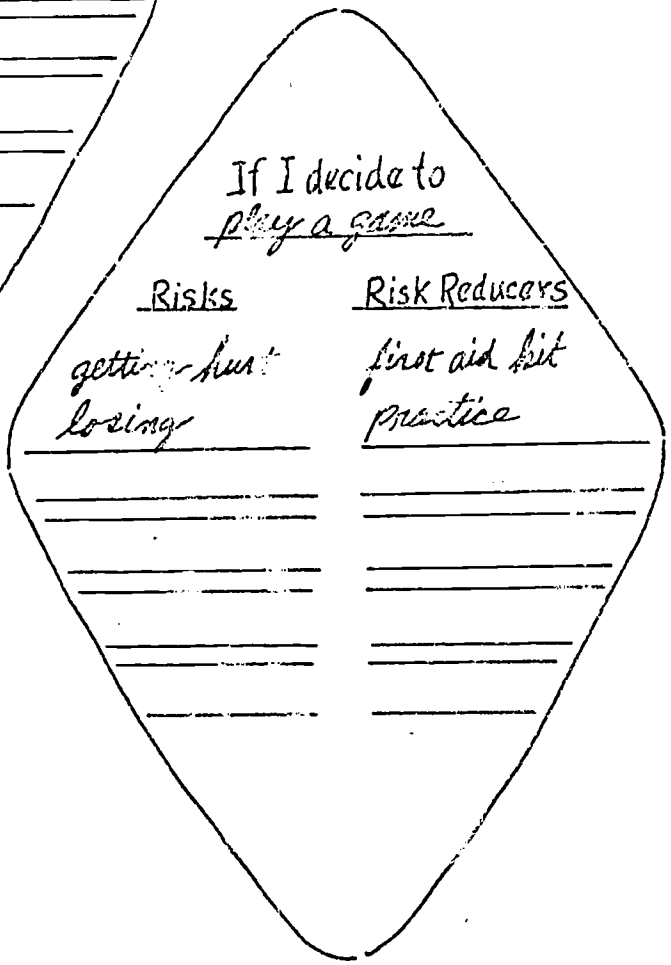
A "GO SLOW" BOOKLET

We take some chances or risks each time we decide about something. Going slowly and thoughtfully can help reduce risks. Make a GO SLOW booklet. On the pages tell the decision, the risks, and what might reduce the risks. The booklet can help you to think ahead and make better decisions. Make as many pages and think of as many risks and risk reducers as you can. Here is a suggestion and some pages which you could use for ideas.

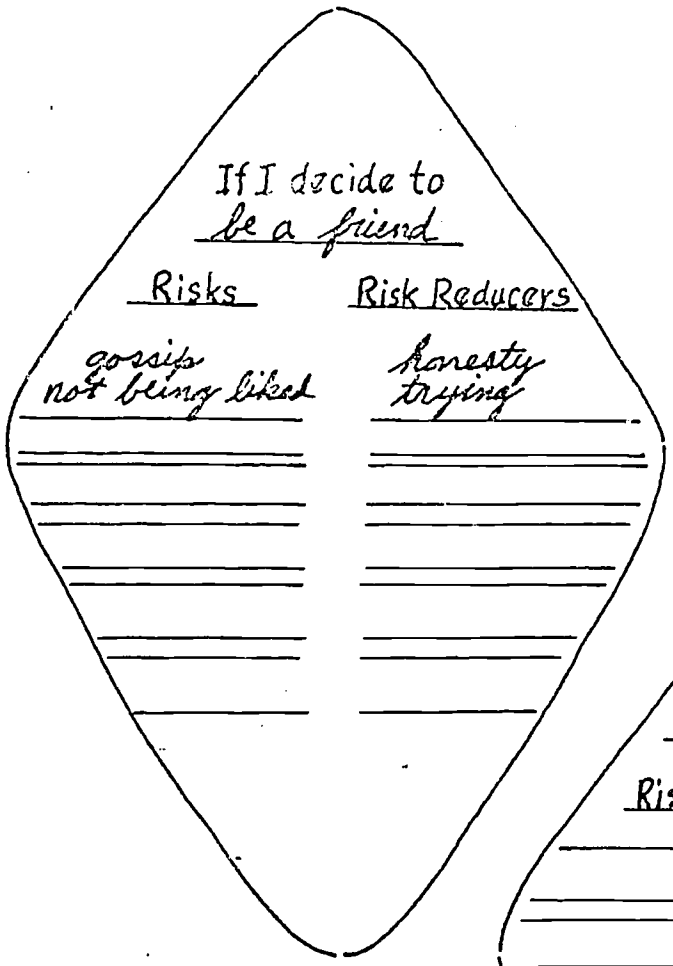


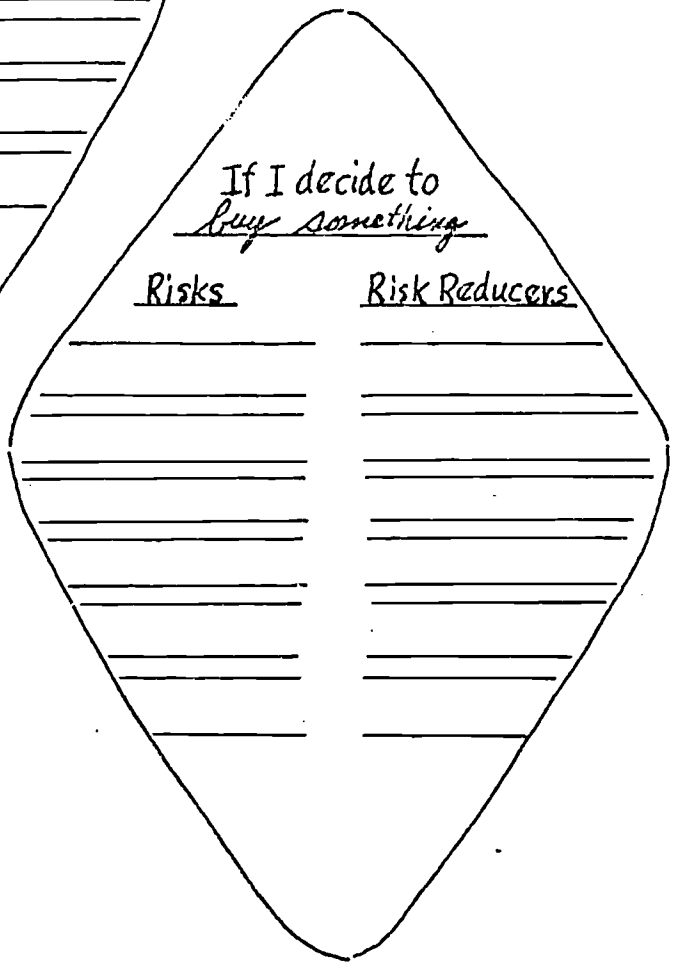
Here are more ideas for GO SLOW pages.





Here are more ideas for GO SLOW pages.





PRINTING MACHINES

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *compare risks in oral communication with risks in printed communication.*

Career Information Dimension

. . . *state the use of two or three machines one would expect to find in a newspaper office.*

Subject Matter Concepts

Science
- Scientific Method
  - Famous scientists have made historic discoveries.

Social Studies
- Sociology-Anthropology
  - Technology produces changes in ways of living.

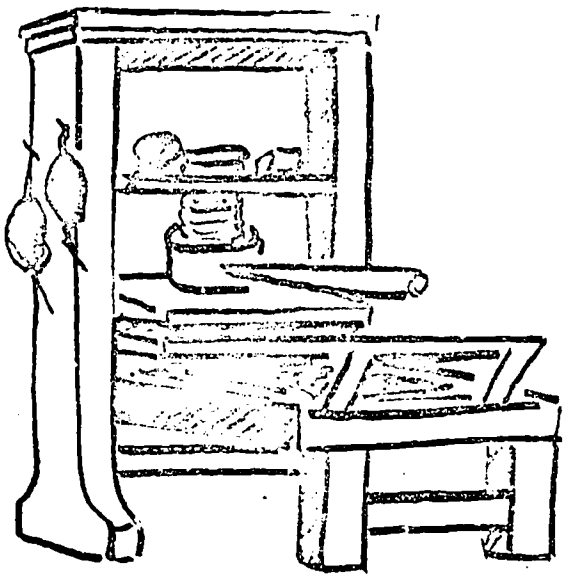
Language Arts
- Writing Skills
  - Spelling
  - Putting ideas in order

Preplanning Suggestions

Books which have pictures of news machines
Pictures from the local newspaper pressroom
Printed side of ditto masters
Cardboard for posters, variety of materials for cutting lettering, ink or paint for printing multi copies of posters, paper for reproducing posters

Decision making involves risks.

Decision Making



. . . compare risks in oral communication with risks in printed communication. PPO

Try this experiment in oral communication. Ask the class to stand in four equal rows, in different parts of the room. Whisper one of these sets of statements to the first person in each row:

1. Johannes Gutenberg invented moveable type in 1440. His press could print 300 pages a day.

2. By 1500 there were over 1000 print shops in Europe and over a million books.

3. The TIMES of London used a revolving cylinder press first. It could print 1,100 sheets per hour.

4. Gutenberg's Bible was a masterpiece of printing. It had 42 lines to a page. It was finished in 1456.

Ask the first person in the row to pass the sentences back by whisper . . . don't repeat. The last person in the row recites the sentences aloud when they reach him. Compare the last statements with the originals. Did they change?

Discuss the risks of oral communication. How does printed communication reduce these risks?

Hundreds of years ago reports told by travellers and handwritten letters were important sources of news from other places.

Occupations require the use of specific materials and equipment.

Career Information

. . . *state the use of two or three machines one would expect to find in a newspaper office.* PPO

Now machines help us get news accurately and quickly. Can the children name machines? What risks do the machines reduce? Telephone, telegraph, teletype, television, typewriter, linotype, printing press, radio, camera, and tape recorder might be mentioned.

How is a printed page different from a handwritten page? Invite the children to look up Gutenberg's invention and explain how it worked. Explain that set type is like mirror writing. Allow the children to examine the print side of a used ditto master.

Class members may enjoy a printing experience. Suggest printing a poster, perhaps to advertise the coming publication of the class paper. Letters could be cut out from styrofoam meat or vegetable packages and glued--backwards, remember--on a large cardboard back. These letters could be inked or painted wet and then pressed with the poster paper for the print.

It should be easy to see that typesetters risk making mistakes even though today's linotype machines are fast and efficient. Discuss what risks a newspaper reduces by hiring proofreaders.

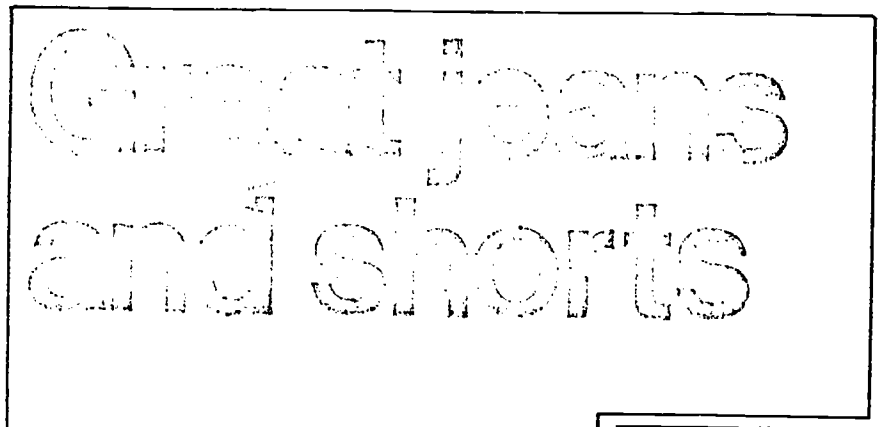
The REACT page illustrates several types of printer's mistakes. Children may enjoy exercising their language ability by ferreting out other mistakes in papers available to you.

DM/Level 4/6

"Printer's Problems"

PRINTER'S PROBLEMS

Circle the wrong numbers in these advertisements.



$12.88

polyester/cotton jeans with the baggie
Wide flare and cuffed bottoms.
In assorted patterns
sizes 8-200

COUPON

CANDY BARS

Reg. 43c 28¢ Save 60c

GOOD MAY 6 ONLY

Find a word misspelled and two lines out of place.
The story was continued to another page.

COLLINSVILLE, Il., May 5—The muddy footprintss is still there. halfway up the door that was kicked down by longhaired gunmen in the night.

It is on the door of Donald Askew's cottage, which is set back off a darkened street in this quiet town 15 miles east of St. Louis.

Minutes before, a similar footprint was put on the door to the townhouse of Herbert and Louise Giglotto.

The nightmare of these broken doors haunts the people in both homes.

THE GUNMEN had been so quiet that spring evening the Giglotto's dogs didn't even bark.

Then, the explosion.

Wood splintered; doors burst from his bed, still half asleep. pounded up the stairs; the sound of heavy breathing filled the hall.

Gigolotto said he jumped from his bed, still half asleep.

Find three misspelled words.

Secretariat By 31 Lengths

NEW YORK, June 9 (AP) —Secretariat won the Belmont Stakes Saturday by 31 lengths to become thoroughbred racingts firs' triple crown winner in 25 years.

RELATED MATERIALS

American Newspaper, The (Book) Alvin Silverman. Robert B. Luce, Inc., Washington, D. C., 1964.

Building Work Habits Series (Sound Filmstrip) Learning Arts, P. O. Box 917, Wichita, Kansas, 1972.

Find a Career In Journalism (Book) Tom Parsons. G. P. Putnam's Sons, New York, New York, 1959.

Finding Information (Film, Color, 11-min.) Churchill Films, 622 North Robertson Boulevard, Los Angeles, California 90069, 1963.

Get That Story (Book) John J. Floherty. J. B. Lippincott, Philadelphia, Pensylvania, 1964.

I Want to Be a News Reporter (Book) F. Eckart. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1958.

Nellie Bly: First Woman Reporter (Book) Iris Noble. Julian Messner, New York, New York, 1966.

News and How It Travels (Book) W. Simpson. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1960.

Newspaper Serves Its Community, A (Film, Color, 14½-min.) Bailey Film Associates, 2211 Michigan Avenue, Santa Monica, California 90404, 1972.

Saturday's Child (Book) Susan Seed. J. Philip O'Hara, Inc., Chicago, Illinois, 1973.

School Problems: Getting Along With Others (Film, Color, 12-min.) Bailey Film Associates, 2211 Michigan Avenue, Santa Monica, California 90404, 1972.

Story of Newspapers, The (Book) Denis Thomas. Methuen's Outlines, Methuen & Company, Ltd., 1965.

Under Fire: The Story of American War Correspondents (Book) M. L. Stein. Julian Messner, New York, New York, 1968.

What Could I Be? (Book) Walter Lifton. Science Research Associates, 259 East Erie Street, Chicago, Illinois 60611.

Your Career In Journalism (Book) M. L. Stein. Julian Messner, Inc., New York, New York, 1955.

NEWSPAPER REPORTERS

Newspaper reporters gather information on current events and write stories for publication in daily or weekly newspapers. In covering events, they may interview people, review public records, attend news happenings, and do research. As a rule, reporters take brief notes while collecting the facts and write their stories upon return to the office. Sometimes, to meet deadlines, they telephone their stories to other staff members known as "rewrite men," who write the stories for them.

Large dailies frequently assign some reporters to "beats," such as police stations or the courts, to cover news originating in these places. Other local news, such as a story about a lost child or an obituary of a community leader, is handled by general assignment reporters. Specialized reporters, who are well-versed in a subject matter field as well as in writing increasingly are interpreting and analyzing the news in fields such as medicine, politics, science, education, business, labor, and religion. Reporters on small newspapers get broad experience; they not only cover all aspects of local news, but also may take photographs, write headlines, lay out inside pages, and even write editorials. On the smallest weeklies, they also may solicit advertisements, sell subscriptions, and perform general office work.

An estimated 37,000 newspaper reporters were employed in the United States in 1968. The majority worked for daily newspapers; most of the others worked for weekly papers. In addition, some reporters were employed by press services and newspaper syndicates.

Reporters work in cities and towns of all sizes throughout the country. Of the 1,750 daily and 9,000 weekly newspapers, the great majority are in medium-size towns. Large numbers of reporters, however, are in cities, since big city dailies employ many reporters, whereas a small-town paper generally employs only a few.

Although talented writers who have little or no academic training beyond high school sometimes become reporters on city newspapers, most reporters without college training begin--and usually remain--on rural small-town, or suburban papers. Most newspapers will consider only applicants having a college education, and graduate work is increasingly important. Some editors prefer graduates who have a degree in journalism, which usually provides a liberal arts education, as well as professional training. Other editors consider a degree in liberal arts as equally desirable.

Young people who wish to prepare for newspaper work through a liberal arts curriculum should take English courses that include writing, as well as subjects such as sociology, political science, economics, history, psychology, and speech. Reading and conversational ability in a foreign language and some familiarity with mathematics also are desirable. Those who look forward to becoming technical writers, or reporters in a special field such as science, should concentrate on course work in their subject matter areas to the maximum extent possible.

Many beginners work on weekly or small daily newspapers. Some college graduates are hired as general assignment reporters; others start on large city papers as copy editors. Beginning reporters usually are assigned to minor news events such as reporting on civic and club meetings, summarizing speeches, writing obituaries, interviewing important visitors to the community, and covering police court proceedings. As they gain experience, they may report more important developments, cover an assigned "beat," or specialize in a particular field of knowledge. Newspapermen also may advance to reporting for larger papers or for press services and newspaper syndicates. Some experienced reporters become columnists, correspondents, editors, top executives, or publishers; these positions represent the top of the field and competition for them is keen. Other reporters transfer to related fields such as writing for magazines, or preparing copy for radio and television news reports.

In competing for regular positions, it is helpful to have had experience as a "stringer"--one who covers the news in a particular area of the community for a newspaper and is paid on the basis of the stories printed. Experience on a high school or college newspaper also may be helpful in obtaining employment.

Personal characteristics of importance are a "nose for news," resourcefulness, an accurate memory, and the physical stamina necessary for an active and often fast-paced life. Skill in typing generally is required since reporters usually must type their own news stories. On small papers, a knowledge of news photography also is valuable.

Well-qualified beginners with exceptional writing talent will find good employment opportunities through the 1970's. In early 1969 editors of large newspapers were actively seeking young reporters with exceptional talent. Other beginners, however, were facing competition for jobs, especially on large city dailies, and probably will continue to do so. In addition to seeking young reporters with exceptional talent, editors also were looking for reporters who were qualified to handle news about highly specialized or technical subjects.

Weekly or daily newspapers located in small towns and suburban areas will continue to offer the most opportunities for beginners entering newspaper reporting. Openings arise on these papers as young people gain experience and transfer to reporting jobs on larger newspapers or to other types of work. Moreover, the number of newspapers in suburban areas is increasing, and many of the existing ones are expanding their staffs to satisfy the need for more detailed community news. Preference in employment on small papers is likely to be given to beginning reporters who are able to help with photography and other specialized aspects of newspaper work and are acquainted with the community.

Large city dailies will provide some openings for the inexperienced with good educational backgrounds and a flair for writing to enter as reporter trainees. Some opportunities may continue to be available for young people who enter as copy boys and advance to reporting jobs.

In addition to jobs in newspaper reporting, new college graduates who have journalism training may enter related fields such as advertising, public

relations, trade and technical publishing, radio and television. The broad field of mass communication, which has grown rapidly in recent years, will continue to expand in the future. Factors pointing toward this continuing expansion include rising levels of education and income; increasing expenditures for newspaper, radio and television advertising; and a growing number of trade and technical journals and various types of company publications. As newspapers share in this growth, employment of reporters is expected to increase moderately. Many job opportunities will be found in teaching journalism. The greatest number of job openings, more than a thousand each year, will continue to arise from the need to replace reporters who are promoted to editorial or other positions, transfer to other fields of work, retire, or leave the profession for other reasons.

Newspaper reporters on big city papers frequently work 7 to 7½ hours a day, 5 days a week; most other reporters generally work an 8-hour day, 40-hour week. Many of those employed by morning papers start work in the afternoon and finish about midnight. Many newspapers pay overtime rates for work performed after the regularly scheduled workday, or for more than 40 hours of work a week; they often provide various employee benefits such as paid vacations, group insurance, and pension plans.

Adapted from: Occupational Outlook Handbook. U. S. Department of Labor, 1970-71 edition. (Washington, D.C.: Government Printing Office), 1971. pp. 215-217.

CURIOSITY CREATED THE CURATOR

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

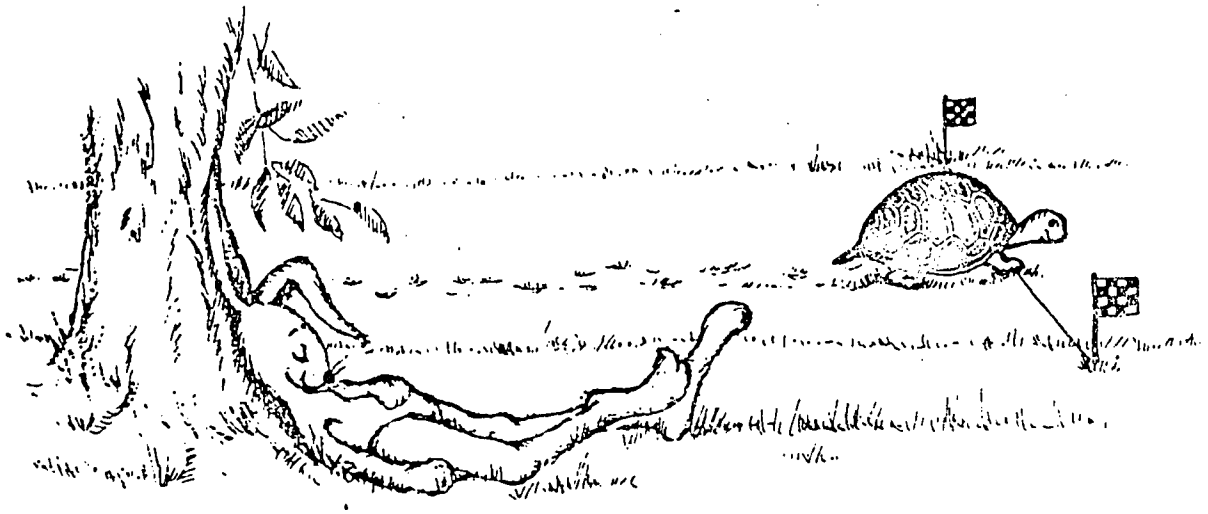
CAREER DEVELOPMENT FOCUS: The decision-making process can be used to set priorities in developing personal goals.

OCCUPATIONAL FOCUS: Curator

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Mini-Museum: Culture Comparison Exhibit
2. Curator's Helper: The Museum Registrar
3. A Few of My Favorite Things
4. Sharing Culture Through Language
5. Museums Protect and Preserve



Teacher Goals

Teacher goals of this strategy combine a Decision Making Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Curator. In this perspective the teacher's goals are to:

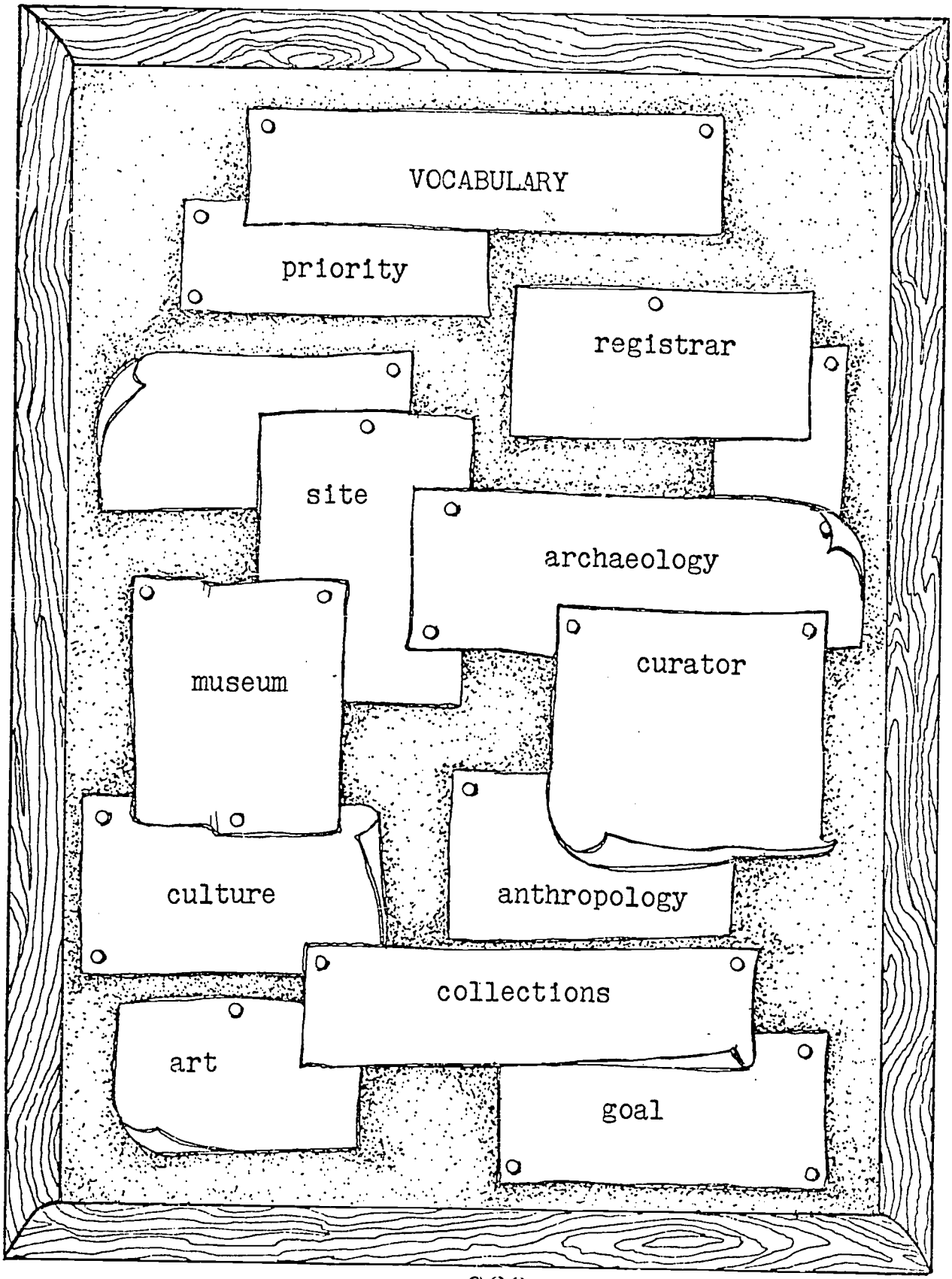
Structure experiences in which pupils use subject matter skills to simulate decisions made by museum curators.

Increase the pupils' awareness of their own personal priorities by comparing them with priorities of museum workers.

Sharpen the pupils' perception of priorities which have been the same for past and present cultures.

Develop the pupils' appreciation of the contribution which museums make to the community.

Offer information about the skills, knowledge, and equipment used by the curator and his staff.


VOCABULARY
priority
registrar
site
archaeology
museum
curator
culture
anthropology
collections
art
goal

389

MINI-MUSEUM: CULTURE COMPARISON EXHIBIT

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *name four basic needs which were priorities for both an historical culture and our present way of life.*

. . . *list two priorities of curators in planning museum exhibits.*

. . . *compare one's personal priorities with those of an historic culture.*

Attitudes and Appreciations Dimension

. . . *take part in organizing and executing a museum culture comparison exhibit.*

. . . *describe the attitudes museum workers might have toward their work.*

Educational Awareness Dimension

. . . *explain how historical changes have required that people add new knowledge and skills to their lives.*

. . . *identify the physical and artistic skills used by museum workers.*

Subject Matter Concepts

Social Studies
- History
  - Human experience is continuous and interrelated.
  - Modern life has its roots in the past.
- Sociology-Anthropology
  - Culture interrelationships
  - People have similar basic needs

Preplanning Suggestions

Books and audio-visual aids concerning historical or cultural pasts of many areas

Prepare an area for a class museum.

Become acquainted with persons in the community who have collections of artifacts from the immediate area. Librarians, historical societies, antique dealers, etc. will be helpful.

Invite an older person in the community to visit and talk about the area as it was known in that person's youth.

MINI-MUSEUM: CULTURE COMPARISON EXHIBIT

A great advantage of museum exhibits is that they make it possible for us to compare our culture or way of life with those of the past and those different from our own. We can find out how goals have changed with time and how ours are different from those of others. Have any class members seen a culture of the past or a foreign culture exhibited in a museum? What could you tell about the goals of the culture from its artifacts?

Learning is a lifelong process.

Educational Awareness

. . . *explain how historical changes have required that people add new knowledge and skills to their lives.* PPO

Interest the children in establishing as a goal to find out how culture in your region has changed in the past thousand years. This investigation will be for the purpose of setting up a mini-museum exhibit. Guide the children to concentrate on three general time periods:

1,000 years ago
100 years ago
Today

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *take part in organizing and executing a museum culture comparison exhibit.* PPO

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

. . . *name four basic needs which were important goals for both an historical culture and our present way of life.* PPO

Consider basic needs as goals of a culture. Ask for volunteers to research each time period under goal headings such as Food, Clothing, Housing, Tools and Utensils, Language, or Government. Encourage individuals

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

or pairs in each time group to assume the role of curators of the above headings. Ask researchers to identify the most important way of reaching a goal in each time period.

. . . list two priorities of curators in planning museum exhibits. PPO

Encourage children assuming the role of curators to set priorities for gathering evidence of the culture of each time period. Talk about priorities as the most important goals. What kind of evidence would be best--pictures from books, reports of experts, real artifacts? Remind the mini-curators of the educational goal of the museum. One priority while gathering evidence of a culture should be how well the information could be used in an exhibit and understood by others. What other priorities would curators have for their exhibits besides educational interest? Perhaps sciertific accuracy, completeness, and artistic appeal would be examples.

What do curators do if they cannot obtain an important artifact for their exhibit? Often the museum workers will be able to make a replica or model.

. . . identify physical and artistic skills used by museum workers. PPO

Perhaps the children would like to prepare clay, cloth, or paper mache models or artifacts. Would this be a priority?

During the assembling of the exhibits, remind children of the original goal: to notice how the ways of life in their region have changed.

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . compare one's personal priorities to those of an historical culture. PPO

Ask each group to think of advantages to ways of reaching goals in the time period which they study. Ask, "If you had a choice of living now, 100 years ago, or 1/000 years ago, which would you choose? Why?"

. . . describe the attitudes museum workers might have toward their work. PPO

The curators of museums want to share their work. Decide upon guests to invite to your mini-museum. How shall you attract them? Perhaps you could feature a souvenir shop, make up a pamphlet, offer skits, etc.

The REACT page suggests a time chart to compare past ways of life with today's. The chart could be a way to plan the mini-museum exhibit.

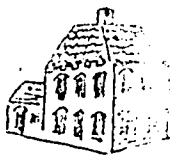
DM/Level 4/7

"A Time Chart"

A TIME CHART

Long ago people had the same needs we have for food, clothing, housing, tools, and transportation. They reached these goals in ways very different from our own. Make a time chart to compare life 100 years ago and 1,000 years ago with today. Fill in the chart with words or pictures. The chart could be a plan for a museum culture comparison exhibit.

A sample beginning:

GOALS:	FOOD	CLOTHING	HOUSING	TOOLS	TRAVEL
1000 yrs. ago	deer fish birds	skins 		stone ax bow	legs
100 yrs. ago					horse
TODAY	in cans in bottles				

Discuss what you think has changed the most. Which type of food, clothing, housing, tools, and transportation would you choose if you could? Why?

CURATOR'S HELPER: THE MUSEUM REGISTRAR

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *compare one's priorities in keeping records for a collection with those of a classmate.*

Attitudes and Appreciations Dimension

. . . *tell how museum workers are dependent upon each other.*

. . . *describe the attitudes museum workers might have toward their work.*

. . . *list two responsibilities of the museum registrar.*

Career Information Dimension

. . . *name at least three tools or instruments helpful in registering museum artifacts.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Dependence upon others

Science
- Scientific Method
  - Comparisons are made by careful measurements.

Mathematics
- Measurement
  - Metric

Preplanning Suggestions

Have several sample file boxes of materials--a recipe file, file drawers for records, etc.
Plan a visit to the library for an explanation of the card file or have the librarian interviewed to explain the file.
Prepare areas for children's displays and collections.
Have on hand a selection of file card forms from various fields of endeavor--libraries, museums, parts department of a garage, etc.
Metric measures of weight, length, etc. (See last page of the activity for suggestions.)

The collections in a museum are rare and vast and valuable.

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

. . . tell how museum workers are dependent upon each other. PPO

Ask the children to speculate about why the museum would keep a record of all the items in its collections. Would record keeping be a priority in a museum? How might the records be kept? What records does your family keep?

Most occupations include common expectations such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

. . . describe the attitudes museum workers might have toward their work. PPO

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . list two responsibilities of the museum registrar. PPO

The museum registrar keeps the record of every object that enters or leaves the museum. Her records are like a card file in a library. Would they include more information than the library files? She has a system for marking every object in the museum. Is every book in the library marked? Why is this important?

Ask interested children to bring their collections to school.

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

. . . compare one's priorities in keeping records for a collection with those of a classmate. PPO

Help the children decide which facts about an object should be registered. Make up a form for registering the items in each collection. Duplicate the card format and register items

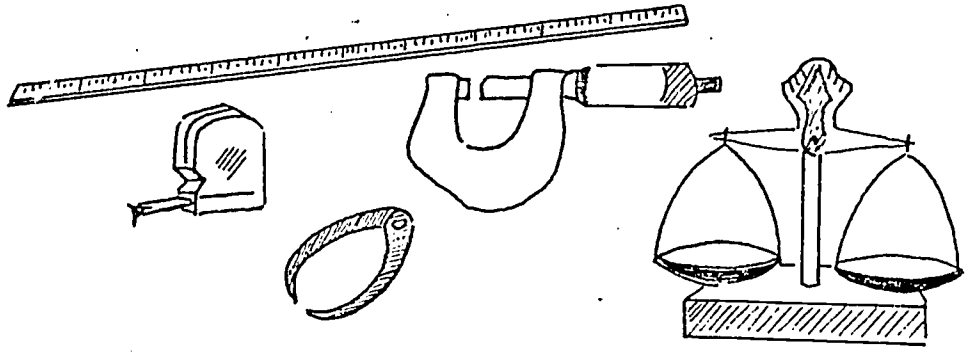
Occupations require the use of specific materials and equipment.

Career Information

in the collections. Devise a marking system for items in the collections to correspond to their registration cards. What workers outside the museum also keep records?

> . . . *name at least three tools or instruments helpful in registering museum artifacts.* PPO

Measurement and weight of collection objects will be priority items on the registration cards. Museums use only metric measure so they can easily compare their objects with those in other museums throughout the world. What tools for measurement would the registrar need? Exhibit the meter stick, metric tape, caliper, micrometer, gram weight scale. Allow the children to use them if possible. Ask children when they have measured things before. Do they know other workers who also take measurements?



The following REACT page contains an exercise in metric measure. Alert the children to the metric units on the side opposite the inch marks on many rulers. Collect data for scientifically appropriate color.

DM/Level 4/8

"Arrowhead Data"

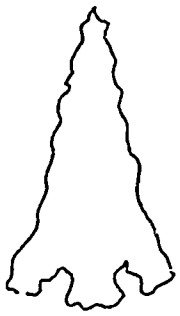
ARROWHEAD DATA

The museum registrar is recording facts about six new arrowheads from Illinois. Help him to record the length and width of the arrowheads at the places where these measures are greatest. Use metric measure.

Item: Arrowhead
Material: flint
Site: Dixon Mounds, Illinois

Length: _____cm._____mm.

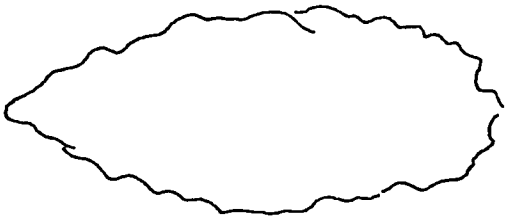
Width: _____cm._____mm.



Item: Arrowhead
Material: obsidian
Site: Crab Orchard, Carbondale, Illinois

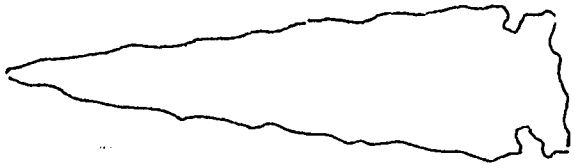
Length: _____cm._____mm.

Width: _____cm._____mm.



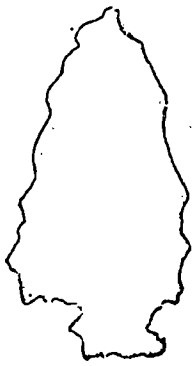
Item: Arrowhead - Material: quartz
Site: Crab Orchard, Carbondale, Illinois

Length: ___cm.___mm. Width: ___cm.___mm.



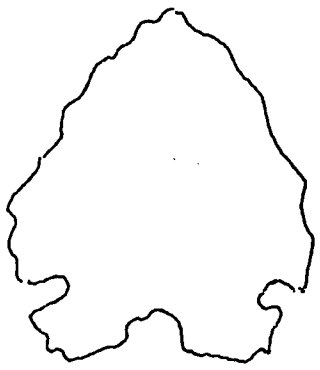
Item: Arrowhead - Material: quartz
Site: Allerton Park, Champaign, Illinois

Length: ___cm.___mm. Width: ___cm.___mm.



Item: Arrowhead - Material: slate
Site: Dixon Mounds, Illinois

Length: ___cm.___mm. Width: ___cm.___mm.



Item: Arrowhead - Material: flint
Site: Cahokia Mounds, Illinois

Length: ___cm.___mm. Width: ___cm.___mm.

Do you know what colors slate, quartz, obsidian, and flint would be? Find out and shade in the colors so that they are scientifically correct.

A FEW OF MY FAVORITE THINGS

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *differentiate one's priority for a collection from a friend's priority for a collection.*

. . . *explain one's decision-making process in choosing a priority for a collection.*

Educational Awareness Dimension

. . . *describe out-of-school activities which relate to museum work.*

Subject Matter Concepts

Science
- Scientific Method
  - Things are classified according to likenesses.

Language Arts
- Grammar and Usage
  - Common and proper nouns, verbs, adjectives

Preplanning Suggestions

Prepare display space for children's collections.
Cards for recording top priority items for collections

Career-oriented learning may take place in school or out of school.

Educational Awareness

The curious curators have a whole museum in which to store many collections and they invite everybody to come to see them. Could any collections be found in the children's houses? Do they ever invite friends to see their collections?

. . . *describe out-of-school activities which relate to museum work.* PPO

Ask the children to bring their collections to school. Provide good space to display them. This makes the classroom into a kind of museum! Each collection owner is a curator. Ask the children about their goals in collecting things. Why do you like that particular thing? Did you ever wonder why it is interesting to have lots of things of the same kind? Lead the children to understand that collections help us to learn the minute differences between things of the same kind.

With a personal collection in mind as a goal, ask children to identify their priority in adding to that collection.

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

. . . *differentiate one's priority for a collection from a friend's priority for a collection.* PPO

. . . *explain one's decision-making process in choosing a priority for a collection.* PPO

Children may title a card, "My Priority," and show on the card a picture or drawing of the item they would most like to add to their collection. Lead children to explain why that item is a priority. Would it be valuable to them because of

age? Rarity? Because everyone else has one? It might be valuable because of its excellent condition, its importance as an example, or simply its interest to the curator.

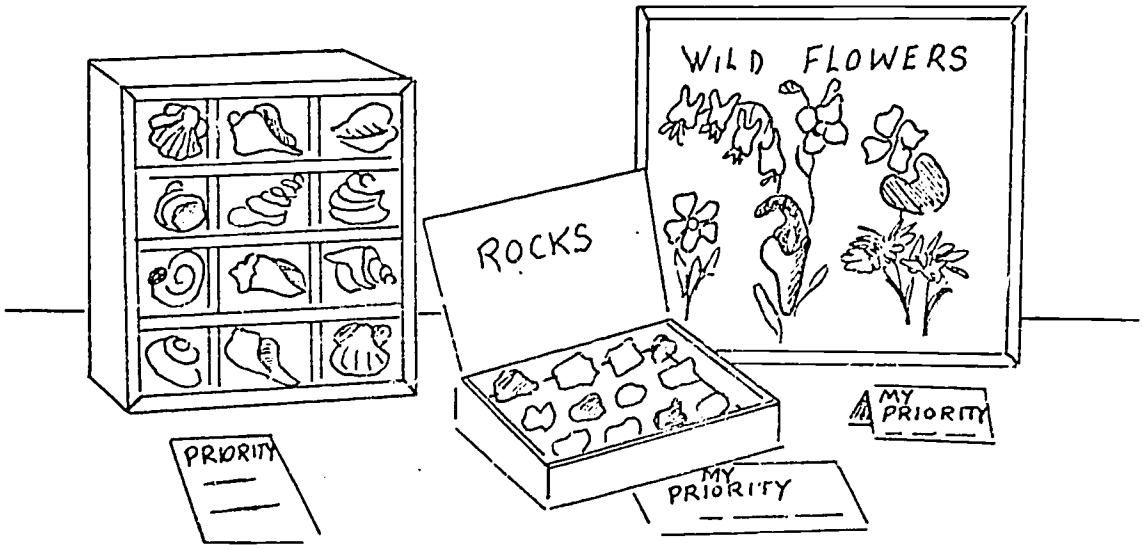
Museums often loan parts of their collections to other museums.

If children could not obtain their priority item, would they want to borrow one? Why or why not? Would they be interested in making a replica or model of the item?

An opportunity for children to recall their priorities or favorites in other areas is given by the REACT page. Emphasize that decision making about priorities is influenced by situation.

DM/Level 4/9

"When I Wouldn't Want My Favorite"



WHEN I WOULDN'T WANT MY FAVORITE

Fill in your favorites. Tell when the favorite might flop!

Example:	
My favorite color is purple	BUT I wouldn't want purple teeth.

My favorite animal is a _____ BUT I wouldn't want _____ stew.

My favorite record is _____ BUT I wouldn't use it for a _____.

I like to collect _____ BUT not if they are _____.

My favorite sport is _____ BUT I couldn't play it with _____.

My favorite clothes are _____ BUT I wouldn't wear them to _____.

My favorite TV program is _____ BUT if I could _____ at the same time I would.

My favorite food is _____ BUT I wouldn't feed it to _____.

My favorite friends are _____, BUT they couldn't help me _____ _____.

_____, _____, _____,

Star a nonsense sentence. Make a picture of it on the back.

SHARING CULTURE THROUGH LANGUAGE

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *identify one's choice of the best way to learn about another culture as the same as a classmate's choice.*

. . . *differentiate between individual priorities in setting up a museum exhibit.*

Educational Awareness Dimension

. . . *identify the academic skills and facts used by the curator in his work.*

. . . *identify the physical and artistic skills used by museum workers.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Culture interrelationships

Language Arts
- Grammar and Usage
  - Origins of English words
  - Derivations from other languages
- Reading
  - Dictionary

Preplanning Suggestions

Boxes or bowls to hold slips of paper with information about examples of other cultures in the United States
Paper cut to use in recording one or two lines of writing
Materials for museum posters using the materials or ideas from the melting pot
Dictionary

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

Knowledge and skills in subject areas are helpful in occupational competence.

Educational Awareness

Curators are often interested in comparing other cultures with their own. If learning from other cultures is a goal, what are the best ways to achieve it?

> . . . *identify one's choice of the best way to learn about another culture as the same as a classmate's choice.* PPO

Lead the children to appreciate <u>speaking</u> to the people of the culture as the best way to learn from them. If an anthropologist-curator wants to learn the way people lived in ancient times, he tries to learn their ancient written language and understand the uses of their artifacts which have been preserved.

Remind the children that the American people represent a mingling of many cultures in the melting pot of this new country. Can they give examples? For fun, write the examples on paper slips and put them in a "melting pot." Give pupils access to the pot for several days.

Ask children to assume the role of curators who wish to exhibit evidence that many other cultures have contributed to our modern American life. Elicit class consent that language is one of the most direct ways of sharing with other people. Would the curator be able to show that American people use many <u>words</u> from other cultures?

> . . . *identify the academic skills and facts used by the curator in his work.* PPO

> . . . *identify the physical and artistic skills used by museum workers.* PPO

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

Make a new class melting pot. On the paper slips write as many words as possible which Americans have borrowed from other cultures. Once the foreign words are collected, invite class members to make a poster for a museum display of culture sharing through language.

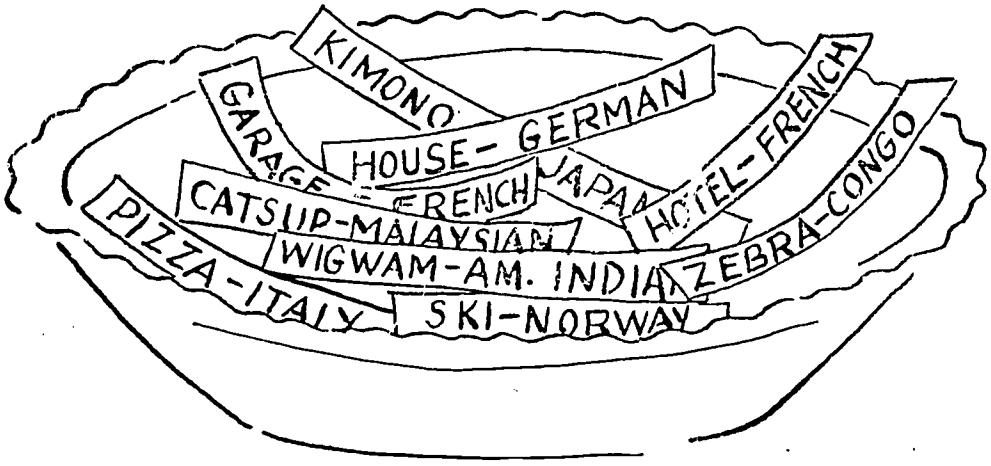
. . . *differentiate between individual priorities in setting up a museum exhibit.* PPO

Share and discuss the way different pupils' posters show their individual priorities about the display.

Using the REACT page will provide an experience of Greek and Latin ancestors of English words.

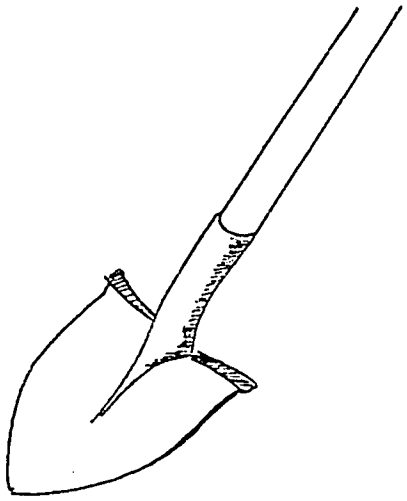
DM/Level 4/10

"A Dictionary Dig"



A DICTIONARY DIG

Sometimes sets of our words come from the same word in an older language. Complete the word meanings with the help of a dictionary.



From Greek, *mousa*--a goddess who ruled over deep thoughts helping people to make up fine songs and poems.

a muse--a Greek _____

to muse--to think deep _____

music--thoughtful sounds and _____

museum--a building with many things to help a person to _____

_____

From Latin, *cura*--to take care of

to cure--to take care of _____

curator--a person who cares for _____

curious--to care a lot about things and be _____

_____

From Latin, *cultus*--help for something growing

cult--prayers and devotions to help people in _____

culture--the way our civilization has _____

to cultivate--to help _____

From Latin, *ars*--with arms and hands--and *facere*--to make

art--skill in _____ fine things.

artifact--a simple _____ made by human hands.

artificial--made by _____ not nature.

MUSEUMS PROTECT AND PRESERVE

Fourth Experience Level Activity

Performance Objectives

Decision Making Dimension

. . . *describe preservation of artifacts as a museum priority.*

Attitudes and Appreciations Dimension

. . . *demonstrate a preservation technique which may be used in a museum.*

Educational Awareness Dimension

. . . *identify academic skills and facts used by the curator in his work.*

Subject Matter Concepts

Science
- Biology
  - Different environments support different forms of life.
- Chemistry
  - Chemical changes involve rearrangement of atoms and molecules.

Preplanning Suggestions

Children's collections
Collect samples of moth holes, mildew, rust, faded paper or cloth, warped wood, etc.
Science books that help determine how to prevent destructive forces such as rust, etc.

The decision-making process can be used to set priorities in developing personal goals.

Decision Making

Ask the children to remember whether they have ever had something they liked very much and wanted others to see but not touch. Why didn't they want anyone to touch this thing? Was the precious object kept in a special place? Do they still have it?

. . . *describe preservation of artifacts as a museum priority.* PPO

Invite class members to display their collections at school. Discuss protecting the collections as a goal. Label the collections with a list of ways the owners protect and preserve them. Think of other instances in which protection is a priority.

The museum curator is careful to do everything possible to preserve and protect the museum collections. His staff must know how to combat insects, temperature, humidity, light mildew, and rot. These are natural but sneaky villains which may destroy precious objects.

Knowledge and skills in subject areas are helpful in occupational competence.

Educational Awareness

. . . *identify academic skills and facts used by the curator in his work.* PPO

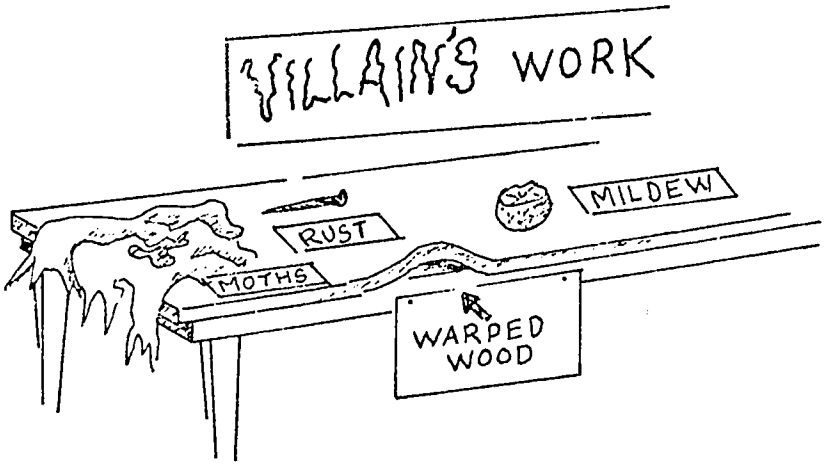
A given work setting requires certain policies and procedures.

Attitudes and Appreciations

. . . *demonstrate a preservation technique which may be used in a museum.* PPO

Display moth holes, mildew, warped wood, rust, faded cloth. Ask the children to identify the cause of the damage. Invite children to bring other items which lacked protection and were harmed. Put samples

on a "Villain's Work" table. Perhaps some individuals or groups of pupils could give a scientific demonstration of the cause of particular kinds of damage. Can they think of any occupations which throw things away instead of preserve them?

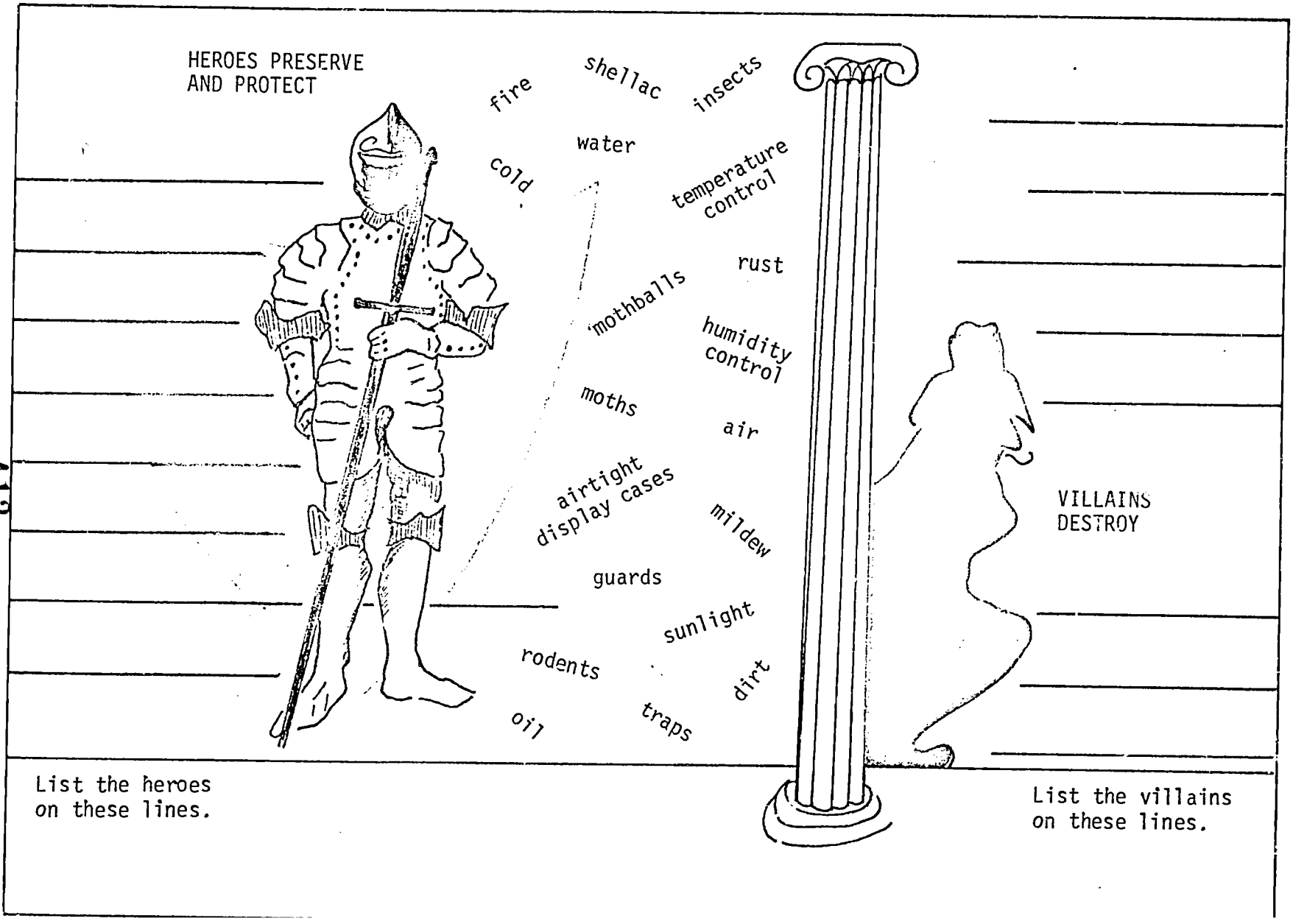


The REACT page is an exercise in decision making using scientific knowledge. Encourage the children to consider that some of the items might be either heroes or villains.

DM/Level 4/11

"Heroes and Villains"

HEROES AND VILLAINS



RELATED MATERIALS

Cave Men of the Old Stone Age (Book) B. Kramer. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1955.

Deciding (Film, Color, 14-min.) Centron Educational Films, 1621 West Ninth Street, Lawrence, Kansas 66044, 1973.

Digging for Dinosaurs (Book) E. Cobert. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1967.

Exploring the World of Pottery (Book) R. Lee. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1967.

I Can Do It (Worktext and Activity Sheets) George A. Pflaum, 38 West 5th Street, Dayton, Ohio 45402, 1971.

Museum Adventures, An Introduction to Discovery (Book) Herbert and Marjorie Katz. Coward-McCann Company, Inc., New York, New York, 1969.

"Skull 1470--New Clue to Earlies and Man?" National Geographic (Magazine) Richard E. Leakey, Bob Campbell. Vol. 143, No. 6, June 1973.

Using the Social Studies: Concepts in Social Science (Textbook--4th Level) Frederick M. King, Herbert C. Rudman, Herbert V. Epperly. Laidlaw Brothers, Thatcher and Madison Streets, River Forest, Illinois, 1970. (Unit 2, Concepts of Anthropology; Unit 6, Concepts of History; Unit 7, Studying a City)

Your Future in Museums (Book) William Burns. Richards Rosen Press, 29 East 21st Street, New York, New York.

MUSEUM CURATORS

Museums deal with information on almost every aspect of the universe; almost any interest, therefore, may lead one into museum work. A person who enjoys the visual arts may find himself working in an art museum, or if he has a passion for history, he may end up doing research for a historical museum. Science museums draw people with specialized knowledge in many areas, and ther are many other kinds of museums to draw those with varied interests. Even suc hobbies as stamp or coin collecting may lead one into a museum position.

"According to the official definition of the American Association of Museums, 'The word "museum" means and shall be deemed to mean a nonprofit, permanent establishment (not existing primarily for the purpose of conducting temporary exhibitions), exempt from Federal and state income taxes, open to the public and administered in the public interest, for the purpose of conserving and preserving, studying, interpreting, enhancing, and, in particular, organizing and exhibiting to the public for its instruction and enjoyment objects and specimens of educational and cultural value, including artistic, scientific (whether animate or inanimate), historical and technical materials.

'Museums thus defined shall include botanical gardens, zoological parks, aquariums, planetariums, historical societies, historical houses, and sites which meet the requirements set forth in the preceding sentence.'"[1]

The museum collections are taken care of by the museum curator. The word "curator" comes from the Latin word cura, meaning "to care." As will be seen, this care involves much more sophisticated tasks than simply dusting the shelves. Much of the curator's work requires a great deal of knowledge and continued study.

The curator sees to it that the museum collections are complete and up-to-date. He stays informed of his general field by reading on his own, taking formal classes, or attending professional conferences. He is often a specialist in his field as well, and may spend much of his time doing research on his favorite insect or obscure painter. Museum curators spend much more time this way--reading and acquiring more knowledge about their collections--than is generally supposed.

The curator must also protect his collection from damage. This means keeping the temperature and humidity at the proper degree at all times, and being aware of the innumerable pests--beetles, mice, moths, silverfish--which devour display materials like wood, paper, and leather. Large museums hire professional exterminators who, armed with a battery of chemicals and traps, patrol the buildings and grounds regularly and take emergency measures whenever they are necessary. The curator of a small museum, however, must do most of this work himself.

---

[1]William A. Burns, Your Future in Museums (New York: Richards Rosen Press, Inc., 1967), p. 17.

Finally, the curator makes his information available to both his colleagues and the general public. A large museum may publish its findings in journals or special pamphlets and monographs. This dissemination of information is one of the most important contributions of the fine museum.

Most museums have a pyramid organization. The Director is the chief administrator and the Board of Trustees is the governing body which makes the policies and raises money for the Director to carry them out. In a busy museum the Director himself may have an Assistant Director or an Assistant to the Director to help share his responsibilities. In order to see how one museum operates, let us examine the structure and activity of a large natural science museum.

Under the Director and Assistant Director of a natural science museum is the scientific staff, which is composed of various scientific departments, each headed by a chairman. Working for each department are a number of curators, associate curators, and scientific assistants. Research associates, honorary associates, field associates, and research fellows, who are not on the museum payroll, also work for the departments.

Carrying out a project in a natural science museum involves the concerted efforts of many people. Suppose, for example, a museum wishes to set up a display showing man's relationship to his environment. The main ideas are first outlined by the Director or a staff scientist. The Director takes these to the Board for approval. If they are approved, he appoints a group of scientists, Board members, and Education Department personnel to determine the location of the exhibit and the precise emphasis it should have. On the basis of this information, construction managers and designers work up the plans, which are then approved by the Director and his committee and allotted the proper amount of funds. After this the work proper begins. While the masons, carpenters, and other workers build the structures for the exhibits, the Department of Exhibition works on the exhibits themselves. In the course of this work, much information will probably be gained which can be used in future exhibits as well.

All museum professionals must have a good education in the general biological sciences and a specialization of some kind. It is also assumed that while on the job the worker will study for a higher degree. Despite the many different kinds of museums, the intangible qualifications for working in a museum are more or less constant. Because a museum is a public institution, most directors want people who have an attractive public personality. A good museum worker also needs to be flexible and calm to be able to handle the problems and annoyances, such as shortage of funds, which often come up in this kind of work. It is perhaps of more importance that he have a good imagination, for this quality often makes up for a lack in other things, like adequate funds, space, and professional help. Finally, of course, a museum worker must enjoy his work. The good museum worker's central qualification is his curiosity, his passion for digging up facts and piecing information together. If he does not have this quality, he will probably not be working in a museum at all.

TELLERS LIKE IT IS

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

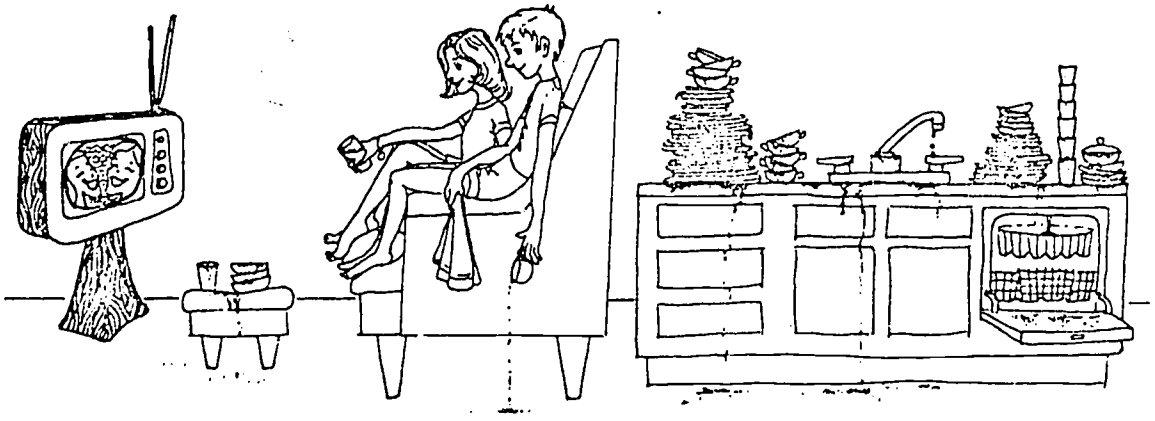
CAREER DEVELOPMENT FOCUS: Moral principles are an integral part of one's work life.

OCCUPATIONAL FOCUS: Bank Teller

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Checking Accounts
2. Savings Accounts
3. Banks from the Beginning
4. Field Trip



Teacher Goals

Teacher goals of this strategy combine a Lifestyle Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Bank Teller. In this perspective the teacher's goals are to:

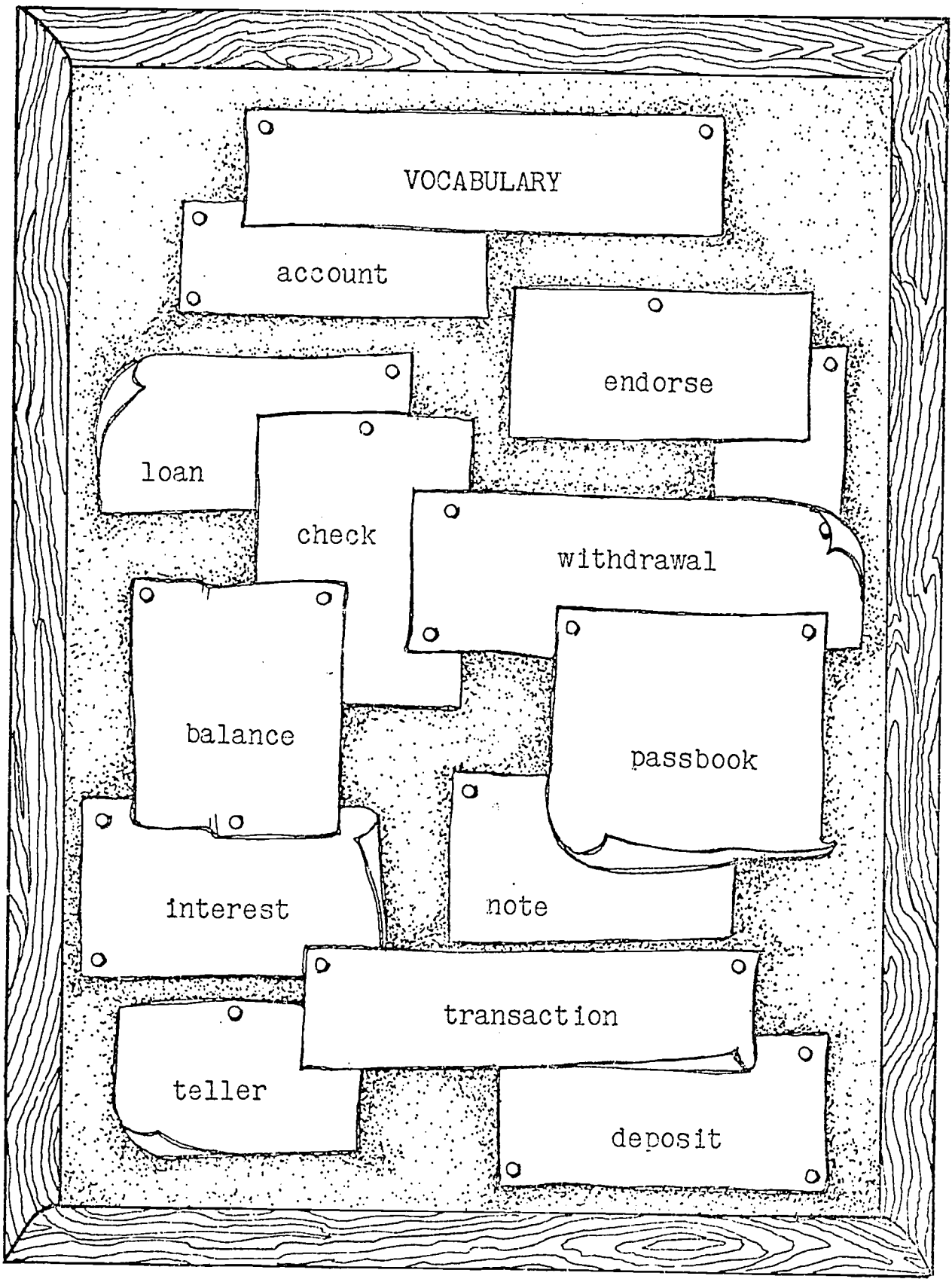
Develop pupils' concept of morals as ideas of what is right, fair, and honest.

Encourage appreciation of the combined effects of occupational competence and moral integrity.

Guide awareness of the roles of money and other forms of wealth in history.

Provide opportunities to apply academic skills to simulated work of the bank.

Increase understanding of the interdependence of banking with society in general.


VOCABULARY
account
endorse
loan
check
withdrawal
balance
passbook
interest
note
transaction
teller
deposit

CHECKING ACCOUNTS

Fourth Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *cite at least two moral principles normally assumed appropriate for bank tellers.*

Attitudes and Appreciations Dimension

. . . *describe a bank teller's transaction as an illustration of an implied contract.*

Career Information Dimension

. . . *identify particular social and intellectual characteristics helpful to a bank teller.*

Educational Awareness Dimension

. . . *identify academic knowledge and skills used by a bank teller.*

Subject Matter Concepts

Social Studies
- Economics
  - Banks
  - Difference between goods and services
- Sociology-Anthropology
  - Community needs a variety of services.

Mathematics
- Problem Solving
  - Earning, spending, saving money
  - Multi-step problems
- Facts and Operations
  - Addition and subtraction

Preplanning Suggestions

Dittoed deposit slip forms, play money, checks, check stubs, and recording sheets in the form suggested in the write-up of the activity

Prepare an area for a "bank" made from large boxes, etc.

A teller's principal function is to process and record routine money transactions, which usually involve deposits and withdrawals by individual customers. Prepare dittoed forms to simulate deposit slips, play money, checks, check stubs, and a simple recording sheet for a "teller" to keep track of transactions as they are made. A main mathematical consideration is the keeping of a cumulative total by adding and subtracting as required by continuing transactions.

TELLER NO._____ DATE_____		
Money Received	Money Paid Out	Total

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *identify academic knowledge and skills used by a bank teller.* PPO

Moral principles are an integral part of one's work life.

Lifestyle

. . . *cite at least two moral principles normally assumed appropriate for bank tellers.* PPO

Discuss with pupils particular traits and skills that would be especially helpful for workers who continually handle money and meet many different people. Meanwhile, expand pupils' concepts of morality to include everyday affairs in addition to the "higher" pronouncements that we normally relate to. This broader view can include topics such as honesty, courtesy, effort toward excellence, and

kindness. Lead toward an appreciation that the combined effects of occupational competence and moral integrity are positive, desirable forces.

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

. . . *describe a bank teller's transaction as an illustration of an implied contract.* PPO

Occupations require special personal characteristics.

Career Information

. . . *identify particular social and intellectual characteristics helpful to a bank teller.* PPO

While instructing pupils in the use of checks and checking accounts, call attention to a routine checking transaction as an assumed agreement between the parties--the teller is expected to carry out certain functions accurately and quickly; one or two banks are expected to process the check; the signer assumes ultimate responsibility for coverage.

Set up three or four teller "windows" and let children take turns serving as tellers while other pupils make deposits and write checks. In all cases, be sure that the idea of a cumulative total is understood and used. If interests and time allow, standing accounts might be set up for each pupil.

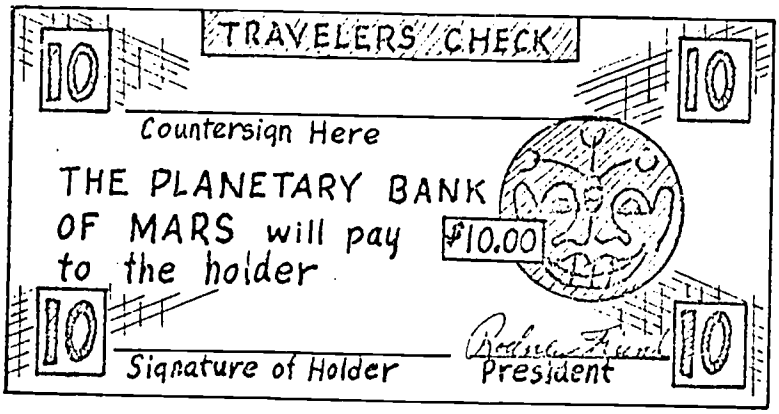
The REACT page offers "travelers checks" as an example of another form of substitute money. Distinguish the terms "denomination" and "fee." Help to clarify the distinctions among personal checks, travelers checks, and "regular" money. What are the advantages and disadvantages of each?

LS/Level 4/1

"Travelers Checks"

TRAVELERS CHECKS

A safe way to carry money is to buy travelers checks from a bank. You sign each one of them when you buy them and they cannot be cashed until you sign them again, exactly the same way, in the presence of the person cashing them.



Banks charge a fee when they issue travelers checks. A check for $1.00 would cost you one cent in addition to the dollar for the amount of the check. For a $10.00 check, the fee would be ten cents. For a $20.00 check, the fee would be twenty cents. In other words, for every dollar that the checks are worth, you pay one extra cent as a fee. Let's try some examples:

For 10 dollars in travelers checks, the fee would be _____ cents.

For 50 dollars in travelers checks, the fee would be _____ cents.

For 65 dollars in travelers checks, the fee would be _____ cents.

For 150 dollars in travelers checks, the fee would be _____.

On the other side of this paper are some different kinds of examples.

What would be the fee for each of the following purchases of travelers checks?

3	100-dollar checks	plus	6 10-dollar checks	_____
5	100-dollar checks	plus	5 50-dollar checks	_____
12	50-dollar checks	plus	12 20-dollar checks	_____
9	500-dollar checks	plus	10 10-dollar checks	_____
6	20-dollar checks	plus	50 10-dollar checks	_____

If you want to buy $100.00 worth of travelers checks, in denominations of ten dollars and twenty dollars, what are three possible combinations of checks that you might ask for?

If you want to buy $300.00 worth of travelers checks, in denominations of one hundred dollars, fifty dollars, and ten dollars, what are three possible combinations of checks that you might ask for?

If you want to buy $500.00 worth of travelers checks, in denominations of fifty dollars, twenty dollars, and ten dollars, what are three possible combinations of checks that you might ask for?

SAVINGS ACCOUNTS

Fourth Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *relate one's own feelings about frugality to the idea of saving money.*

. . . *state at least one moral maxim related to the idea of savings.*

Attitudes and Appreciations Dimension

. . . *discuss the mutual expectations of depositors and banks.*

Educational Awareness Dimension

. . . *relate one's own mathematics and language skills to a savings teller's job.*

Subject Matter Concepts

Social Studies
- Economics
  - Banks
  - Difference between goods and services
- Sociology-Anthropology
  - Community needs a variety of services.

Mathematics
- Problem Solving
  - Earning, spending, saving money
  - Multi-step problems

Preplanning Suggestions

Dittoed deposit slips, withdrawal forms, individual account sheets for the bank
"Savings" windows in the play bank
Dittoed savings account books made by individuals

Distinguish between the purposes of checking and savings accounts. Compare the two types in terms of safety, convenience, and expense. Why, for example, does a bank charge fees for checking and pay interest for savings? Meanwhile, prepare simple dittoed forms to use as play money, deposit slips, withdrawal slips, and individual account sheets to simulate savings transactions.

Moral principles are an integral part of one's work life.

Lifestyle

. . . *relate one's own feelings about frugality to the idea of saving money.* PPO

. . . *discuss the mutual expectations of depositors and banks.* PPO

Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

Encourage pupils to express their own feelings about savings of any kind and to appreciate the idea of trading time for future expectations. Why do we sometimes choose to postpone the spending of money, or the eating of a candy bar, or the studying for a test, etc.?

Draw attention to the respective motives of depositors and bankers in handling savings accounts. What does each party expect to gain? What does each party provide?

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *relate one's own mathematics and language skills to a savings teller's job.* PPO

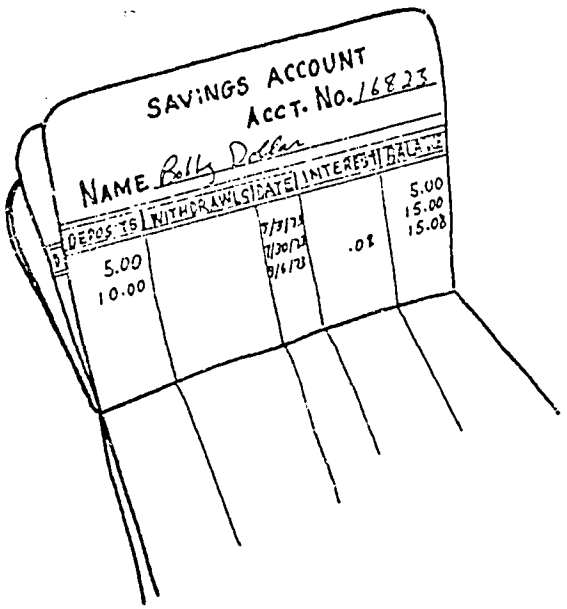
Set up two or more savings "windows" for pupils to take turns acting as tellers. Windows could be labeled with the initials of pupils' names (A-L, M-R, S-Z, for example). Have an appropriate loose leaf notebook

Moral principles are an integral part of one's work life.

Lifestyle

of accounts in each window. Be sure that children understand how to use deposit and withdrawal slips, as well as account sheets. Instruct a very simple calculation of interest for this activity. For instance, one cent on each dollar left on deposit for one hour could be used.

. . . state at least one moral maxim related to the idea of savings. PPO



Toward further awareness of frugality as a time-honored concept, direct pupils to such sources as Poor Richard's Almanac or the Fables of Aesop or Fontaine. Perhaps, some might enjoy making up an original proverb or fable.

A possible long-range activity from this start could be for the class to actually open and maintain a real savings account at a local bank for a particular common goal.

The REACT page offers further practice in figuring interest on savings accounts. Clarify terms such as "account," "interest," and "deposit" to help with understanding. The exercises can provide practice in two-step multiplication as required by the

combination of time and the amount of deposits. Keep the "figuring" reasonably simple, but allow for flexibility in cases of particularly apt pupils.

LS/Level 4/2

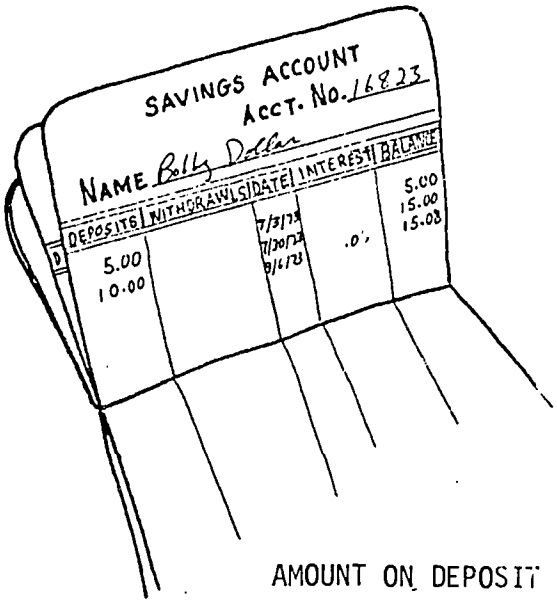
"Very Interesting"

VERY INTERESTING!

Interest is the "rent" that is paid for the use of money.

A savings account allows a bank to use your money for a while.

The bank pays you interest for how much and for how long you leave your money in the account.



A bank might pay 4 cents for every dollar that you leave on deposit for a year. For 2 dollars for a year you would get 2 times 4 cents or 8 cents. For 2 dollars on deposit for 2 years you would get twice the 2 times 4 cents or 16 cents.

Using this rate of 4 cents for each dollar for each year, figure out how much interest you would get for each of the following deposits:

AMOUNT ON DEPOSIT	LENGTH OF TIME	INTEREST
2 dollars	1 year	____ cents
2 dollars	2 years	____ cents
2 dollars	3 years	____ cents
2 dollars	5 years	____ cents
3 dollars	5 years	____ cents
3 dollars	4 years	____ cents
3 dollars	3 years	____ cents

Were those examples easy enough for you? If not, ask your teacher or a classmate to help you check your work.

On the other side of this paper are more examples that are a little tougher.

Using the rate of 4 cents for each dollar for each year, figure out how much interest you would get for each of the following deposits:

AMOUNT ON DEPOSIT	LENGTH OF TIME	INTEREST
4 dollars	2 years	____ cents
5 dollars	2 years	____ cents
6 dollars	2 years	____ cents
6 dollars	4 years	____ cents
4 dollars	6 years	____ cents
5 dollars	6 years	____ cents
10 dollars	6 years	____ cents
6 dollars	10 years	____ cents
3 dollars	10 years	____ cents
3 dollars	5 years	____ cents
1 dollar	5 years	____ cents
1 dollar	3 years	____ cents
(BE CAREFUL!) 50 cents	3 years	____ cents
50 cents	2 years	____ cents
50 cents	1 year	____ cents

Here are some special problems:

If you deposited 5 dollars, how long would you need to leave it to earn 20 cents in interest?

_____

How long would you need to leave 5 dollars on deposit to earn 40 cents in interest?

_____

How long would you need to leave 5 dollars on deposit to earn 1 dollar in interest?

_____

BANKS FROM THE BEGINNING

Fourth Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *discuss how principles and attitudes toward wealth and money have changed through history.*

. . . *judge various historical conditions of money, banking, and saving according to one's own moral principles.*

Attitudes and Appreciations Dimension

. . . *relate banking services to at least two other aspects of a given society.*

Career Information Dimension

. . . *explain probable reasons for the development of a particular monetary situation.*

Educational Awareness Dimension

. . . *describe how historical changes produced changes in monetary affairs.*

Subject Matter Concepts

Social Studies
- History
  - Modern life has roots in the past.
  - Societies have changed and are changing.
  - American values and traditions
- Economics
  - Banks
  - Governments influence economic development

Social Studies (Cont'd.)
- Sociology-Anthropology
  - Lifestyles differ with time and place.
  - Values and purposes in behavior
  - Community's wants and needs

Language Arts
- Reading
  - Finding information
  - Making judgments

Preplanning Suggestions

Audio-visual aids about money and banking
History books and encyclopedias with information about banking

Moral principles are an integral part of one's work life.

Lifestyle

Technological, economic, social, and political factors influence supply and demand of jobs.

Career Information

Learning is a lifelong process.

Educational Awareness

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Use filmstrips, movies, or printed materials to supply information about the history of banking and other forms of storage against anticipated needs of the future. Modern banking, for instance, began in Venice in 1587. The Egyptian pyramids and temples of Babylon and Greece were used as storage places for treasures. Rome set aside the Street of Janus for money changers. Money changers also show up in Biblical times and places. A good encyclopedia can provide several leads into relevant material.

. . . *discuss how principles and attitudes toward wealth and money have changed through history.* PPO

. . . *explain probable reasons for the development of a particular monetary situation.* PPO

. . . *describe how historical changes produced changes in monetary affairs.* PPO

. . . *relate banking services to at least two other aspects of a given society.* PPO

The general idea of "taking thought for tomorrow" may be characterized by examples of how different cultures or individuals have invested money, time, or material goods with the expectation of future returns. This theme could easily be related to any and all considerations for the conservation of natural resources and the environment. The varied types of money throughout history and the means devised for its distribution, valuation, and storage and investment can provide a great deal of study material and can also lead to similar ideas about other forms of wealth.

Moral principles are an integral part of one's work life.

Lifestyle

. . . *judge various historical conditions of money, banking, and saving according to one's own moral principles.* PPO

As pupils study other people's attitudes and activities regarding money and its uses, encourage them to express their own feelings about those behaviors. How, too, do our values and cultural conditions affect present day attitudes in this area? How, for example, has credit buying changed our opinions and values about saving and spending?

The REACT page presents a more general approach to the idea of morality. Help pupils to transfer their considerations of values and behaviors from money and wealth to broader concepts of good-bad, right-wrong, or desirable-undesirable. Assign small groups to read and discuss the stories. Each group may present its work to the class for further consideration.

LS/Level 4/3

"Moral Accounting"

MORAL ACCOUNTING

These stories tell about moral problems. Read and discuss them in small groups. Think of a moral which might help solve the problem.

I. Ed was having such a good time doing cannonballs off the low dive that he didn't even notice his sister, Joan, leaving the pool. When Ed parked his bike in front of their house an hour later, Joan was sitting on the porch with a double decker chocolate ice cream cone. "Where did you get that?" he asked. "Mom gave me 25¢," said Joan. The ice cream looked delicious. Ed ran inside to ask his mother for a quarter but Mother said, "No." Joan had done several errands while Ed was swimming. The quarter was her reward. Ed had lots of bad feelings. Mother liked Joan better than him. He wanted to call Joan names and pour mustard on her ice cream.

What could Ed do about his jealousy? _____

_____

When do you feel jealous? _____

_____

Do you think everyone feels jealous sometimes? _____

What is a good way to deal with jealous feelings? _____

_____

What could Ed do? _____

_____

II. The fourth and fifth grade girls had a secret club called the Supremes. About the only things they did were to go to each others' houses after school and sometimes stay overnight together. Cora wanted very much to join. They were the neatest and best-dressed girls in the school. Cora was surprised at

what a person had to do to join. The new member had to buy a pack of cigarettes and smoke three cigarettes in front of the other Supremes. Cora worried. Her parents wouldn't like it, but she didn't have to let them know. She didn't want to spend her money that way. She knew the other girls would laugh because she really didn't know how to smoke at all. But she probably wouldn't get lung cancer from three cigarettes. Cora felt torn. If she didn't join, none of the Supremes would ever respect her.

What could Cora do? _____

_____

Have you ever done something you didn't want to do just to impress others?

_____

What kind of strength does a person need to be himself when others want him to be like them? _____

III. Kim stayed in for recess to finish her math page. Her chewed-off pencil stub wasn't helping her. She needed to erase several mistakes. Right beside her in Ray's desk was a big new eraser. She reached in and borrowed it and went to work fixing up the page. Not long after recess, Miss Cahill announced, "Ray can't find his eraser. Has anyone seen it?" Kim didn't say a word. "Tough," she thought, "He's way ahead of me in math anyway."

What do you think of Kim's morals? _____

What should Miss Cahill do? _____

Would Ray be very upset? _____

How important is an eraser? _____

What could Kim do? _____

FIELD TRIP

Fourth Experience Level Activity

Performance Objectives

Lifestyle Dimension

. . . *relate the working conditions in a bank to one's own preferences and values.*

Attitudes and Appreciations Dimension

. . . *explain the interdependence of job specializations in a given bank.*

Career Information Dimension

. . . *describe at least two different work settings within a single bank building.*

Educational Awareness Dimension

. . . *cite at least two facts about banking learned during the field trip.*

Subject Matter Concepts

Language Arts
- Listening and Speaking
  - Interviewing
  - Giving and taking directions
  - Noting and remembering details
- Writing Skills
  - Note-taking

Preplanning Suggestions

Arrange for a group of class members to visit a local bank.
Plan how children will develop interview sheets.

Occupations have their own work settings.

Career Information

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Career-oriented learning may take place in school or out of school.

Educational Awareness

Moral principles are an integral part of one's work life.

Lifestyle

Arrange for the class to visit a local bank for a directed tour. Have all of the class visit at one time or plan for visits for a succession of smaller groups. Prepare the pupils for effective observation by brainstorming with them about what they already know about banks and banking. What other positions are there besides the teller? What safety precautions are used? What services does a bank provide? What kinds of machines and other equipment are used by the employees?

. . . describe at least two different work settings within a single bank building. PPO

. . . explain the interdependence of job specializations in a given bank. PPO

. . . cite at least two facts about banking learned during the field trip. PPO

. . . relate the working conditions in a bank to one's own preferences and values. PPO

A successful field trip requires planned procedures for the recording and reporting of observations and other experiences. A guide sheet or questionnaire can be a great help for directing pupils' attention to details. Keep in mind that the teller has been the main focus and use that position as a point of reference for others that are considered.

Follow up the trip with at least a summarizing discussion. Encourage expressions of personal opinions and preferences concerning the assumptions and activities in banking. Individual or small group research reports may be inspired by particular aspects of the trip.

The REACT page provides directions for pupils to explore the interdependence of banking with other businesses in the neighborhood. Help them to anticipate effective ways of contacting interviewees, recording their conversation and observations, and reporting their findings to the class. Perhaps some pupils may prefer to do the interviewing in pairs rather than individually.

LS/Level 4/4

"Banking on the Bank"

BANKING ON THE BANK

Many other businesses depend upon the services of banks.

To find out how banks serve other businesses, plan to interview at least two people who work in or near your neighborhood. These might be storekeepers, gas station workers, policemen, truck drivers, teachers, or almost any other kind of workers.

Make arrangements ahead of time with persons you will talk to so that you can be sure that they will be ready and will know why you are interviewing. Take something along to make it possible to take notes during the interviews. Afterwards, you will want to share your information with your classmates.

Remember that your main purpose is to learn how the person you are talking with makes use of bank services in his business.

Here are some questions that you might find helpful when you are talking with the people you have chosen:

How long have you worked at this location?

What services (or goods) do you provide?

What bank services do you use?

With which bank do you do business?

RELATED MATERIALS

Bank Tellers (Sound Filmstrip) Bowmar, 622 Rodier Drive, Glendale, California 91201, 1970.

The Banker (Sound Filmstrip) Eye Gate House, Inc., 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Banks and Banking (Sound Filmstrip) Eye Gate House, Inc., 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Come to Work With Us in a Bank (Book) Jean and Ned Wilkinson. Sextant Systems, Inc., 3048 North 34th Street, Milwaukee, Wisconsin 53210, 1971.

Earning Money (Book) Frederick Rossomando, et. al. F. Franklin Watts, Inc., 575 Lexington Avenue, New York, New York 10022, 1967.

Everyday Courtesy (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1967.

Everywhere We Go (Book) American Guidance Services, Inc., Publishers' Building, Circle Pines, Minnesota 55014, 1970.

I Want to Be a Bank Teller (Book) Eugene Baker. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1972.

The Story of a Check (Film, Color or B/W, 13-min.) BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404, 1971.

BANK TELLERS

Every bank, no matter how small, has at least one teller to receive and pay out money and record these transactions. In a very small bank, one teller often known as an all-around teller may handle transactions of all kinds, but in large banks usually different kinds of transactions are assigned to different tellers. A Christmas Club teller accepts and records deposits made to Christmas Club savings accounts, for example, and a note teller handles certain transactions for clients making loans on securities. Other tellers who have special job titles include commercial (or paying and receiving), savings, foreign exchange, payroll, discount, and securities tellers.

Approximately 230,000 tellers of all kinds were employed in early 1968. A considerable number worked only part time, and about eight out of ten were women.

Commercial tellers are mainly occupied with cashing customers' checks and handling deposits and withdrawals from checking and savings accounts during the hours the bank is open to the public. Before he cashes a check, the teller must verify the identity of the person to whom he makes payment and be certain that the funds in the payee's account are sufficient to cover the payment. When he accepts a deposit, he checks to see whether the amount of money has been correctly itemized on the deposit slip and enters the total in a passbook or on a deposit receipt. Tellers may use machines to make change and to total deposits. A teller handling savings accounts may use a "window" posting machine which prints a receipt or records the transaction in the customer's passbook and simultaneously posts the transaction in the bank's ledger.

After public banking hours, the teller counts the cash on hand, lists the currency-received tickets on a settlement sheet, and balances his day's accounts. He also may perform other incidental tasks such as sorting checks and deposit slips, filing new account cards, and removing closed account cards from files. A paying and receiving teller may supervise one or more clerks assigned to assist him.

In hiring tellers, employers prefer high school graduates experienced in related clerical positions. They regard personal characteristics such as maturity, neatness, tact, and courtesy as being particularly important because customers, who deal with tellers far more frequently than with other bank employees, often judge a bank's services principally on their impressions of the tellers. Since tellers handle large sums of money, they must be able to meet the standards established by bonding companies. In filling new positions, most banks give preference to their employees who have demonstrated the necessary qualifications.

Newly hired tellers usually learn their duties by first observing experienced workers for a few days and then, under close supervision, doing the work themselves. Training periods may last from a few days to three weeks or longer. A new teller's first assignment is usually a combination job as a savings and commercial teller; or, in those banks which are large enough to have a savings teller's "cage," the beginner may start as a savings teller.

After gaining experience, a competent teller in a large bank may advance to the position of head teller, in which he supervises the bank's staff of tellers. Eventually, experienced tellers may qualify for promotion to bank officer positions, particularly if they have had college training or have taken specialized courses offered by the banking industry.

The number of bank tellers is expected to increase very rapidly through the 1970's as banks continue to expand their services for the growing urban population. An increasing proportion, however, will be part-time tellers employed during peak hours to accommodate those customers who transact business during the noon hour and in the evenings. More than 20,000 openings are expected each year as a result of the increase in employment and the need to replace tellers who retire or stop working for other reasons. Turnover is relatively high among the thousands of women who work as tellers.

Although increased use of mechanical and electronic equipment can be expected to eliminate some of the routine work done by many tellers and to speed other work they now perform, it is unlikely to affect greatly the total number employed.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U. S. Department of Labor, Washington, D.C.
pp. 788-789.

SPACE FOR SPECIAL PEOPLE

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

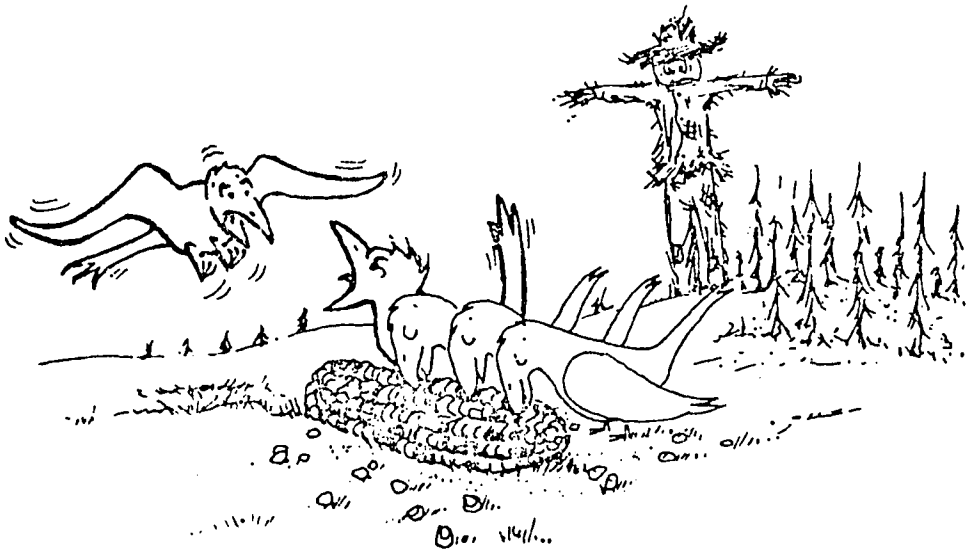
CAREER DEVELOPMENT FOCUS: A person's membership in a group affects the group as well as himself.

OCCUPATIONAL FOCUS: Architect

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Designing for Group Needs
2. The Language of the Draftsman
3. Architect's License



Teacher Goals

Teacher goals of this strategy combine a Self-Development Dimension subconcept with subconcepts from Attitudes and Appreciation, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Architect. In this perspective the teacher's goals are to:

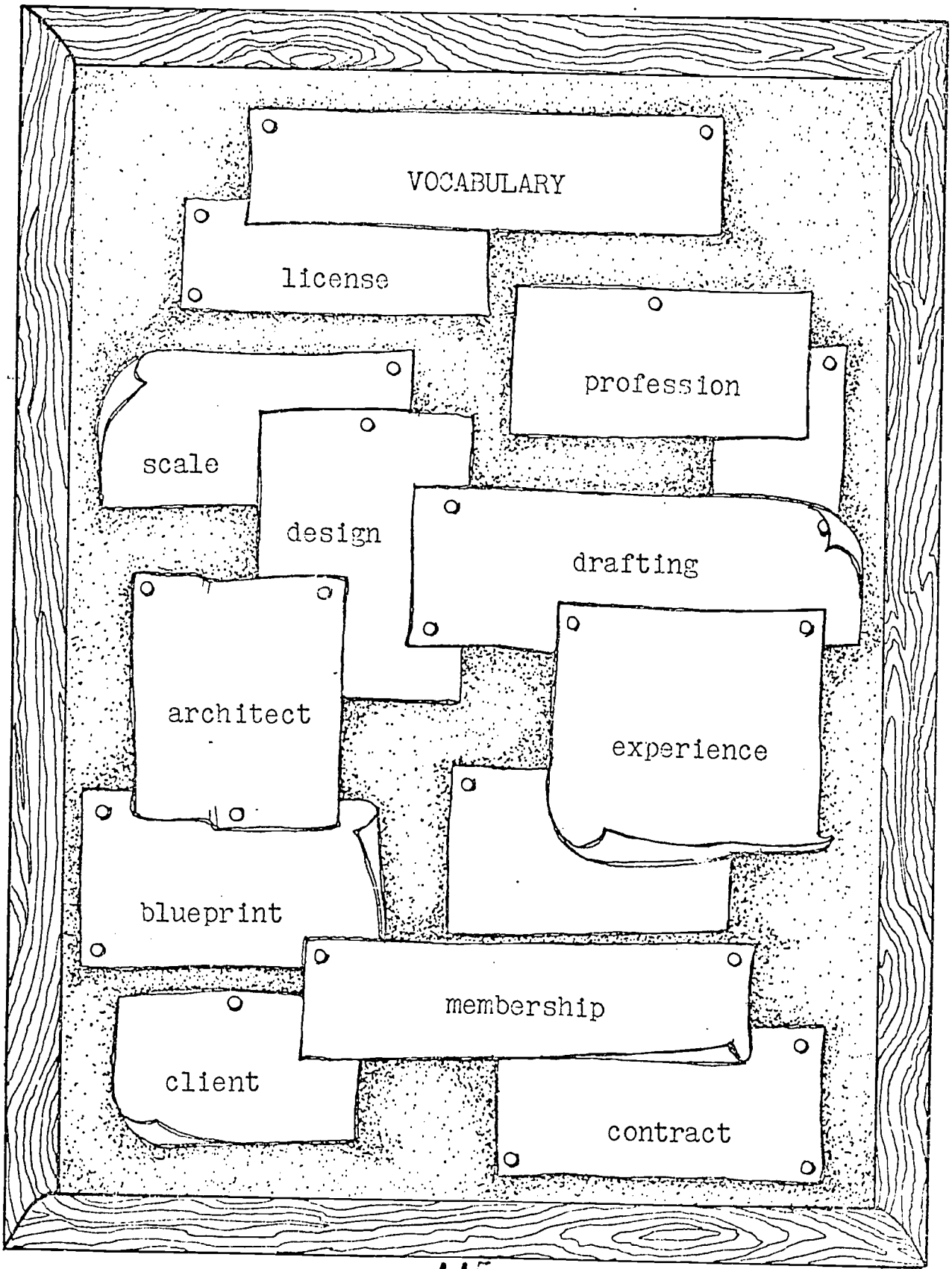
Organize the class into diverse and changing subgroups.

Draw children's attention to group memberships of all kinds involving children and adults.

Expand the children's understanding of the social contributions of the architectural profession.

Help children relate aspects of the architect's profession to themselves and other community members.

Devise learning experiences in architecture.


VOCABULARY
license
profession
scale
design
drafting
architect
experience
blueprint
membership
client
contract

DESIGNING FOR GROUP NEEDS

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *find out the name of the architect who designed a familiar building in your community.*

. . . *cooperate in forming subgroups within the class.*

. . . *name two groups an architect may influence.*

Attitudes and Appreciations Dimension

. . . *tell how the architect responds to group needs.*

Career Information Dimension

. . . *name two famous buildings.*

Subject Matter Concepts

Social Studies
- Sociology-Anthropology
  - Community wants and needs
  - Housing
- Geography
  - Modification of environments

Language Arts
- Reading
  - Finding information

Preplanning Suggestions

Information about which buildings in the area have cornerstones or architectural information in view on the building
Visuals of architects' plans, blueprints of new homes, or pictures in magazines of floor plans

A person's membership in a group affects the group as well as himself.

Self-Development

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

An architect is both a scientist and an artist. He knows how to make a building useful and beautiful.

. . . *find out the name of the architect who designed a familiar building in your community.* PPO

Interest the children in finding out the architect who designed a building they know such as the school, the public library, or a church. Perhaps copies of the architect's plans would be available for class members to see. Children could ask someone who uses the building how its architecture influences them.

. . . *tell how the architect responds to group needs.* PPO

Invite the children to play the role of architect. Distribute descriptions of clients' needs. Here are some samples:

1. Pretend that the architect's client is your own family. Think of your family's needs for space. Design a house in which you would all be comfortable.

Something to remember: An architect rarely designs a home for one family. The family would have to be very rich to contract with an architect for an original design. Plans for most homes and apartments are copies. Builders use the same basic plan for lots of houses. They may consult a licensed architect for his or her approval.

2. Pretend the client is a school board. They need a new school for 350 boys and girls. They

would like to have a large kindergarten room, a music room, an art room, a gym with a stage, and cafeteria space. The school board owns a square city block on which to build. They want some parking space for teachers and a playground outside. Plan a building which would help make school fun.

3. Pretend that the client is the pastor of a church. His people are ready to have a new church built. Two hundred and fifty families use the church. They want a sanctuary, an office for the pastor, Sunday School rooms, and a church hall for meetings and dinners. What design would you suggest for the church people?

Ask the children to pick a client for whom they want to design. Make building plans including the floor plan and a perspective view from the outside. Tell the children that the perspective drawing will be like an outside photograph and the floor plans like a map showing the outlines of the rooms. Encourage the children to think of using space well and making easy access between rooms, good light, and ventilation. The designs can be quite rough. Ideally, borrow some architect's sketches to use for examples.

A person's membership in a group affects the group as well as himself.

Self-Development

. . . cooperate in forming sub-groups within the class. PPU

Ask the children to organize into sub-groups. The purpose of the groups will be to give the architects a chance to show their plans to children who wish to play the role of clients interested in a home, school, church, etc. Clients may enjoy picking their favorite plan and telling why they expect it would serve their group's needs.

A person's membership in a group affects the group as well as himself.

Self-Development

Occupations have their own work settings.

Career Information

. . . *name two groups an architect may influence.* PPO

Remind the children that the architect serves many groups. He is a member of his community and his buildings can make it a better place to live. He may be a member of an architectural firm as well as the American Institute of Architects. He contributes professional services to groups and individuals who hire him for building or consulting.

. . . *name two famous buildings.* PPO

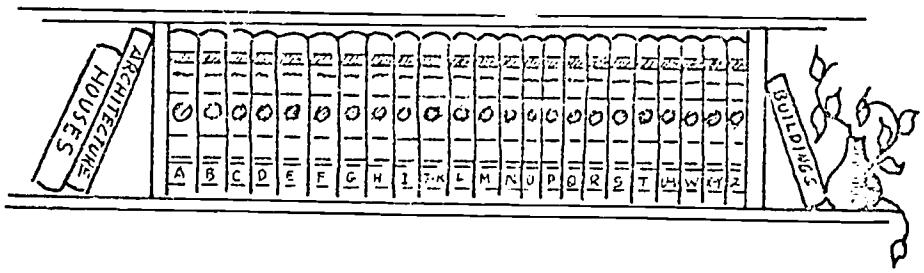
The REACT page is a research activity. major encyclopedias picture the listed buildings as well as books about architecture for children. Ask the children to consider how the architecture of these buildings may influence those who use them.

SD/Level 4/1

"All Kinds of Buildings"

ALL KINDS OF BUILDINGS

. Find pictures of these well known buildings. Write a sentence to tell why you think the building would be good for the people who use it.



Building: Pyramid
Place: Egypt
Purpose: King's tomb

This is a good building because _____

_____

Building: Igloo
Place: Far North
Purpose: Home for Eskimo families

This is a good building because _____

_____

Building: Parthenon
Place: Athens, Greece
Purpose: Temple

This is a good building because _____

_____

Building: Habitat
Place: Montreal, Canada
Purpose: Apartment building

This is a good building because _____

_____

Building: Coliseum
Place: Rome, Italy
Purpose: Sports arena

This is a good building because _____

_____

Building: Notre Dame Cathedral
Place: Paris, France
Purpose: Church

This is a good building because _____

_____

Building: Alhambra
Place: Granada, Spain
Purpose: Castle

This is a good building because _____

_____

THE LANGUAGE OF THE DRAFTSMAN

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *suggest a classroom arrangement allowing for individual and group needs*

Educational Awareness Dimension

. . . *explain the importance of drawing.*

. . . *identify drafting as an important skill of the architect.*

. . . *make a scale drawing of the classroom.*

Subject Matter Concepts

Mathematics
- Measurement
  - Map scale
- Figural
  - Scale drawings

Language Arts
- Reading
  - Picture reading

Preplanning Suggestions

Graph paper with ½ or ¼ inch squares for each child
Yardsticks, metersticks, rulers
8½ by 11 inch paper, scissors, and glue for REACT page

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Learning achievement depends upon effort and ability.

Educational Awareness

Career-oriented learning may take place in school or out of school.

Educational Awareness

A person's membership in a group affects the group as well as himself.

Self-Development

. . . *explain the importance of drawing.* PPO

To emphasize the purpose of drawing, illustrate for the class the difference between telling about something with words and telling with a picture. Pick one of your favorite pictures. Describe it orally for the class. Then show the picture. Ask the class what they know from seeing the picture that they couldn't imagine from the words alone.

. . . *identify drafting as an important skill of the architect.* PPO

. . . *make a scale drawing of the classroom.* PPO

Explain to the class that an architect puts his plans for a building into drawings, not just words. Drawings are his special language. Obviously the architect cannot draw a building to actual size. What a paper that would be! Instead he reduces the size of the building according to a scale that fits the drawing paper. Remind the pupils of map scales.

Distribute graph paper with 1/4" to 1/2" squares. Have children measure the classroom to find its dimensions. (Round off inches to the nearest foot.) Measure distances between windows, doors, etc. Make a rough sketch showing the distances on the board for all to see. After they have measured, invite the children to become draftsmen by making a scale drawing of the classroom on the graph paper. Devise a convenient scale.

. . . *suggest a classroom arrangement allowing for individual and group needs.* PPO

Once the draftsmen get the stationary parts of the room into their scale drawing--the walls, doors, and windows--suggest that they design an arrangement of the furnishings for their favorite class period.

A place for desks, shelves, worktable etc., could be designed for mathemati science, indoor recess, or other activities.

The first REACT page is an exercise i scale drawing and measurement.

The second REACT page emphasizes the subconcept asking children to put drawings or descriptions of good group members in the windows. They will need a blank 8½" x 11" backing paper, scissors, and glue for this activity.

SD/Level 4/2

"Drawing to Scale"

SD/Level 4/3

"Who Would Be Good for the Group?"

DRAWING TO SCALE

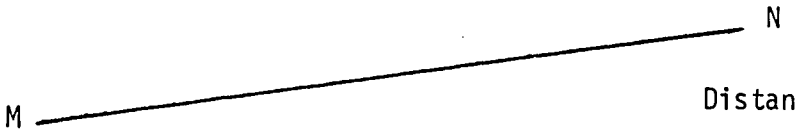
Use a ruler to do these pages.

These lines are drawn to the scale ½ inch = 1 foot.
Measure the lines. Fill in the blanks.

A _____ B Distance AB = _____ feet.

X _____ Y Distance XY = _____ feet.

O _____ P Distance OP = _____ feet.



Distance MN = _____ feet.

Use the scale 1 inch = 3 feet. In the space below, draw these lines.

Line CD = 6 feet. Line PQ = 4½ feet.

Line KL = 9 feet. Line GH = 12 feet.

(over)

Use the scale ¼ inch = 1 foot. In the space below, draw these lines.

Line EF = 6 feet.

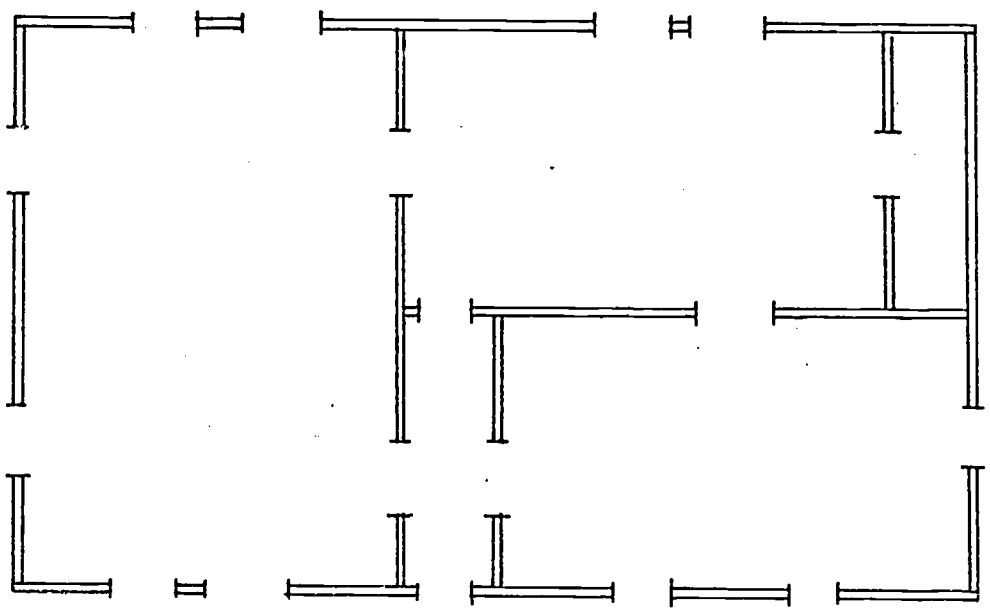
Line IJ = 10 feet.

Line QR = 9 feet.

Line MN = 8 feet.

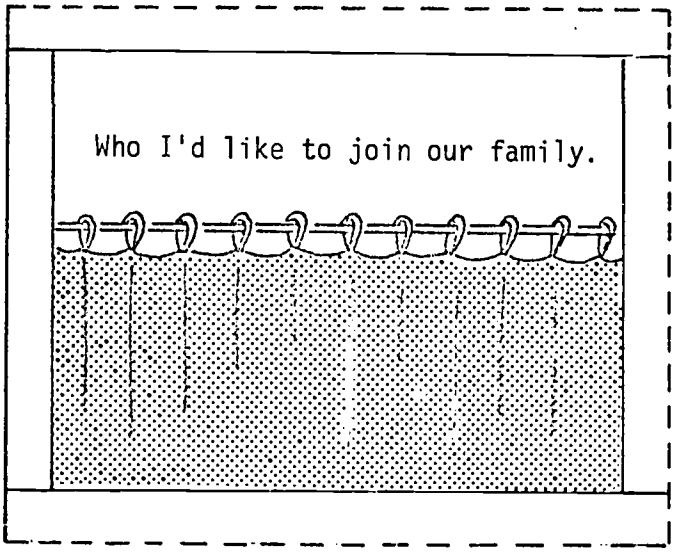
Below is the floor plan of a little house. If this house is 25 feet long and 15 feet wide, the scale is 1 inch = _____ feet.

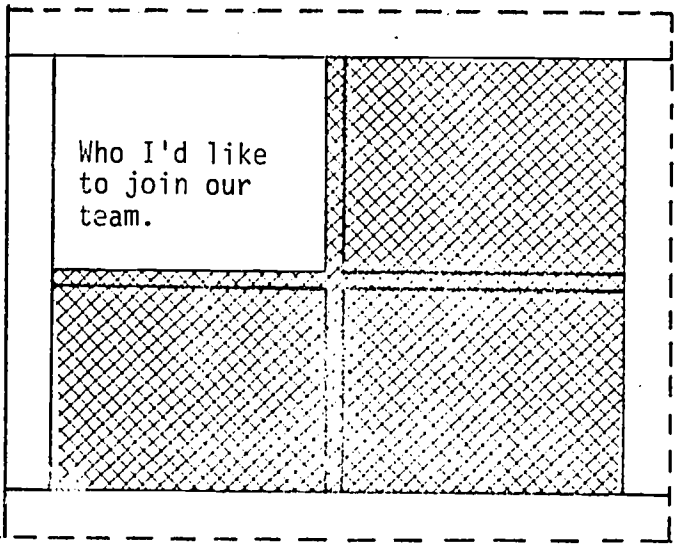
When you find the scale, mark the length and width of the rooms on the floor plan.



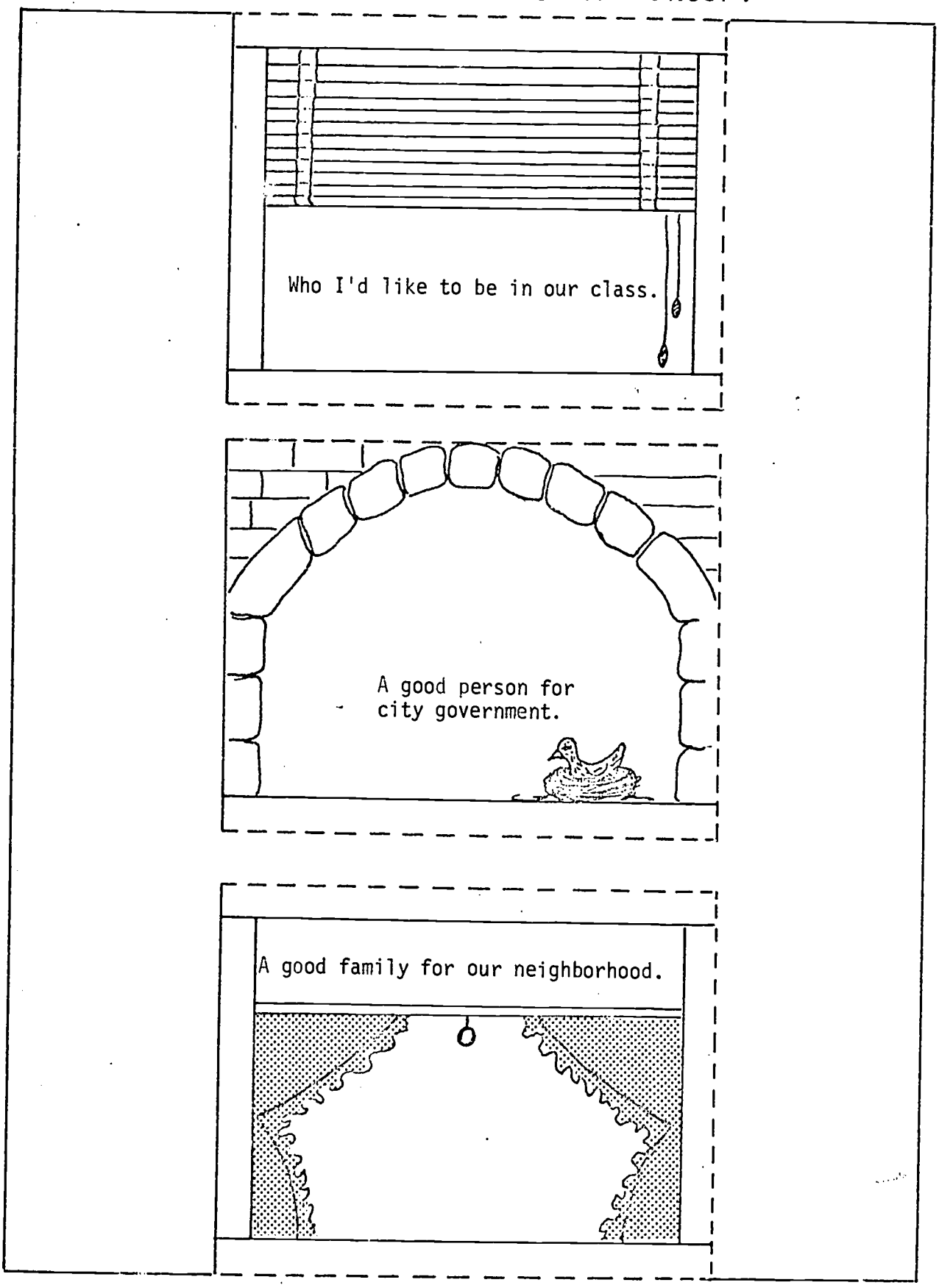
WHO WOULD BE GOOD FOR THE GROUP?

Here are some windows. Cut the broken lines carefully. Paste these pages over blank papers the same size. Do not paste the windows. They can open and close. Inside the windows write or draw about the kind of person you think would help the group.





WHO WOULD BE GOOD FOR THE GROUP?



ARCHITECT'S LICENSE

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *define "license" as official permission.*

. . . *identify architecture, at present, as a field whose members are mostly men.*

Attitudes and Appreciations Dimension

. . . *tell how licenses protect people.*

. . . *identify architecture as a field open to women.*

Career Information Dimension

. . . *tell how an architect gets a license.*

. . . *relate stages of the architect's professional training to schooling.*

Subject Matter Concepts

Social Studies
- Political Science
  - Rules for interaction needed by groups
- History
  - Before and after relationships

Preplanning Suggestions

Copies of a variety of licenses needed by humans in order to live in the community--driver's license, bicycle license, dog license, etc.
Materials for a chart or list for class activities
Materials for making "pupil license" (See activity.)

ARCHITECT'S LICENSE

Career development includes progression through stages of educational and occupational training.

Career Information

A person's membership in a group affects the group as well as himself.

Self-Development

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

An architect cannot have his own office unless he has a license. A license is an official piece of paper which gives the worker the permission of the state to do a certain job.

. . . *tell how an architect gets a license.* PPO

To get a license, an architect must have at least three years' experience working in an architectural office and must pass a state examination. The exam is very difficult. It lasts from 8 to 12 hours a day for 3 or 4 days. Ask the children whether they can imagine taking such a long test. Architects are not required to graduate from college in order to get a license. But architects agree that it would be difficult to pass the test without going to college to study architecture. Ask the children to think of other things which are hard to do without schooling. Tell the children that there are about 60 schools of architecture in the United States.

. . . *define "license" as official permission.* PPO

. . . *tell how licenses protect people.* PPO

The state protects people by requiring many other workers to have a license. Ask the children to name kinds of licenses they know about. They may suggest the following: cars, trucks, trailers, bicycles, doctors, dentists, beauticians, barbers, dogs, veterinarians, restaurant owners, hunters, fishermen, drivers, pharmacists, etc.

Show your teacher's license to the class and tell them how you got it.

Perhaps children would be interested in taking a photo field trip through your business district to collect snapshots of workers displaying their licenses.

Suggest trying giving out "4th Grade Pupil Licenses" to members of the class. First, decide upon the qualifications needed for class membership. Such things as these may be appropriate:

Must be able to sit up straight

Show a piece of completed school work

Be able to listen and follow directions

Observe anti-litter laws

Know how to cooperate in groups

Have a sharp pencil and scissors

Be able to take turns

Be able to win or lose

A simple test could be devised and a licensing board could administer the test to those who wanted it. A "4th Grade Pupil License" could be issued to those who passed the test.

Career development includes progression through stages of educational and occupational training.

Career Information

. . . relate stages of the architect's professional training to schooling. PPO

The first REACT page asks pupils to consider the several stages of the architect's professional preparation.

A great many tasks can be performed by men or women.

Attitudes and Appreciation

. . . identify architecture as a field open to women. PPO

A person's membership in a group affects the group as well as himself.

Self-Development

. . . identify architecture, at present, as a field whose members are mostly men. PPO

The second REACT page tells the story of a woman in architecture, Gertrude Lempp Kerbis. Questions following the story can be answered in writing or through discussion.

SD/Level 4/4

"Building a Career"

SD/Level 4/5

"Space Lady"

BUILDING A CAREER

Here are steps a person goes through to become an architect. Write them in the stair steps. Try to get the order right from the first step to the last step.

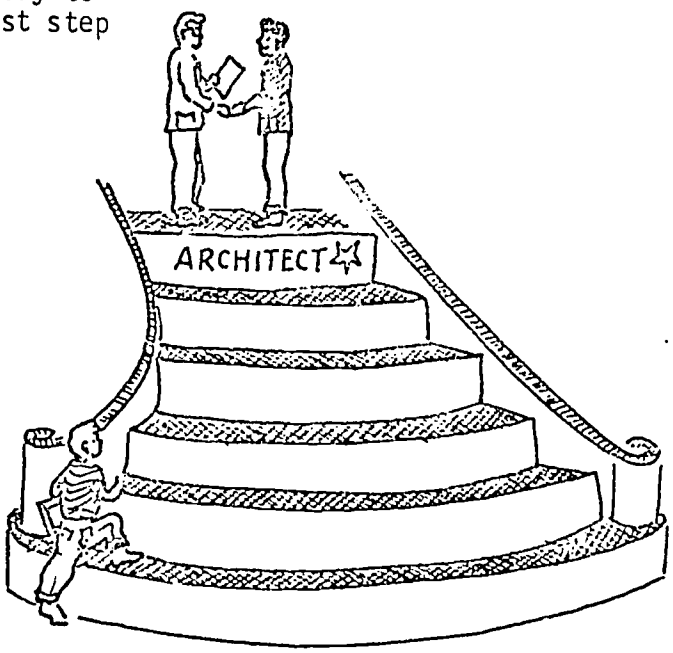
Grade school

High school

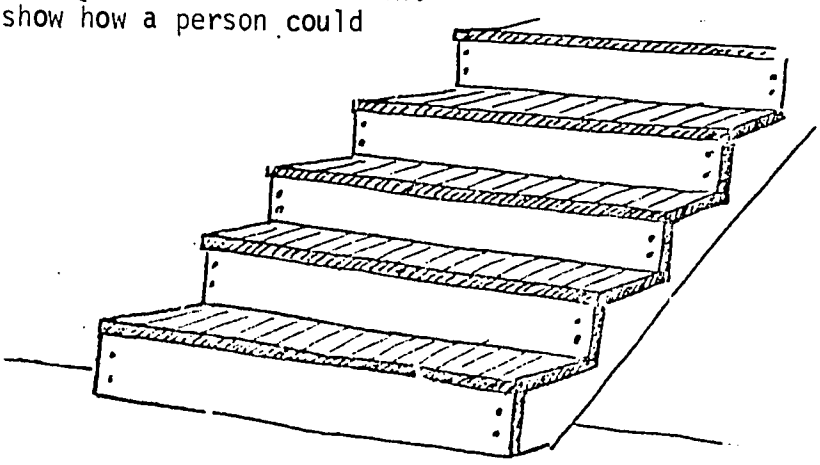
College

Three years experience

Licensing exam



Think of an occupation you are interested in. Make a set of steps to show how a person could get ready for that job.



SPACE LADY

Read this story. Answer the questions at the end in writing or in a group discussion.

Vocabulary: Taliesin East, Frank Lloyd Wright, designed, deserted, roamed, Harvard University, hydralic, profession

When Gertrude Lempp Kerbis was 18 years old she went off to college. She had no idea what she wanted to be. She liked art and she liked science. But she didn't know any job for a person who liked to do art and science at the same time.

One day Ms. Kerbis' friends told her about a school named Taliesin East run by the famous architect, Frank Lloyd Wright. The school was different and its buildings were beautiful. Ms. Kerbis wanted to go there. Hitchhiking was not as dangerous in those days. She hitched a ride in a truck. When she got to the school, it seemed deserted. To get in she climbed over the wall and jumped down.

Once inside, Ms. Kerbis was very excited. Peacocks on the lawns frightened her. She roamed all around the buildings amazed at their special shapes and sizes. Very tired, she slipped inside one of them and fell asleep. When she woke up, she noticed that the inside of the building was as finely designed as the outside. At last a caretaker found her and said that Mr. Wright and the students of the school were away on a trip.

Ms. Kerbis hurried back to her own school with an important new idea in her head. It would take both science and art to make a beautiful building. An architect could work in both science and art.

Soon Ms. Kerbis moved to Harvard University where she could study architecture. She surprised many people because there were very few women working in architecture. Ms. Kerbis thinks women would be talented in the field because they have a feel for beautiful buildings. They can sense what kind of space would be right for different activities. She thinks cavewomen designed the first houses while men hunted.

Ms. Kerbis likes to think of architecture as a way to make space. She says you can feel the shape of the space you are in--whether it is big or airy or simple or scary. She likes to solve problems in architecture with science. Ms. Kerbis was the architect who designed the big dining building at the United States Air Force Academy in Colorado. Here she had the whole roof built on the ground and then raised into place with hydralic lifts. Most of all Ms. Kerbis likes to see people walking in and out, using buildings that once were only in her drawings.

What people must have helped Ms. Kerbis?

Do you suppose men in architecture are happy about Ms. Kerbis? Why?

Why is Ms. Kerbis important to girls interested in architecture?

Do you think architecture is a better profession because it is for both men and women? Why?

How does Ms. Kerbis help groups of people?

This story is adapted from the book, Saturday's Child, by Suzanne Seed, J. Philip O'Hare, Inc., Chicago, Illinois 60611. It is filled with interesting stories and pictures about women workers.

RELATED MATERIALS

Building for the Millions (Filmstrip) Eye Gate House, Inc., 146-01 Archer Avenue, Jamaica, New York 11435, 1972.

Different Ways of Living (Transparencies) Western Publishing Company, 850 Third Avenue, New York, New York 10022, 1967.

Feeling Spaces, Ripples Series (Film, Color, 14-min.) National Instructional Television, Box A, Bloomington, Indiana 47401.

Girls Can Be Anything (Book) Norma Klein. E. P. Dutton and Company, Inc., 201 Park Avenue South, New York, New York 10003, 1973.

Here I Am (Textbook) George A. Pflaum, Publisher, 38 West Fifth Street, Dayton, Ohio 45402, 1971.

Houses: From Cave to Skyscraper (Book) Irving and Ruth Adler. John Day Company, 62 West 45th Street, New York, New York 10036, 1964.

I Want to Be an Architect (Book) Eugene Baker. Childrens Press, 1224 West Van Buren Street, Chicago, Illinois 60607, 1969.

Popeye and Construction Careers (Comic Book) King Feature Syndacates, 235 East 45th Street, New York, New York 10017, 1973.

Saturday's Child--36 Women Talk About Their Jobs (Book) J. Philip O'Hara, Inc., 20 East Huron, Chicago, Illinois 60611, 1973.

School Problems: Getting Along With Others (Film, Color, 12-min.) Bailey Film Associates, 11559 Santa Monica Boulevard, Los Angeles, California 90025, 1972.

Shelter (Film, Color or B/W, 11-min.) Encyclopaedia Britannica Educational Films, Inc., 425 North Michigan Avenue, Chicago, Illinois 60611, 1973.

Young Scientist Looks at Skyscrapers, A (Book) George Barry. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York, New York 10036, 1964.

ARCHITECTS

Architects plan and design buildings and other structures. Their goal is to design structures which are safe, useful, and pleasing in appearance. Architects also work with other professionals, such as engineers, urban planners, and landscape architects in the designing of cities and towns and in the planning and improvement of an overall physical environment.

When an architect receives a commission to design a building, he meets with the client to discuss the purpose, requirements, and cost limitations of the structure, as well as the client's preferences as to style and plan. Subsequently, the architect must make hundreds of decisions, considering not only the requirements of the building, but also local and state building codes, zoning laws, fire regulations, and other ordinances. For example, in planning a school, the architect must decide, among other things, the amount of corridor and staircase space required to enable students to move easily from one class to another; the type and arrangement of storage space; and the location, size, and interior arrangements of the classrooms, laboratories, lunchroom, gymnasium, and administrative offices.

The architect makes preliminary drawings of the structure and meets with the client to develop a final design. This design includes floor plans, as well as details of the interior and exterior of the building. The final design then is translated into working drawings which show the exact dimensions of every part of the structure and the location of the plumbing, heating, electrical, air conditioning, and other equipment. Consulting engineers usually prepare detailed drawings of the structural, plumbing, heating, and electrical work. Engineers' drawings are coordinated with the architect's working drawings, and specifications are prepared listing the construction materials to be used, the equipment, and, in some cases, the furnishings.

The architect then assists his client in selecting a building contractor and in negotiating the contract between client and contractor, and he acts as the client's advisor and representative in dealings with the contractor. As construction proceeds, the architect makes periodic visits to the construction site to see if the design is being followed and that the materials specified in the contract are being used. The architect's work is not completed until the project is finished, all required tests are made, and guarantees are received from the contractor.

Most self-employed architects plan and design a wide variety of structures, ranging from homes to churches, hospitals, office buildings, and airports. Architects also plan and design multibuilding complexes for urban renewal projects, college campuses, industrial parks, and new towns. Some architects, however, specialize in one particular type of structure or project. When working on large-scale projects or for large architectural firms, architects frequently specialize in one phase of the work, such as design, drafting, specification writing, or construction contract administration (insuring that a structure is built according to plans and specifications).

An estimated 34,000 registered (licensed) architects were employed in the United States in late 1968. In addition, many other architectural school

graduates who are unlicensed were working in positions requiring a knowledge of architecture. About 4 percent of all architects are women.

Approximately two-fifths of all architects are self-employed, either practicing individually or as partners. Most of the others work for architectural firms. Some architects work for engineers, builders, real estate firms, and for other businesses having large construction programs. Others are employed by government agencies, often in fields such as city and community planning and urban redevelopment. About 1,500 of these are employed by the federal government.

Architects are employed in all parts of the country. However, they are concentrated in those states with large metropolitan areas. Nearly half of all architects are employed in six states--California, New York, Illinois, Texas, Pennsylvania, and Ohio.

A license for the practice of architecture is required by law in all states and the District of Columbia mainly to insure that architectural work which may affect the safety of life, health, or property is done by qualified architects. Requirements for admission to the licensing examination are set by the individual states. These generally include graduation from an accredited professional school followed by 3 years of practical experience in an architect's office. As a substitute for formal training, most states accept longer periods of practical experience (usually 10 to 12 years) for admission to the licensing examination.

In 1968, professional training in architecture was offered by 87 colleges and universities in the United States, 63 of which were accredited by the National Architectural Accrediting Board. The great majority of these schools offered a 5-year curriculum leading to the bachelor of architecture degree. Many architectural schools also offered graduate education leading to the master's degree, and a few schools offered the Ph.D. degree. Although graduate training is not essential for the practice of architecture, it is often desirable for research and teaching positions.

Most schools of architecture admit qualified high school graduates who meet the entrance requirements of the college or university with which the school of architecture is associated. Some schools require 1 or 2 years of college education before admitting the student to a 3- or 4-year architectural training program. In general, architectural schools prefer that students' preparation include mathematics, science, social studies, language, and art. A typical curriculum includes not only architectural courses but also other subjects--usually English, mathematics, physics, chemistry, sociology, economics, and a foreign language.

Among the personal qualifications needed by persons planning a career in architecture are a capacity to master technical problems, a gift for artistic creation, and a flair for business and for human relations. Students are frequently encouraged to work for architects or for building contractors during summer vacations to gain some knowledge of practical problems.

New graduates usually begin as junior draftsmen in architectural firms where they make drawings and models of building projects or draft details in

the working drawings. As they gain experience, they are given more complex work. After several years, they may progress to chief or senior draftsman with responsibility for all the major details of a set of working drawings and for the supervision of other draftsmen. Other architects may work as designers, construction contract administrators, or specification writers. An employee who is particularly valued by his firm may be designated an associate and may receive, in addition to his salary, a share of the profits. Usually, however, the architect's goal is to establish his own practice.

The outlook is for continued rapid growth of the profession through the 1970's. Employment opportunities are expected to be good both for experienced architects and for new architecture graduates.

A major factor contributing to this favorable outlook is the expected growth in the volume of nonresidential construction--the major area of work for architects. Moreover, the increasing size and complexity of modern nonresidential buildings, as well as the homeowners' growing awareness of the value of architects' services, are likely to bring about a greater demand for architectural services. Urban redevelopment and city and community planning projects, other growing areas of employment for architects, also are expected to increase considerably in the years ahead. In addition, expanding college enrollments will create a need for additional architects to teach architectural courses.

Besides those needed to fill new positions due to growth, deaths and retirements will account for about 1,000 new openings every year.

Along with the anticipated rise in demand for architects, an increase is expected in the number of architectural graduates. If graduations in this field follow the trend expected in all college graduations, the number of architectural degrees awarded each year during the 1970's should be considerably greater than the estimated 3,200 degrees awarded in 1968. However, many architectural graduates utilize their training in fields such as sales and administration in the building industry and do not enter the profession. Thus, those who choose to enter the field should have good employment opportunities through the 1970's.

Most architects work in well-lighted, well-equipped offices and spend long hours at the drawing board. However, their routine often is varied by interviewing clients or contractors or discussing the design, construction procedures, or building materials of a project with other architects or engineers. Architects involved in construction contract administration frequently work out of doors during inspections at construction sites.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U. S. Department of Labor, Washington, D. C.
pp. 221-223.

ATTENDANT ECONOMICS

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

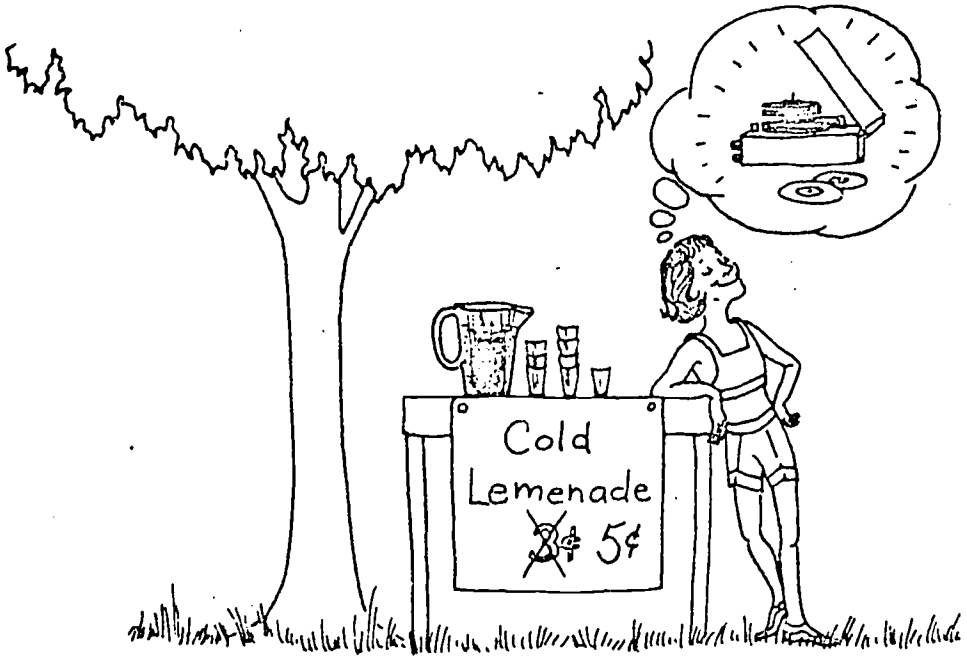
CAREER DEVELOPMENT FOCUS: An individual is influenced by economic forces.

OCCUPATIONAL FOCUS: Service Station Attendant

ACTIVITIES

IN THIS INFUSION STRATEGY

1. Money and Measures
2. Workers' Viewpoints
3. From There to Here to There



Teacher Goals

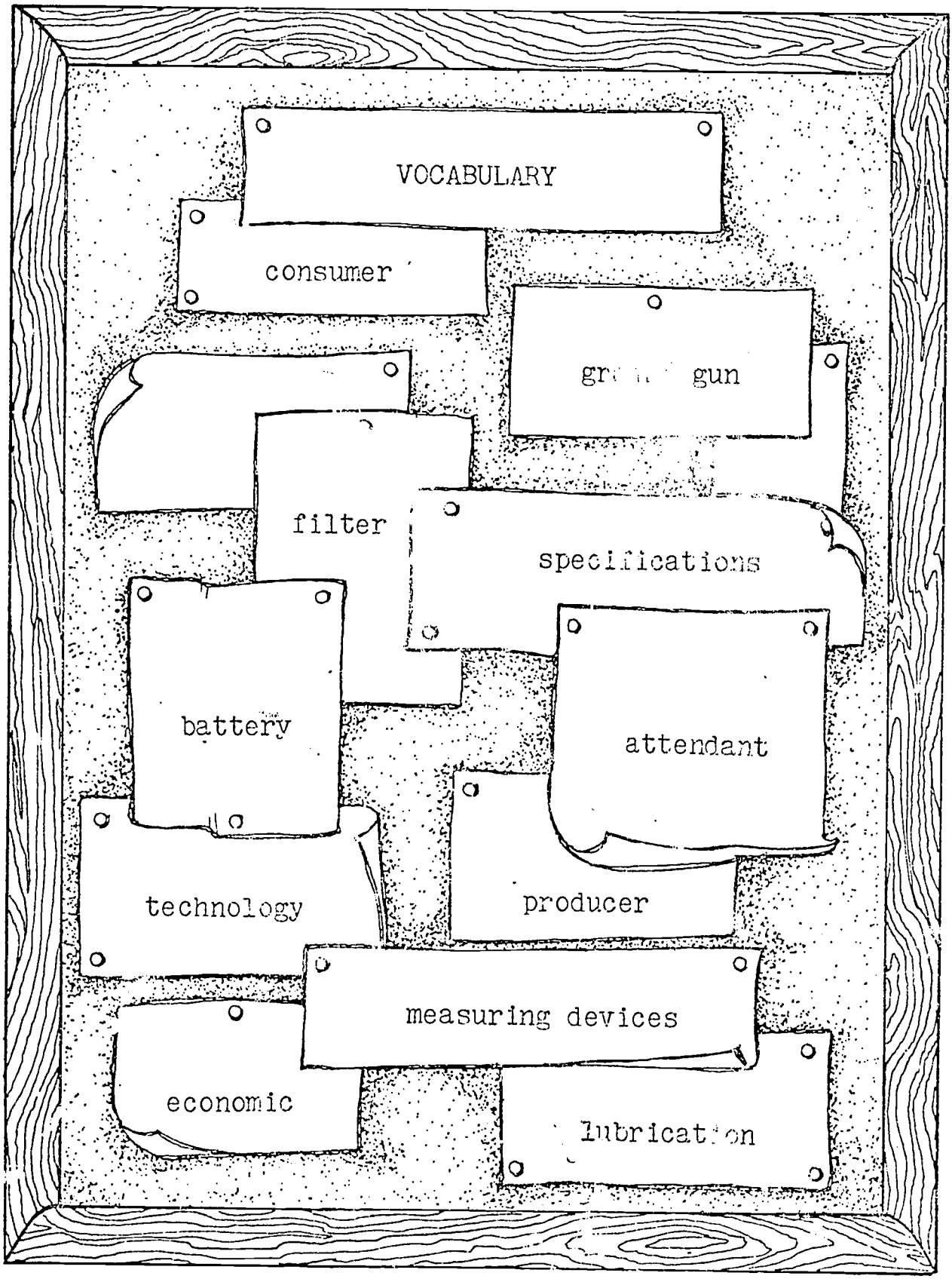
Teacher goals of this strategy combine a Self-Development Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Educational Awareness, and subject matter concepts for the occupation of Service Station Attendant. In this perspective the teacher's goals are to:

Provide information about the service station attendant's role in the context of automotive transportation.

Structure experiences for application of academic skills to activities related to the service station business.

Expand pupils' awareness of the wide variety of skills required for work as a service station attendant.

Increase pupils' appreciation of the role of economic forces in determining one's choices.


VOCABULARY
consumer
gun
filter
specifications
battery
attendant
technology
producer
measuring devices
economic
lubrication

MONEY AND MEASURES

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *discuss how differences in costs may affect choices to buy different grades of gasoline or other automotive products.*

Attitudes and Appreciations Dimension

. . . *discuss the role of the service station attendant in selling particular items.*

Career Information Dimension

. . . *describe at least three measuring devices used by a service station attendant.*

Educational Awareness Dimension

. . . *identify mathematical skills used by a service station attendant.*

Subject Matter Concepts

- Mathematics
  - Problem Solving
    - Two-step problems
    - Averages
    - Comparisons
    - Saving and spending money
  - Measurement
    - Precision to nearest unit
    - Fractional parts
- Science
  - Scientific Method
    - Evaluative techniques
    - Special instruments to observe
- Social Studies
  - Sociology-Anthropology
    - Values and purposes
    - Individuality and responsibility

Preplanning Suggestions

Tools and equipment from a service station or adequate substitutes
Cost of different grades of gasoline at one station or many stations
Catalog of cost of items at service stations (Catalogs of mail order houses may have many of the items.)
Resource material for reading and visuals about service stations
Owner's manuals for different kinds of cars

This activity concentrates on the mathematical needs of a service station attendant. Secure whatever materials and devices might be available from a nearby service station to illustrate mathematical activities. For example:

a tire pressure gauge
a book of parts specifications
credit card forms
tax schedules
sample labels or price lists of items sold
an oil dipstick
a hydrometer, etc.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *identify mathematical skills used by a service station attendant.* PPO

Occupations require the use of specific materials and equipment.

Career Information

. . . *describe at least three measuring devices used by a service station attendant.* PPO

Reference to the very obvious "gallons" and "dollars" gauges on the gasoline pumps can get things started. Show how the increases in gallons and dollars are related to price per gallon.

An individual is influenced by economic forces.

Self-Development

. . . *discuss how differences in costs may affect choices to buy different grades of gasoline or other automotive products.* PPO

Consider the differences in cost between regular and premium gasolines. How much would it cost to operate a car for a week if it went X number of miles and got Y number of miles per gallon? Change the X and/or Y several times and extend the length of time to a month or more as the concepts are

A given work setting requires certain policies and procedures.

Attitudes and Appreciations

mastered. Would the cost differences affect anyone's decision to buy one kind of gas rather than another? What other factors might be involved?

. . . discuss the role of the service station attendant in selling particular items. PPO

Extend the idea of costs and choices to other products sold at service stations (e.g., batteries, tires, motor oils, spark plugs). Which kinds of items have varying prices according to grades of quality? Which are "one of a kind?" What is the responsibility of the service station attendant when either kind of a purchase is being made? Information for these considerations can be secured from specification books and price lists borrowed from local service stations or garages.

The concept of choice according to price differences can, of course, be enlarged to consider practically any kind of goods or services.

Besides handling money numbers, the service station attendant deals with various kinds of measurement concepts. From the simple counting of lugs for mounting a wheel to complex compression ratios within cylinders, math is always part of the work. Discuss with children the kinds of things a service station attendant might be called upon to measure. For example:

tire pressure
specific gravity of radiator coolant
tire tread wear
wheel balance
level of oil in crankcase
time required for a specific task
distances on a road map

In each case, identify whatever device or reference material is used to determine the quantity involved. If time

and pupil capacities permit, problems may be invented to develop any of the measurement concepts further.

Foreign cars offer possibilities for treating some of these concepts in metric measures. Encourage pupils to seek owners' manuals and specifications.

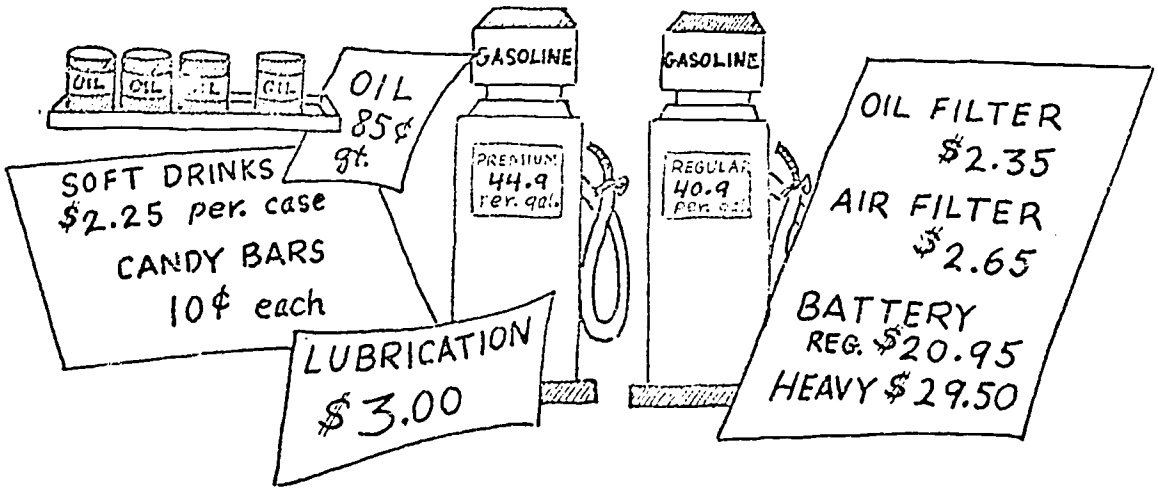
The REACT page offers some money arithmetic problems dealing with items that are normally sold at service stations. More complicated, or more simple, examples may also be invented. Children might want to add more products and services to the lists.

The teacher may want to include the idea of sales tax in this activity. This could depend upon individual pupil capacities to deal with the concept. If tax is used, the local rate is recommended.

SD/Level 4/6

"Service Sales"

SERVICE SALES



What would a customer pay for . . .

7 gallons regular gasoline
1 quart oil
TOTAL

1 quart oil
5 gallons regular gasoline
1 air filter
TOTAL

lubrication
5 quarts oil
1 oil filter
13 gallons premium gasoline
TOTAL

1 heavy duty battery
1 air filter
11 gallons regular gasoline
TOTAL

1 case soft drinks
1 regular battery
6 gallons premium gasoline
TOTAL

lubrication
9 gallons premium gasoline
1 air filter
3 candy bars
TOTAL

WORKERS' VIEWPOINTS

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *identify at least two sources of income for a service station.*

Attitudes and Appreciations Dimension

. . . *identify at least two contributions made to society by a service station attendant.*

Career Information Dimension

. . . *discuss the opinions of at least two service station attendants with respect to their jobs.*

Educational Awareness Dimension

. . . *explain how at least two service station attendants prepared for their jobs.*

Subject Matter Concepts

Social Studies
- Economics
  - Population influences demand.
  - Division of labor
  - Production of goods and services
- Sociology-Anthropology
  - Community's wants and needs
  - Individual characteristics
  - Values and purposes

Science
- Physics
  - Forces move things.
  - Tools and utensils
  - Functions of shape
  - Energy can change form.

Preplanning Suggestions

Class visits by workers from a service station
Tape recorder for interviews or a method of written records
Catalogs of service station equipment and products

The individual determines which aspects of an occupation may be pleasant or unpleasant.

Career Information

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

Career-oriented learning may take place in school or out of school.

Educational Awareness

This activity seeks to provide some understanding of the personal side of working in a service station. Invite two or three employees of local service stations to visit the classroom and discuss their work. Brief them ahead of time about the kinds of information you would like to cover and make suggestions as to how the following objectives might be used as guidelines.

> . . . *discuss the opinions of at least two service station attendants with respect to their jobs.* PPO
>
> . . . *identify at least two contributions made to society by a service station attendant.* PPO
>
> . . . *explain how at least two service station attendants prepared for their jobs.* PPO

Minimal topics for this discussion should stem from the objectives listed. Help children to formulate specific questions aimed toward those ideas.

Seek to find out how the individuals secured their present jobs.

> What did they have to know?
> What skills did they need?
> How did they go through the process of being hired?

Their attitudes toward their work are important.

> Why did they decide to do this kind of work?
> What do they like and dislike about it?
> What are their intentions for staying with some kind of service station work?

An individual is influenced by economic forces.

Self-Development

. . . identify at least two sources of income for a service station. PPO

And, look into the larger context in which a service station operates.

- How does a service station make money?
- Where do the products a service station sells come from?
- Who are the customers who patronize the station?
- How does volume of business (or other factors) affect the products and services offered by the station?

Depending on time and interest, the teacher may want to add other topics for discussion. More perspective could be achieved by inviting different individuals from different stations for another visit.

The REACT page directs the pupil to visit a service station and find out about tools and other equipment used there. Encourage consideration for the workers' time and patience during the visits.

SD/Level 4/7

"Things They Use"

THINGS THEY USE

Visit a nearby service station and ask permission to learn about some of the equipment used there. Try to pick a time that will not be too busy for the workers.

On the chart below, name the equipment and tell what it is used for. Three suggestions are offered as starters.

EQUIPMENT	USED FOR
gasoline pump	to get gasoline from the storage tank to the gas tank of a car
air hose	
grease gun	

If you want to add more things to your list, use the other side of this paper.

FROM THERE TO HERE TO THERE

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *describe at least two ways that automotive goods move from producers to consumers and the effects on costs.*

. . . *estimate the amounts of money needed for each of a specified number of personal wants or needs.*

Attitudes and Appreciations Dimension

. . . *relate the goods and services of a local service station to at least two other parts of society.*

Career Information Dimension

. . . *explain possible economic reasons why a particular service station is located where it is.*

Educational Awareness Dimension

. . . *identify the effects of technology and science on the work of a service station attendant.*

Subject Matter Concepts

Social Studies
- Geography
  - Site helps to determine character of locale.
  - Interaction of people and environments
- Sociology-Anthropology
  - Community needs variety of services.
  - Community reflects assumptions and values.
  - Neighborhoods have character.

Social Studies (Cont'd.)
- Economics
  - Transportation of goods
  - Using natural resources
- History
  - Modern life has roots in the past.
  - Consequences in other times and places.

Language Arts
- Writing Skills
  - Characterization and plot
  - Descriptions

Preplanning Suggestions

Encyclopedias, newspapers, films, etc. as research material for sources of service station products

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

Technological, economic, social, and political factors influence supply and demand of jobs.

Career Information

Learning is a lifelong process.

Educational Awareness

An individual is influenced by economic forces.

Self-Development

How does the local service station fit into the larger economy? Assign groups to research and report on the steps required to produce and deliver gasoline and other products to the local service station. In addition, try to trace the effects of the goods and services offered by the station.

. . . *relate the goods and services of a local service station to at least two other parts of society.* PPO

. . . *explain probable economic reasons why a particular service station is located where it is.* PPO

. . . *identify the effects of technology and science on the work of a service station attendant.* PPO

Provide some context for this study with audiovisual aids and/or printed materials.

. . . *describe at least two ways that automotive goods move from producers to consumers and the effects on costs.* PPO

With respect to conservation of energy, time, and money encourage suggestions whereby the distribution and consumption of certain automotive products may be made more efficient.

A further extension of study can be made into the historical perspective that gasoline service stations imply. the development of the automobile, roads and highways, and the petroleum industry are obvious cases in point.

An individual is influenced by economic forces.

Self-Development

. . . estimate the amounts of money needed for each of a specified number of personal wants or needs. PPO

The REACT page presents a series of four charts upon which the pupil estimates the amount of money (from his allowance) that he spends for certain items. Help children think about other kinds of items to fill in the blank lines in the charts.

The front side has a column for those who do get an allowance and a column for those who do not get an allowance. On the back, the pupil is invited to speculate about how he would spend a doubled allowance and a super dream-land boost up to ten dollars a week.

SD/Level 4/8

"Allowance Budgets"

ALLOWANCE BUDGETS

This page is to help you dream about a bigger allowance.

In the first column below, tell how much you spend for different things with your present allowance.

If you do not get a regular allowance at this time, fill in the column that tells you to imagine that you do get one dollar each week.

THINGS TO BUY AND DO	My allowance every week is now _____. This is how much I spend for different things.	I don't get a regular allowance. If I did get one dollar every week, this is how much I would spend for different things.
Snacks		
School stuff		
Save		
Movies		
Toys		
Other Entertainment		

(over)

THINGS TO BUY AND DO	If my allowance (or the imaginary dollar) were doubled, this is how much I would spend for different things.	If my weekly allowance were ten dollars, this is how much I would spend for different things.
Snacks		
School stuff		
Save		
Movies		
Toys		
Other Entertainment		

RELATED MATERIALS

Automobiles: How They Work (Book) Charles Yerkow. G. P. Putnam's Sons, 200 Madison Avenue, New York, New York 10016, 1965.

Developing Basic Values (Sound Filmstrip) Society for Visual Education, 1345 Diversey Parkway, Chicago, Illinois 60014, 1972.

Field Trips out of the Ordinary (Sound Filmstrip) Eye Gate House, 146-01 Archer Avenue, Jamaica, New York 11435, 1970.

First Book of Automobiles (Book) Jeanne Bendick. F. Franklin Watts, Inc., 845 Third Avenue, New York, New York 10022, 1971.

Golden Age of the Automobile, The (Film, Color, 30-min.) Learning Corporation of America, 711 Fifth Avenue, New York, New York 10022, 1972.

How Machines and Tools Help Us (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1969.

True Book of Automobiles (Book) Norman V. Carlisle and M. Carlisle. Childrens Press, Inc., 1224 West Van Buren Street, Chicago, Illinois 60607, 1955.

Understanding Yourself (Sound Filmstrip) AV-ED Films, 7934 Santa Monica Boulevard, Hollywood, California 90046, 1972.

What Makes a Car Go? (Book) Leonard Darwin. Little, Brown, and Company, 34 Beacon Street, Boston, Massachusetts 02106, 1963.

SERVICE STATION ATTENDANT

Almost all of the more than 95 million motor vehicles in the United States are serviced at one time or another in a gasoline service station. When a car or truck is driven into a station, the service station attendant (also called gasoline station salesman or serviceman) greets the customer and inquires about his needs. The attendant may perform a variety of services for the customer, ranging from directing the customer to a street address to making a minor repair.

When servicing a car, he dispenses gasoline, cleans the windshield, and, with the customer's permission, checks the water level in the radiator and battery, the oil level in the crankcase and automatic transmission, and the air pressure in the tires. He also may check the tires, fan belt, and other parts of the car for excessive wear.

The attendant also has other responsibilities besides servicing cars. He sells and installs items such as tires, batteries, fan belts, and windshield wiper blades. When a customer pays his bill, he makes change or prepares a charge slip if the customer uses a credit card. He also may dispense trading stamps. In small stations, particularly, he may perform minor maintenance and repair work, such as lubrication, changing the engine oil, rotating tires, repairing tires, or replacing a muffler. Some attendants, called mechanic-attendants, perform more difficult repairs. Before and after doing maintenance and repair work, the attendant may drive the customer's car between a convenient parking place and the service area. He also may keep the service areas, building, and restrooms clean and neat. In some stations, he helps the station manager take inventory, set up displays, and perform other duties associated with the operation of a small business.

If a gasoline service station provides emergency road service, the attendant may drive a tow truck to a stalled car and change a flat tire or perform other minor repairs needed to fix the customer's vehicle. If more extensive repairs are needed, he tows the vehicle back to the service station.

In doing maintenance and repair work, gasoline service station attendants may use simple hand tools such as screwdrivers, pliers, and wrenches; and power tools such as pneumatic wrenches. Mechanic-attendants frequently use more complex equipment such as motor analyzers and wheel alignment machines.

An estimated 410,000 service station attendants, more than one-third of whom were part-time workers, were employed in gasoline service stations in 1958. In addition to attendants, about 220,000 gasoline service station managers and owners did similar work.

Gasoline service station attendants are employed in every section of the country, in the largest cities, the smallest towns, and outlying areas. About 40 percent, however, are employed in the seven states that have the largest number of motor vehicles: California, Texas, New York, Ohio, Illinois, Pennsylvania, and Michigan.

An applicant for a job as gasoline service station attendant should have a driver's license, a general understanding of how an automobile works, and some sales ability. He should be friendly and able to speak well, present a generally neat appearance, and have self-confidence. He should know simple arithmetic so that he can make change quickly and accurately and help keep business records. An applicant should be familiar with local roads, highways, and points of interest in order to give directions to strangers and to locate vehicles whose owners have called for road service.

Although completion of high school is not generally a requirement for getting an entry job, it is an advantage because it indicates to many employers that a young man can "finish a job." A high school education generally is required for attendants to qualify for service station management training programs conducted by oil companies and to advance to the position of service station manager.

Gasoline service station attendants usually are trained on the job, although there are some formal training programs. Attendants, who are trained on the job, first are given relatively simple work assignments. They may be required to keep the station clean, wash cars, dispense gasoline, clean windshields, and otherwise make themselves useful. Gradually, they progress to more advanced work such as making sales, writing credit charge slips, doing simple maintenance work, installing accessories on cars, and helping to keep the station records. It usually takes from several months to a year for a gasoline service station attendant to become fully qualified.

Formal training programs for young people who want to do gasoline service station work are offered in many high schools around the country. In this curriculum, known as distributive education, students in their last 2 years of high school take business education courses and work part-time in a gasoline service station where they receive instruction and supervision in all phases of service station work.

Some attendants are enrolled in formal training programs for service station managers, which are conducted by most major oil companies. These programs usually last from 2 to 8 weeks and emphasize subjects such as simple automobile maintenance, salesmanship, and business management.

Several avenues of advancement are open to gasoline service station attendants. Additional training qualifies attendants to become automobile mechanics; those having business management capabilities may advance to station manager. Many experienced station managers and automobile mechanics go into business for themselves by leasing a station from an oil company, the most common means, or by buying their own service station. Some service station attendants are hired by oil companies as salesmen or district managers.

Employment of gasoline service station attendants is expected to increase moderately through the 1970's creating several thousand full-time and part-time job openings annually. An even greater number of job openings will result from the need to replace attendants who transfer to other fields of work, are promoted, retire, or die. Deaths and retirements alone are expected to provide an estimated 4,700 full-time job opportunities annually.

More attendants also may be needed to perform additional maintenance on newer, more complex cars. For example, more cars will have devices that reduce exhaust fumes and these devices must be serviced periodically. On the other hand, more cars that require oil changes and lubrication less frequently will offset partially the servicing requirements of additional, more complex vehicles.

In many stations, employers provide fringe benefits such as accident and health insurance and paid vacations. Some employers furnish uniforms and pay for their cleaning; others require the attendants to pay for these expenses. More than one-half of the attendants work over 40 hours a week; many work more than 48 hours. Attendants frequently work at night and on weekends and holidays.

A gasoline service station attendant works outdoors in all kinds of weather. He must be in good physical condition because he does considerable lifting and stooping and spends much time on his feet. Possible injuries include cuts from sharp tools and burns from hot engines. The attendant frequently gets dirty because he dispenses gasoline, handles oil and grease, and works with tools and around cars. For many attendants, however, the opportunity to meet new people and the possibility of someday managing their own service stations more than offset these disadvantages. For others, the opportunity to get part-time employment is important.

Some high school and college students have been able to work their way through school by working as gasoline service station attendants after school, and on vacations and holidays. Some workers also supplement their income from regular jobs by working part time as attendants.

Adapted from: Occupational Outlook Handbook, 1970-71 edition,
U. S. Department of Labor, Washington, D. C.
pp. 535-537.

FISH FRY ANYONE?

FOURTH EXPERIENCE LEVEL INFUSION STRATEGY

CAREER DEVELOPMENT FOCUS: Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

OCCUPATIONAL FOCUS: Fish Hatcher

ACTIVITIES

IN THIS INFUSION STRATEGY

1. An Underwater Adventure
2. Aquarium Care
3. Keeping the Balance

Teacher Goals

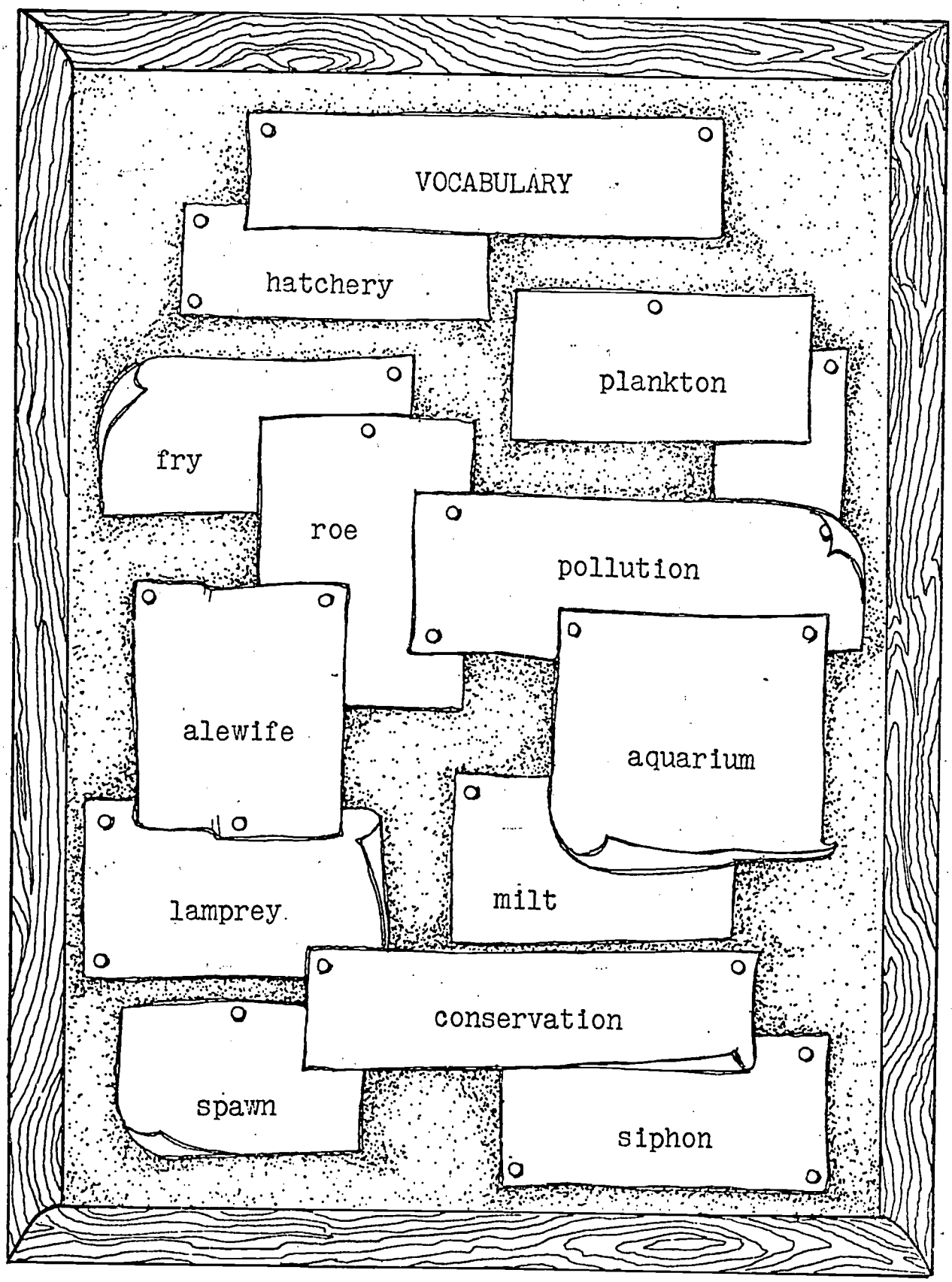
Teacher goals of this strategy combine a Self-Development Dimension subconcept with subconcepts from Attitudes and Appreciations, Career Information, and Education Awareness, and subject matter concepts for the occupation of Fish Hatcher. In this perspective the teacher's goals are to:

Help children, according to their interests, aptitudes, and values, to acquire some of the scientific knowledge of the fish hatcher.

Develop long-range pupil abilities to assist in fish conservation.

Provide opportunities for pupils to analyze personal achievements in fish classification, aquarium care, and fish conservation according to their personal interests, aptitudes, and values.

Widen the pupils' perspective of fish as precious natural resources.


VOCABULARY
hatchery
plankton
fry
roe
pollution
alewife
aquarium
lamprey
milt
conservation
spawn
siphon

AN UNDERWATER ADVENTURE

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *relate one's personal experience of fish to interests, aptitudes, and values.*

. . . *state one's feelings about learning to identify at least ten different kinds of fish.*

Attitudes and Appreciations Dimension

. . . *discuss different feelings one has about finishing a fish identification project.*

Career Information Dimension

. . . *give a geographic reason for the variety of fish raised in a hatchery.*

Educational Awareness Dimension

. . . *identify knowledge of fish classification and anatomy as necessary for the fish hatcher.*

. . . *tell how one's attitude influenced learning about fish.*

. . . *tell how one's classmates helped in learning fish identification.*

Subject Matter Concepts

Language Arts
- Reading
  - Finding information

Science
- Scientific Method
  - Things are classified according to likenesses.

Science (Cont'd.)
- Biology
  - Different environments support different forms of life.

Social Studies
- Sociology-Anthropology
  - Differences due to climate, resources, location

Preplanning Suggestions

Visuals and books about fish and fish hatcheries
Sticks, string, and construction or drawing paper (See REACT page.)

Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

Self-Development

. . . *relate one's personal experience of fish to interests, aptitudes, and values.* PPO

Ask the children to describe the kinds of fish they see most often. Encourage them to name varieties and tell the situation--a home fish bowl, a stuffed fish trophy, dead fish on a beach, television programs, or a tuna casserole. Help children to relate their knowledge of fish to their interests such as keeping aquarium pets, watching TV, cooking, or going fishing. Keep track of the number of fish the children name.

Conclude the discussion with this fact: Experts estimate that there are 30,000 different kinds of fish. Ask a volunteer to subtract from 30,000 the number of fish mentioned by the children. The children may be amazed at the large difference.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *identify knowledge of fish classification and anatomy as necessary for the fish hatcher.* PPO

Help the group to suggest reasons why we are acquainted with so few of the creatures which live in the water. Identify the fish hatcher as a life scientist who may know several thousand different kinds of fish. This person works in a fish hatchery where conditions are just right to raise lots of strong and healthy fish.

(See The National Geographic, April 1973, p. 527, for a good picture of a goldfish hatchery.)

Technological, economic, social, and political factors influence supply and demand of jobs.

Career Information

. . . *give a geographic reason for the variety of fish raised in a hatchery.* PPO

Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

Self-Development

Fish hatcheries serve commercial as well as conservation and sporting interests. Lead the children to suggest a grographic reason for certain varieties being raised in hatcheries, such as ocean fish in coastal hatcheries.

. . . state one's feelings about learning to identify at least ten different kinds of fish. PPO

Interest as many children as possible in a project to learn to identify at least ten different kinds of fish. Show them pictures of some exciting varieties to stimulate their interest--the stonefish, the flounder, the flying-fish, the grunion, etc. Suggest that each child choose, after a day or two of research, one or two varieties of special interest to him. Try to avoid duplications. Children could report by showing a picture, telling location, size, and unusual habits of the fish.

Find a theme to make the whole project interesting such as Around the World in 80 Days--Underwater. Language arts could be used and the class could publish an "Underwater Believe It or Not" column for a few days. Your class may like to have a "Fish America Pageant" with a student panel of judges to present awards in several categories such as Most Beautiful Fish, Most Talented Fish, Best Tasting Fish, Fish Most Beneficial to Man, Most Dangerous Fish, etc. Awards should be presented on the merits of the reports given.

After the project, children can use pictures or descriptions of fish to test each other in learning the names of the fish. Help the children to avoid pitfalls such as calling whales or dolphins "fish" when they are mammals.

Learning achievement depends upon effort and ability.

Educational Awareness

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

Learning achievement depends upon effort and ability.

Educational Awareness

. . . *tell how one's attitude influenced learning about fish.* PPO

. . . *discuss different feelings one has about finishing a fish identification project.* PPO

. . . *tell how one's classmates helped in learning fish identification.* PPO

Recap the activity by helping the children to evaluate their response. Did the theme make the learning easier? Did their interest or past experience help them or hinder them in learning? Did classmates help?

Express appreciation to those who tried to overcome lack of interest in order to participate. Do not criticize those who preferred something else to the fish projects.

Remark that the fish hatcher's training requires that he learn hundreds of different fish. Ask the children why this study might be easy for him.

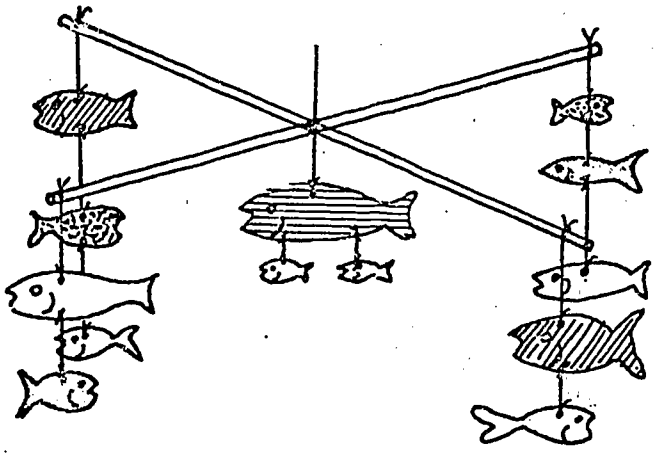
Directions for making a fish mobile appear on the REACT page. Children will need access to resource books with ample pictures throughout the activity.

SD/Level 4/9

"A Fish Mobile"

A FISH MOBILE

To make the mobile frame, use two sticks about 30 centimeters long. Bind the sticks together near the middle of each stick. Use string to fasten fish from the ends of the sticks or from the place where the sticks cross.



Put samples of these kinds of fish on your mobile. Use your own ideas too.

A very small fish	A fish that feeds on the bottom
A very large fish	A cold fresh water fish
A dangerous fish	A warm salt water fish
A cold salt water fish	A fish with beautiful colors
A warm salt water fish	A fish that is good to eat
An ugly fish	A fish that comes out of the water

Be able to name the fish you choose. Make them at least 4 to 5 inches long. Use thick paper. Make the fish look real.

AQUARIUM CARE

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *perform a physical task related to setting up or caring for an aquarium.*

. . . *predict a certain number of personal achievements according to one's interests, aptitudes, and values.*

Attitudes and Appreciations Dimension

. . . *name three procedures for which the fish hatcher is responsible.*

. . . *decide how one would like to cooperate in the care of an aquarium and assume that responsibility.*

Educational Awareness Dimension

. . . *find information to answer a standard question about aquarium care.*

. . . *demonstrate the use of a dip tube siphon.*

Subject Matter Concepts

Language Arts
- Reading
  - Finding information

Science
- Biology
  - Man can control the environments of living things.
- Physics
  - Forces move things.

Social Studies
- Sociology-Anthropology
  - Values and purposes in behavior

Preplanning Suggestions

Books and visuals about fish and hatcheries
Aquarium for the classroom--anything from a jar to a real aquarium
Resource person who is interested and involved with fish as an occupation or a hobby
Field trip to a commercial hatchery, public aquarium, or the local store that sells fish
Fish and supplies for the aquarium
Glass tube to use as a siphon (See REACT page.)
Rubber tube siphon

Most occupations include common expectations such as punctuality, dependability, and avoidance of excessive absence.

Attitudes and Appreciations

. . . name three procedures for which the fish hatcher is responsible. PPO

The fish hatcher knows how to set up idea' conditions for breeding, hatching, and raising fish. He knows their diet and the amount of air, water, and temperature they need. Many of these skills can be learned by undertaking well organized and scientific care of a classroom aquarium. This can be as simple as keeping a goldfish in a large jar if your resources are limited.

If you can, enlist the help of an expert such as a local fish hatcher, a tropical fish store owner, or an avid home aquarist to help the children set up a classroom aquarium.

If the classroom setup is not feasible, arrange to visit a fish hatchery, store, or public aquarium to carefully observe the domestic care of fish.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . find information to answer a standard question about aquarium care. PPO

The class or small groups of children should be able to answer the following questions before beginning the aquarium project.

1. What kind of fish will enjoy our average classroom temperature?
2. How much water surface area does each fish need?
3. How should the tank be cleaned before filling?
4. Why should new aquarium water sit in the room for 24 hours before being put in the tank?

5. What shall go in the tank and why--gravel, plants, snails, etc.?

6. Where can the tank be placed to allow for correct lighting and even temperature?

7. What shall the fish be fed and how often?

8. How can waste be cleaned from the bottom of the tank?

If an expert cannot help you, these questions are answered in an excellent book with large type entitled The Care of Water Pets, by Gertrude Pels, Thomas Y. Crowell Company, New York, New York, 1955.

Work involves the acceptance of responsibility for a task.

Attitudes and Appreciations

Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

Self-Development

. . . decide how one would like to cooperate in the care of an aquarium and assume that responsibility. PPO

. . . perform a physical task related to setting up or caring for an aquarium. PPO

To illustrate the subconcept, let the aquarium project be a matter of free choice for the children. Let apt and interested children take over certain aspects of aquarium care. Once into the project, use it to illustrate how certain individuals' achievements depend on their interests and aptitudes.

This project could be expanded in many ways. Many different types of live fish food could be raised for the fish. In a good aquarium a pair of guppies may spawn. Learn how to feed and protect the babies and many may survive. If you have fishermen in your area, it may be easy to get some eggs (roe) and milt from their spring catches. These eggs will hatch in an aquarium. You can easily raise infursoria or seign plankton to feed the fry once the yolk sak is gone.

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

Self-Development

Ideally, visit a fish hatchery an have the fish culturist in charge demonstrate the many aspects of h task for the children.

. . . demonstrate the use of a dip tube siphon. PPO

The first REACT page illustrates t use of a dip tube siphon. Childre should be able to explain scientif why it works.

. . . predict a certain number personal achievements according to one's interests, aptitudes, and values. PPO

The second REACT page asks childre to identify what their own potenti achievements may be as compared tc fish hatcher's.

SD/Level 4/10

"A Dip Tube Siphon"

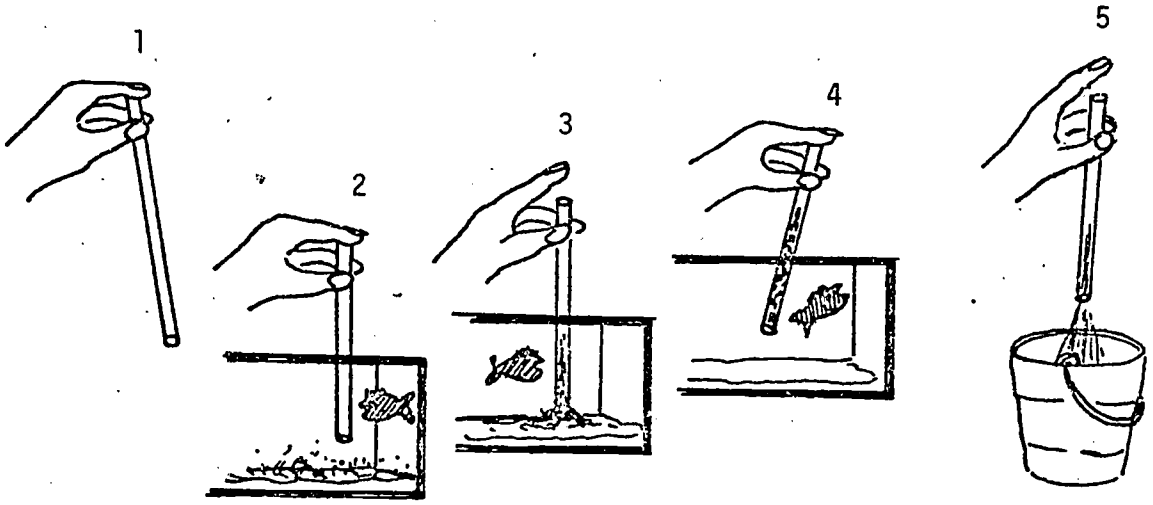
SD/Level 4/11

"Two Fishermen"

A DIP TUBE SIPHON

A fish tank is dirtied by wastes, bits of dead plants, and left-over food. You can clean it with a dip tube siphon. This is a half-inch glass tube 12 to 15 inches long. It could also be a long drinking straw. Use it like this.

1. Put your finger over the top of the tube.
2. Lower the tube over the wastes you want to take out.
3. Take your finger off. Up comes the dirt!
4. Put your finger back over the top of the tube. Keep it tight.
5. Move the tube to a bucket and let the waste go.



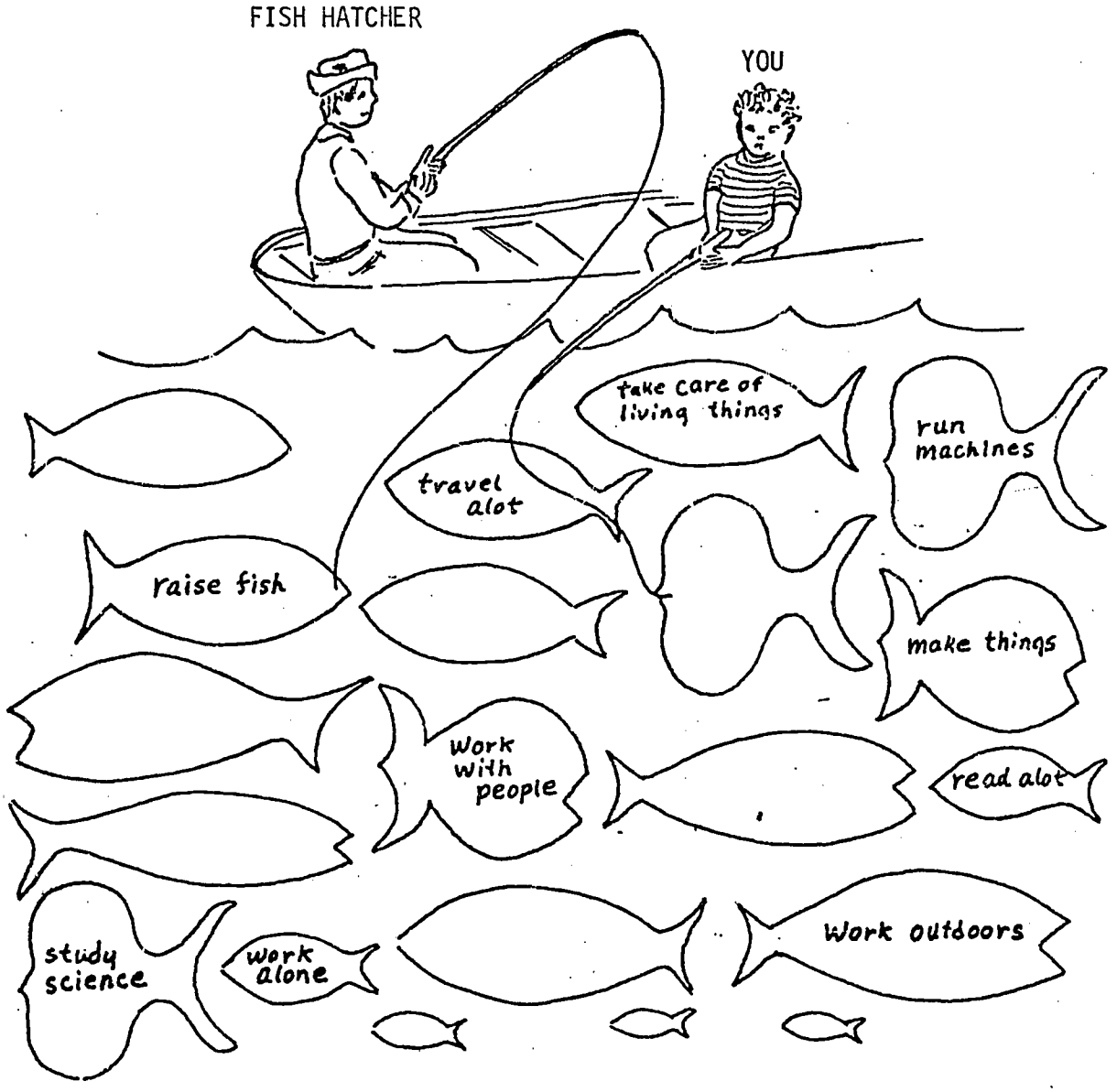
A long rubber tube will make a siphon for emptying or filling an aquarium. Do you know how to make it work? Try it.

Learning about fishes is life science. Learning about weight and pressure is physical science. Sciences help each other.

Use your science book to find out why the dip tube siphon works.

TWO FISHERMEN

What we do depends on what we are interested in. What we do also depends on what we are able to do and what we think is good to do. Each "fish" is something to do. Draw lines from the poles to "fish" you think these fishermen would catch. Write your own ideas in the blank fish. Explain your fishing lines to a friend.



KEEPING THE BALANCE

Fourth Experience Level Activity

Performance Objectives

Self-Development Dimension

. . . *relate an example of getting off balance to a person's interests, aptitudes, or values.*

Attitudes and Appreciations Dimension

. . . *name three ways fish hatchers contribute to others.*

. . . *tell how fish conservation has helped the Great Lakes.*

Career Information Dimension

. . . *define "conservation."*

Educational Awareness Dimension

. . . *reconstruct a model of an underwater food chain.*

Subject Matter Concepts

Language Arts
- Listening and Speaking
  - Developing discussion skills

Science
- Biology
  - Man can control the environments of living things

Social Studies
- Economics
  - Using natural resources
  - Different uses of environments

Preplanning Suggestions

Maps of waterways of the United States
Library of books and visuals about fish
Field trip to a conservation area showing balance of nature

Specialized occupations result in an interdependent society.

Attitudes and Appreciations

. . . *name three ways fish hatchers contribute to others.* PPO

Fish hatchery work is important to the commercial food industry, sports fishing, and conservation. Lead the children to isolate the areas to which the fish hatcher contributes. This discussion will focus on the topic of conservation.

Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

Self-Development

. . . *relate an example of getting off balance to a person's interests, aptitudes, or values.* PPO

Occupations have their own voacabularies.

Career Information

. . . *define "conservation."* PPO

Ask children for both physical demonstrations and verbal stories about keeping balance. These might include standing on your head, teeter totters, and weighing with a balance scale. Ask them what balance means to a football player, a waitress, or a gymnast. What is a balanced diet and a balanced schedule of work, play, and rest? Ask for explanations, in light of the subconcept, of how people get off balance. Explain that conservation in nature, which we hear so much about today, means helping nature to keep in balance. Give brief examples.

Completion of a worthwhile task has value for the worker and for society.

Attitudes and Appreciations

. . . *tell how fish conservation has helped the Great Lakes.* PPO

Offer the following story of the way the fish life in the Great Lakes got out of balance. (See the National Geographic, August, 1973, for pictures.) Use large maps as you read or tell the story.

Men needed a waterway from the Atlantic to middle America. Niagara Falls kept ships from coming any further than Lake Ontario. The Welland Canal was built to bypass Niagara Falls. As part of the St. Lawrence Seaway system, the canal made it possible for ships to sail into Lake Erie and beyond. But, under the water, ugly sea lampreys hitched a ride on the bottom of ships going through the canal. Before, Niagara Falls had kept the lampreys out. Now, they were coming in and within a few years they had killed nearly all the brown lake trout in the Great Lakes. Later, another enemy, the little alewife, made its way through the canal. Now there there were no trout to eat them up. Lampreys do not eat alewives. Soon the alewives ate the food of other little fish in the lakes. These fish began to die off and the alewives multiplied so vastly that soon half the fish in the lakes were alewives. Beaches were littered with dead alewives.

The balance of fish life in the Great Lakes was greatly upset by the lampreys and the alewives. Fish scientists came to the rescue. As part of their conservation work they developed a poison to kill baby lampreys but nothing else. Hatcheries restocked the lakes with trout. Hatcheries also introduced both coho and chinook salmon into the lakes. The trout and the salmon are eating up the alewife problem right now.

Questions for discussion: Why was the Welland Canal important? How did the canal upset the balance of fish life in the Great Lakes? How did fish hatcheries help start good conservation again?

Find other examples of fish conservation such as control of fishing by international and national commissions and pollution controls. (See a good problem picture in National Geographic, December, 1970, pages 772-773.)

Knowledge and skills in subject matter areas are helpful in occupational competence.

Educational Awareness

. . . *reconstruct a model of an underwater food chain.* PPO

Use the REACT page to visualize the balance in the underwater food chain. Pupils may cut out the pieces of the design and use either the written or pictorial descriptions to reconstruct the cycle.

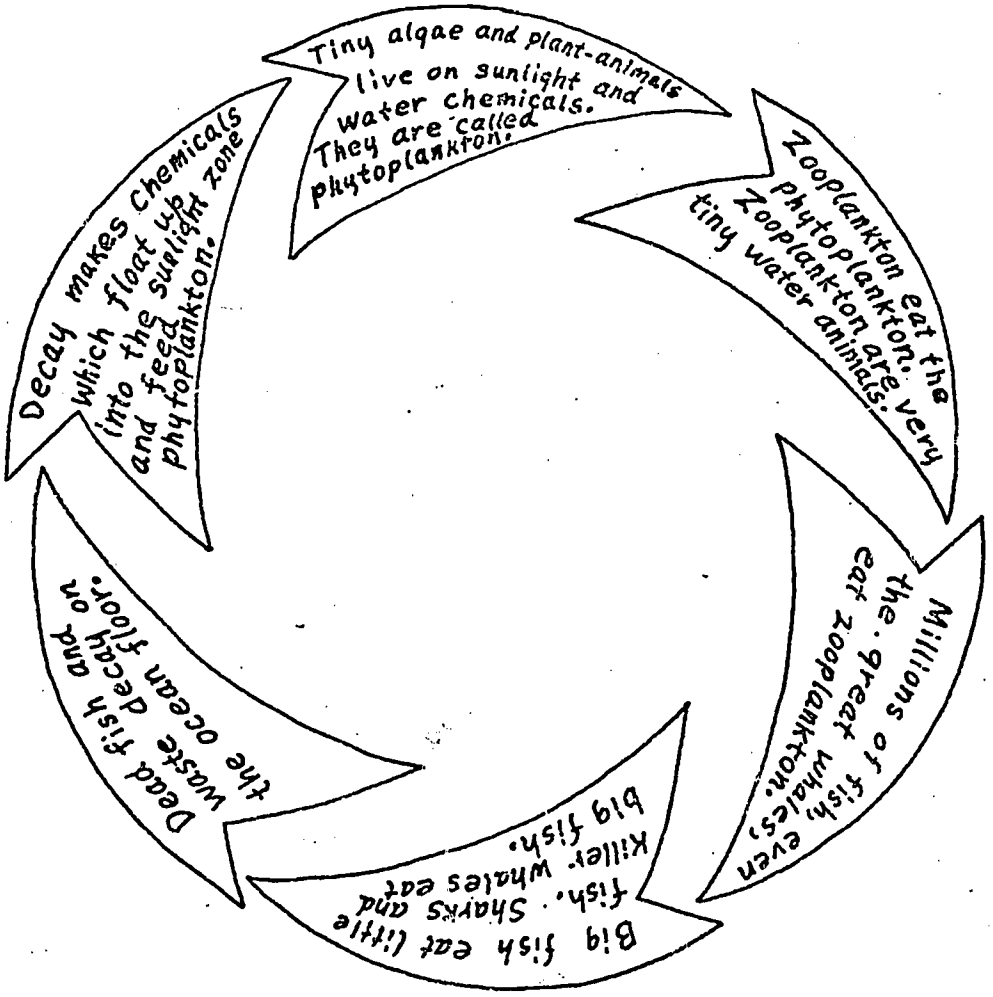
If possible, take a field trip to a nearby body of water. Try to find specimens of the living links in its food chain. Take jars, fine nets, fishing poles, magnifying glasses, notebooks, and writing-drawing pencils.

SD/Level 4/11

"Balance in Nature"

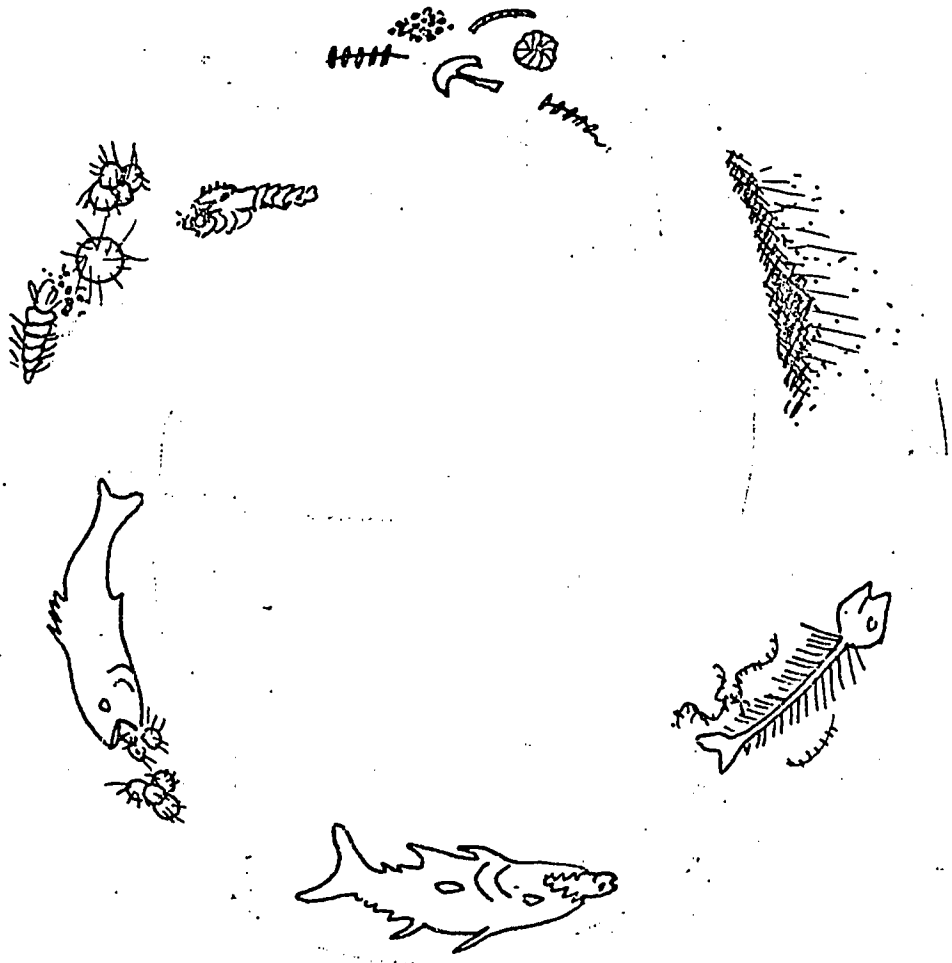
BALANCE IN NATURE

Conservation means keeping the balance. Here is the way life in the sea is balanced. Look on the back of the page to see the cycle in pictures. Cut the pieces apart. Test yourself. Can you put them together in the right order?



This is called a food chain. Talk about what would happen if one of these parts were polluted, or grew too big, or too small. How would the balance be upset?

Find out what is meant by a balanced aquarium.



RELATED MATERIALS

All About Fish (Book) Carl Barger. Random House, Inc., 457 Madison Avenue, New York, New York 10022, 1970.

Brian Wildsmith's Fishes (Book) F. Franklin Watts, Inc., 845 Third Avenue, New York, New York 10022.

Care of Water Pets, The (Book) Gertrude Pels. Thomas Y. Crowell Company, 201 Park Avenue South, New York, New York 10003, 1955.

Coldwater Aquariums (Book) Neil Wainwright. Frederwick Warne and Company, Ltd., London, New York, 1969.

Fish and Wildlife Conservation (Film Loop) Doubleday Multimedia, Box 11607, 1371 Reynolds Avenue, Santa Ana, California 92705.

Fish Are Interesting (Film, Color or B/W, 11-min.) Bailey Film Associates, 2211 Michigan Avenue, Santa Monica, California 90404, 1971.

Fishes, A Golden Nature Guide (Book) Herbert S. Zim and Hust H. Shoemaker. Golden Press, New York, New York, 1955.

"Great Lakes, The: Will Our Inland Seas Survive?" (Magazine Article) Gordon Young and others. National Geographic, Vol. 144, No. 2, August 1973, pp. 170-171 and 180-181.

Grunion: Fish Out of Water (Book) Ann Stepp. Harvey House, Inc., Irvington-on-Hudson, New York, 1971.

Here I Am (Book) Walter J. Limbacher. Dimensions of Personality Series. George A. Pflaum, Publisher, 38 West Fifth Street, Dayton, Ohio 45402.

Our Class Works Together (Film, Color, 11-min.) Coronet Instructional Films, Coronet Building, 65 East South Water Street, Chicago, Illinois 60601, 1970.

Picture Book of Fisheries, The (Book) Anita Brooks. The John Day Company, 62 West 45th Street, New York, New York 10036, 1961.

Popeye and Marine Science Careers (Comic Book) King Features Syndicate, 235 East 45th Street, New York, New York 10017, 1973.

Problems and Attitudes in School (Film, Color, 9-min.) Henk Newenhouse, 1825 Willow Road, Northfield, Illinois 60093, 1970.

School Problems: Getting Along With Others (Film, Color, 12-min.) Bailey Film Associates, 11559 Santa Monica Boulevard, Los Angeles, California 90025, 1972.

Swimmy (Book) Leo Leonni. Pantheon Books, 201 East 50th street, New York, New York 10022.

"Those Outlandish Goldfish" (Magazine Article) Paul A. Zahl. National Geographic, Vol. 143, No. 4, pp. 514-534.

Understanding Yourself (Sound Filmstrip) AV-ED Films, 7934 Santa Monica Boulevard, Hollywood, California 90046, 1972.

Wondrous World of Fishes (Book) Leonard J. Grant, Editor. National Geographic Society, Washington, D. C., 1969.

FISH HATCHERS

By fish hatcher we wish to designate that fish culture technician who works in a hatchery. He may hatch the eggs, raise them to a given size, and release the fish into bodies of water for conservation, sporting, or marketing purposes.

Fish hatchery technology is liable to great geographical variations according to the bodies of water which it serves.

The fish hatcher raises and spawns brood fish. He carefully nurtures the eggs. They are usually kept in large trays and sprayed with clean well-oxygenated water. Daily, dead eggs are picked out and others checked for signs of disease. The fish hatcher is responsible for regular feeding of the young fish, cleaning the runs and holding tanks, maintaining hatchery grounds and equipment, distributing the adult fish, and keeping accurate records. The fish hatcher may supervise the work of others who help in these tasks.

In state fish hatcheries the fish hatcher may work with a fish wildlife conservationist. This person will travel widely, gathering field data and setting up habitat improvement programs. The conservationist recommends whether a stream should be fished or not. He seeks out ways to reduce disease and pollutants, restore water vegetation, and encourage the breeding of fishes. He suggests to the fish hatcher amounts and varieties of fish needed for stocking various bodies of water.

Assisting hatchery personnel are trained on the job. Most positions in fish culture technology require a high school education. Positions in federal hatcheries require the civil service examination. A fish hatchery manager is uaully a college-trained fish biologist. This person must have broad knowledge of fish anatomy and classification and the environmental needs of fishes. His work is often physical so he must be in good health and enjoy using his hands. He must be able to tolerate the strong smell of fish and not mind outdoor work in inclement weather. The fish hatcher needs skill in meeting the public. This skill will assist him in distribution of his product. He is usually a sporting person who appreciates the thrill of outdoor fishing. His ambitions are more toward making environmental contributions than toward accumulating monetary rewards.

Appendix A

CAREER DEVELOPMENT MAJOR CONCEPTS

Attitudes and Appreciations

Society is dependent upon the productive work of individuals.

Career Information

Basic career information will aid in making career-related decisions.

Coping Behaviors

Certain identifiable attitudes, values, and behaviors enable one to obtain, hold, and advance in a career.

Individuals can learn to perform adequately in a variety of occupations and occupational environments.

Decision Making

Life involves a series of choices leading to career commitments.

Basic components of the decision-making process can be applied to the establishing of personal goals and the making of career-related decisions.

Educational Awareness

Educational skills and experiences are related to the achievement of career goals.

Lifestyle

Work affects an individual's way of life, in that a person is a social being, an economic being, a family being, a leisure being, and a moral being.

Self-Development

An understanding and acceptance of self is important.

Social, economic, educational, and cultural forces influence self-development.

Individuals differ in their interests, aptitudes, values, and achievements.

Appendix B

DEVELOPMENTAL DIMENSIONS SCOPE AND SEQUENCE

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS FOR EXPERIENCE LEVELS READINESS THROUGH SIXTH						
		READINESS LEVEL	FIRST LEVEL	SECOND LEVEL	THIRD LEVEL	FOURTH LEVEL	FIFTH LEVEL	SIXTH LEVEL
COPING BEHAVIORS	Certain identifiable attitudes, values, and behaviors enable one to obtain, hold, and advance in a career.	An individual should learn to cope with authority exercised by others.	An individual should learn to cope with the rights and feelings of others.	An individual should learn how to give and take criticism.	A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.	Certain behaviors are appropriate to specific job settings.	There is a universality of feelings and aspirations of all people--regardless of physical appearance, nationality, creed, sex, or ethnic background.	There are effective interpersonal relations skills for giving or evaluating instructions.
	Individuals can learn to perform adequately in a variety of occupations and occupational environments.	Different skills are required for different tasks.	Several skills may be required to perform a given task.	Some skills can be transferred from one job to another.	Performance requirements for a job vary with the work setting.	Performance requirements for a job may change with time.	It is important for a person to be able to make the transition from one job to another.	There are characteristics which differentiate between occupations--both within and between job families.
DECISION MAKING	Life involves a series of choices leading to career commitments.	Choice means "making up one's mind" and there are certain situations where one can make choices.	Things change and these changes influence the choices and decisions one makes.	An individual's decisions affect himself and others.	People change and these changes influence the choices and decisions one makes.	Decision making involves risks.	Decision making can precipitate chain reactions.	Previous decisions, peers, gratifications, needs, interests, and career information influence present and future decisions.
	Basic components of the decision-making process can be applied to the establishing of personal goals and the making of career-related decisions.	An individual should recognize what "a goal" is and learn how to set one's own goals.	Problems which conflict with one's goals can be identified and assessed.	An individual should consider alternative ways to reach a given goal.	Decision making plays a role in the setting of immediate and long-range goals.	The decision-making process can be used to set priorities in developing personal goals.	Setting goals can be enhanced by analyzing decision-making processes.	The decision-making process can be used to determine one's preferences, at that point in time, between various job

DEVELOPMENTAL DIMENSIONS
SCOPE AND SEQUENCE

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS FOR EXPERIENCE LEVELS READINESS THROUGH SIXTH						
		READINESS LEVEL	FIRST LEVEL	SECOND LEVEL	THIRD LEVEL	FOURTH LEVEL	FIFTH LEVEL	SIXTH LEVEL
LIFESTYLE	Work affects an individual's way of life, in that a person is a social being, an economic being, a family being, a leisure being, and a moral being.	Most people work and there are many reasons why people work.	Family members perform work they are capable of performing, responsibilities are shared, and the family is an interdependent unit.	Lifestyles within a community differ.	Relationships exist between a person's occupation and the people with whom a person tends to associate.	Moral principles are an integral part of one's work life.	Relationships exist between desired lifestyles and career monetary rewards.	Leisure-time activities and interests may lead to a career, and one's career may, in turn, affect the amount and use of leisure time.
SELF-DEVELOPMENT	An understanding and acceptance of self is important.	Awareness of oneself within the context of the family structure is important.	An individual experiences various roles--friend, student, group member, etc.	There are certain physical, social, and emotional characteristics which make an individual unique.	An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.	A person's membership in a group affects the group as well as himself.	Interests and abilities mature and change as well as one's physical being.	There is a relationship between an individual's knowledge and acceptance of self and his career preference.
	Social, economic, educational, and cultural forces influence self-development.	An individual is influenced by other people.	The school can provide an opportunity to enhance self-development.	An individual's feelings and the feelings of others relate to commonly held beliefs and customs.	Groups outside of school influence an individual's personal development.	An individual is influenced by economic forces.	Changes in an individual influence his environment and changes in environment influence him.	An individual's values and personal goals are influenced by the values of other people.
	Individuals differ in their interests, aptitudes, values, and achievements.	An individual should be aware of the tasks that he performs and begin to determine his interests in these tasks.	An individual's interests, aptitudes, values, and achievements are not always the same as those of his peers.	An individual has social, physical, and intellectual aptitudes for various tasks.	Individuals differ in their physical characteristics.	Achievements in school and out of school are often dependent upon interests, aptitudes, and values.	An individual can differentiate between himself and others in terms of interests, aptitudes, values, and achievements in and out of school.	There is a relationship among interests, aptitudes, achievements, values, and occupations.

Appendix C

INTERACTING DIMENSIONS
SCOPE AND SEQUENCE

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS APPROPRIATE FOR ALL EXPERIENCE LEVELS (READINESS THROUGH SIXTH)
EDUCATIONAL AWARENESS	Educational skills and experiences are related to the achievement of career goals.	Knowledge and skills in subject matter areas are helpful in occupational competence. Career-oriented learning may take place in school or out of school. Learning is a lifelong process. Learning achievement depends upon effort and ability.
ATTITUDES AND APPRECIATIONS	Society is dependent upon the productive work of individuals.	Completion of a worthwhile task has value for the worker and for society. Work involves the acceptance of responsibility for a task. A great many tasks can be performed by men or women. Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absence. A given work setting requires certain policies and procedures. Specialized occupations result in an interdependent society.

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS APPROPRIATE FOR ALL EXPERIENCE LEVELS (READINESS THROUGH SIXTH)
523 CAREER INFORMATION	Basic career information will aid in making career-related decisions.	Occupations may have certain dress requirements. Occupations require the use of specific materials and equipment. Occupations have their own vocabularies. The individual worker determines which aspects of an occupation may be pleasant or unpleasant. Occupations have their own work settings. Occupations require special personal characteristics. Earnings vary with occupations. Career development includes progression through stages of educational and occupational training. Costs of training for occupations vary. Technological, economic, social, and political factors influence supply and demand of jobs.