ED 134 483   SO 009 601

TITLE   Concept Teaching in Social Studies.
INSTITUTION   Texas Education Agency, Austin. Div. of Curriculum
                Development.
REPORT NO   759
PUB DATE   75
NOTE   48p.
AVAILABLE FROM Division of Curriculum Development, Texas Education
                Agency, 201 East 11th Street, Austin, Texas 78701
                ($1.00)

EDRS PRICE   MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS   Concept Formation; *Concept Teaching; Conceptual
                Schemes; Content Analysis; Deductive Methods;
                Educational Principles; Elementary Education;
                Evaluation Methods; Fundamental Concepts;
                Generalization; Inductive Methods;
                Intellectualization; Learning Processes; *Social
                Studies; *Teaching Methods; Thought Processes

ABSTRACT
                The handbook, capsulizing much of the growing body of
research and writing on conceptual approaches, is designed to provide
assistance to elementary teachers in giving students a conceptual
perspective for dealing with social studies content. The handbook is
arranged in seven sections. After a brief discussion of the rationale
for teaching concepts, the second section focuses on the meaning of
concepts. Concepts are defined as abstractions that refer to a class
or group of objects, qualities, etc., which possess certain common
characteristics. This section discusses the components of concepts,
such as attributes, classes, and symbols, and the relationship
between concepts and generalizations. The third section discusses the
advantages of teaching conceptual thinking and of teaching students
to generalize from one situation to another. The fourth section
enumerates a number of principles for the teacher to keep in mind in
order to facilitate the learning of concepts by the students, such as
actively involving students in the learning process. The fifth
section offers two strategies for teaching concepts. The deductive
strategy is characterized by the introduction of the concept or
generalization at the beginning of the instruction sequence. The
student is then given the opportunity to verify the concept or
generalization through experience or example. The inductive strategy
begins with specifics and proceeds to generalizations which are then
tested. The sixth section provides a checklist for evaluating
conceptual teaching and learning. The self-checklist helps teachers
analyze teacher behavior, student behavior, and the curriculum. The
last section lists articles, books, and parts of books dealing with
the concepts and concept teaching and learning in social studies.
(ND)

CONCEPT TEACHING IN SOCIAL STUDIES

DIVISION OF CURRICULUM DEVELOPMENT
Texas Education Agency
201 East 11th Street
Austin, Texas 78701

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(5)   enrollment and assignment of students without discrimination on the ground of race, color or national origin;

(6)   non-discriminatory practices relating to the use of a student's first language; and

(7)   evidence of published procedures for hearing complaints and grievances.

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FOREWORD

Concept Teaching in Social Studies has been
prepared for all who develop and teach
social studies because of the belief that
there has been and continues to be a
general need for a better understanding
of the most fundamental ideas underlying
conceptual teaching in the social studies
classroom. It brings together the thinking
of some of the more prominent educators
who have addressed themselves in recent
years to concepts and conceptual approaches.

It is hoped that this bulletin will provide
assistance in giving students a conceptual
perspective in dealing with social studies
content they will need to find meaning and
personal satisfaction in the future.

M. L. Brockette
Commissioner of Education

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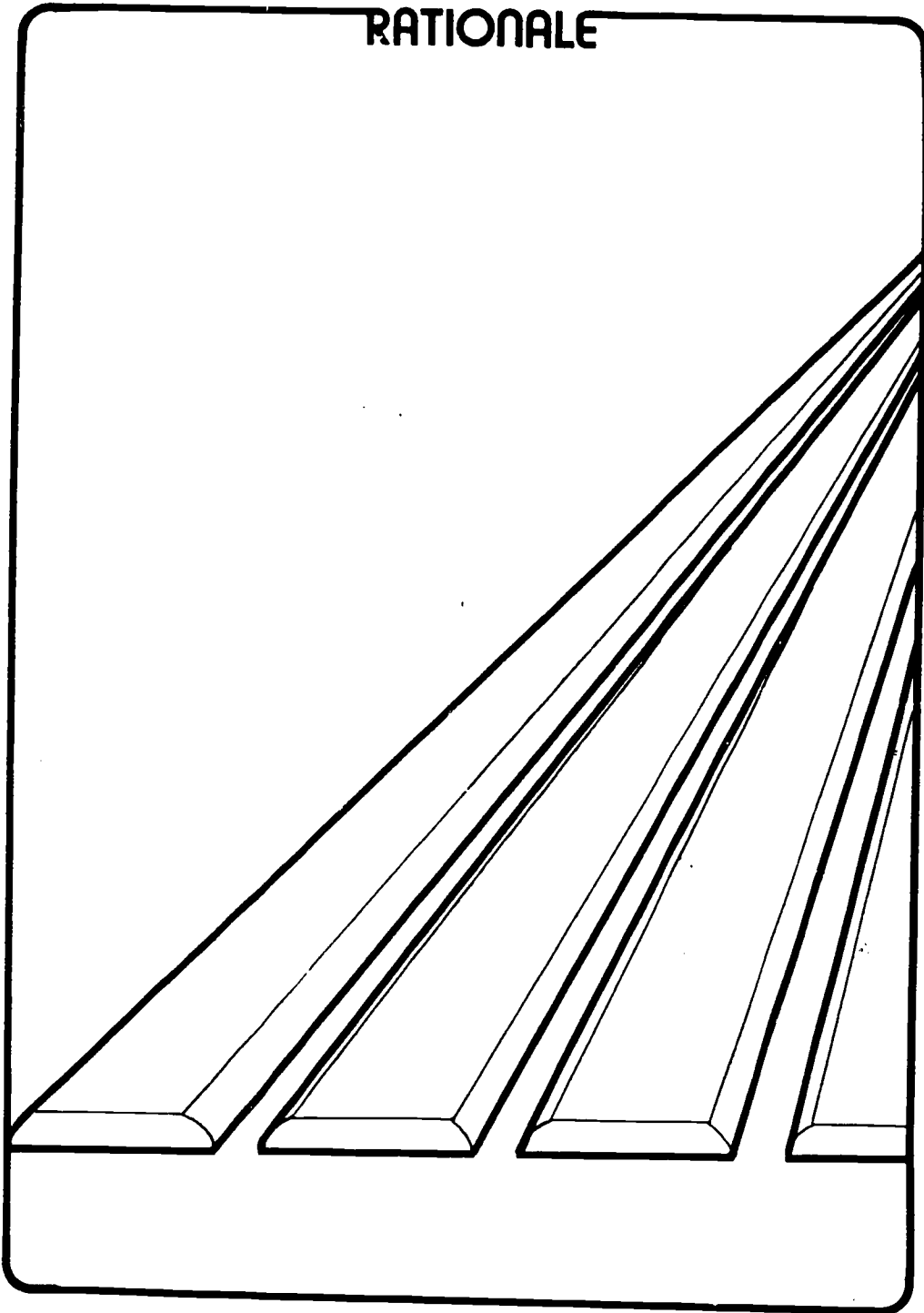Larry Perry   Elvin Tyrone

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ACKNOWLEDGEMENT

CONTENTS

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RATIONALE

One of the many challenges facing social studies educators today is deciding what should be presented to the student for maximum educational value. The rapid rate at which knowledge is being accumulated in the twentieth century makes it impossible for a person to learn or teach all known facts. Of necessity, teachers must know how to select course content that is significant and transferable from one context or experience to another.

. During the last decade a number of efforts have been made throughout the nation to revise social studies curricula in order to meet this challenge. A result of these efforts has been agreement among many social studies educators that social studies content should be organized around a framework of concepts and generalizations drawn from the various social science disciplines.

At the same time the national efforts were being undertaken an extensive study was conducted in Texas by Texas Education Agency staff members, the curriculum committee of the Texas Council for the Social Studies, study groups in Texas school districts, and staff members of the regional education service centers and many teacher education institutions The results of this study were incorporated into the Texas Education Agency bulletin, *Framework for the Social Studies, Grades K-12*, which is intended to provide guidelines to Texas public schools in planning their social studies programs and to serve as a basis for state adoptions of social studies textbooks.

According to guidelines in the *Framework*, social studies content, particularly on the elementary level, should be planned within a conceptual framework to ensure transferability of knowledge and ideas from one context or experience to another. The move to a conceptual framework is reflected in state-adopted textbooks for

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elementary social studies and in elementary social
studies curricula throughout the state. *Concept
Teaching in Social Studies* has been designed particu-
larly with the elementary teacher in mind; neverthe-
less, it can be of value to secondary teachers and
teacher education students.

This bulletin is not intended as a definitive study
of the conceptual approaches to social studies.
Rather, it is designed to capsulize much of the
growing body of research and writing on conceptual
approaches for the busy educator who is hard-pressed
for time to collect and review all the pertinent
literature relative to concept teaching in social
studies.

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WHAT ARE CONCEPTS?

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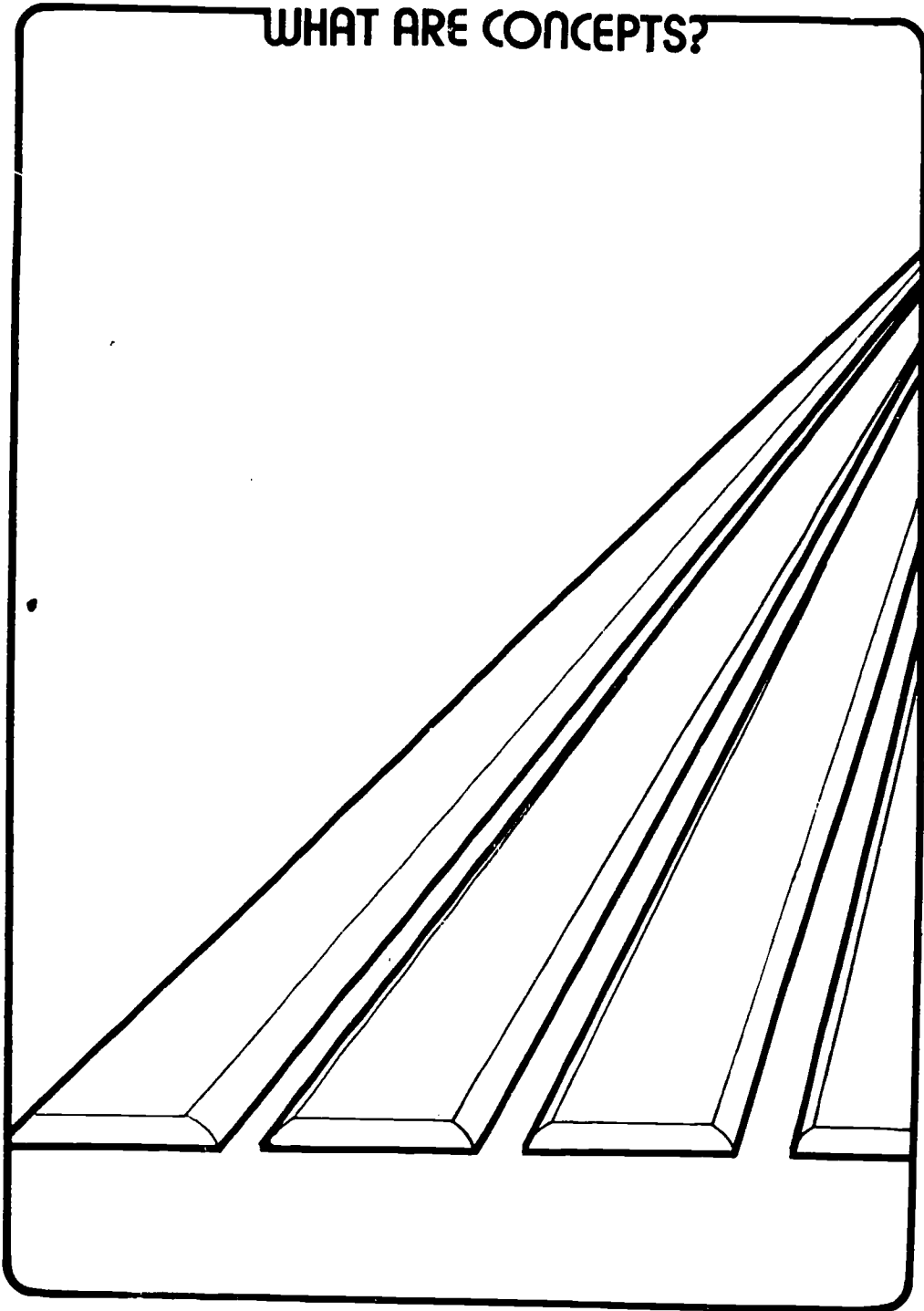
Many meanings are universal within a culture or
society. Since most individuals within that society
have a number of virtually identical experiences and
have been in nearly the same environments, common
experiences are categorized under similar labels or
symbols. The meanings recalled by these labels or
symbols are *concepts*.

Concepts are abstractions that refer to a class or
group of objects, qualities, actions, etc., possess-
ing certain common characteristics. The concepts
people develop are woven into their *cognitive struc-
ture*--the way the individual has organized and labeled
his or her own experiences.

Because some individuals have had different experi-
ences, they may have different concepts. For example,
the terms teacher, classroom, and learning symbolize
concepts with which social studies teachers have had
much experience. These terms have commonality and
universality that make them useful in communication.
Such words as paradigm, mandamus, and heuristic,
however, are not so familiar to the same group of
teachers but are daily jargon to another group of
people.

To illustrate with a concept common to social studies,
natural resources, teachers listing names of natural
resources will most likely include several of the
items below. This is to be expected; somewhere in
their formal or informal education they have acquired
a means for identifying natural resources.

nickel	limestone	animals
vegetation	soil	game
bauxite	air	furs
birds	salt	oil
plants	lead	fish
uranium	trees	gold
iron ore	water	silver

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COMPONENTS OF CONCEPTS

Attributes

Why are the teachers' lists similar to the above list?
What do the listed items have in common?

The first component of a concept is its attributes or
characteristics. These common characteristics are
the distinctive characteristics of things, events,
ideas, or qualities.

What are the attributes of natural resources? First,
they are provided by nature. Secondly, they are
usable by people--otherwise they are not resources.
For example, uranium was not a resource for the
American Indians because they did not have the tech-
nical knowledge nor the need to utilize this mineral.
However, as technology changed and the need for ura-
nium increased, it became an important resource.

All concepts have attributes which make them useful.
But knowledge of these attributes varies among
people depending on the extent of their experiences.

Concrete experiences provide common meanings for
concepts. Because they can be experienced through
the senses, rain and snow are concrete concepts;
they are common to many environments. *Abstract
concepts*, on the other hand, cannot be experienced
directly through the senses. The more abstract
the concepts are, the more diverse the meanings
become. For example, the concept beauty varies
widely among individuals and cultures.

Classes

The second component of a concept is the category or
class in which things, events, ideas, or qualities
having the same or similar attributes are grouped.
Several classes could be included under natural re-

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sources, such as animal, plant, or mineral resources.
Returning to the earlier listing, we can now classify
the natural resources as shown below:

Concept: Natural Resources

Classes: Animal resources	Plant resources	Mineral resources
furs	vegetation	water
game	plants	lead
birds	trees	salt
fish		air
		soil
		limestone
		gold
		iron ore
		uranium
		bauxite
		nickle
		oil

Categories are important because they permit communica-
tion by referring to large classes of things without
enumerating every item in the class.

A concept is dependent upon the frame of reference in
which it is used. Although animal resources is one
class under natural resources, in another context it
might be used as a concept, as shown below:

Concept: Animal Resources

Classes: Furs	Game	Birds	Fish
mink	deer	duck	sardine
beaver	bear	geese	salmon
marten	moose	turkey	tuna
ermine	duck	bobwhite	white fish
rabbit	geese		halibut

Each of the items in the above listing may, in certain
contexts, be used as concepts. If birds were the con-

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cept under consideration, the concept label for the classes might include listings by types of beaks, feet, wings, or natural habitat. It would seem that this branching could go to infinity, but actually it stops at the limit of an individual's experience.

Concepts are important because they allow communication of a large amount of information efficiently by helping to capsulize and categorize meanings. Meanings are recalled by the labels given these individual categories or classes. Such labels are referred to as symbols.

Symbols

Symbols are another component of concepts. They give people the ability to communicate concepts readily to others. Some symbols are verbal labels, words or numerals which stand for words; others are pictorial, such as the heart as a symbol for love. There are also nonverbal-visual symbols, such as the shoulder shrug, and nonverbal-auditory symbols, such as a scream. But the symbol alone is not a concept. It is an agreed-upon way of referring to the concept. The meaning it recalls depends on both the real and vicarious experiences of the receiver. Real experiences are those in which an individual has direct involvement, such as a field trip to the State Capitol. Vicarious experiences are secondary experiences, such as activities experienced through reading a book or seeing a film about the State Capitol, or hearing someone tell about a trip to the State Capitol.

Words are merely the verbal symbols for concepts. Emphasis on vocabulary is important, not for the sake of the words themselves, but to assist students in symbolizing, putting effective names on conceptions.

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GENERALIZATIONS

Developing labels for experiences so that they may
be recalled easily is only one of the goals in the
teaching of concepts. Another aim is assisting stu-
dents to discover the relationships between concepts.

A *generalization* is the statement of relationships
among concepts that has predictive validity in time
and space. In other words, a generalization allows
a meaningful relationship of concepts. From this
relationship, one can predict what will happen in
other situations. An example might be the concept,
round. The concept is in our cognitive structure
and we know that marbles, balls, beads, pencils,
and other objects that can be categorized under the
concept will roll when pushed or placed on an uneven
surface. That generalization is useful as long as
we understand the concept, roll. A pencil rolling
is different from a ball rolling; however, both
actions are generally classified as rolling. Given
the generalization, round objects roll, what would
you expect to happen when you place an orange on a
table?

RELATING CONCEPTS AND GENERALIZATIONS

Both concepts and generalizations are built on ex-
periences (illustrated in figure 1), which can be
either real or vicarious. All knowledge is built
on experiences, from which individuals develop
facts and discriminations.

Facts are simply verifiable bits of information that
can be used to support concepts and generalizations.
They are limited in value because they describe one
object, event, idea, or quality. One cannot get along

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without facts, but the teaching of facts alone permits
little worthwhile learning. The following are facts
on the disposal of wastes:

Some sewage remains untreated.
Much sewage is dumped directly into local streams.
The drainage from dumps ends up in streams.

These statements are useless, however, unless they are
related under the concepts, water resources, pollu-
tion, and careless use. Moreover, these facts must
be related to each student's own experiences.
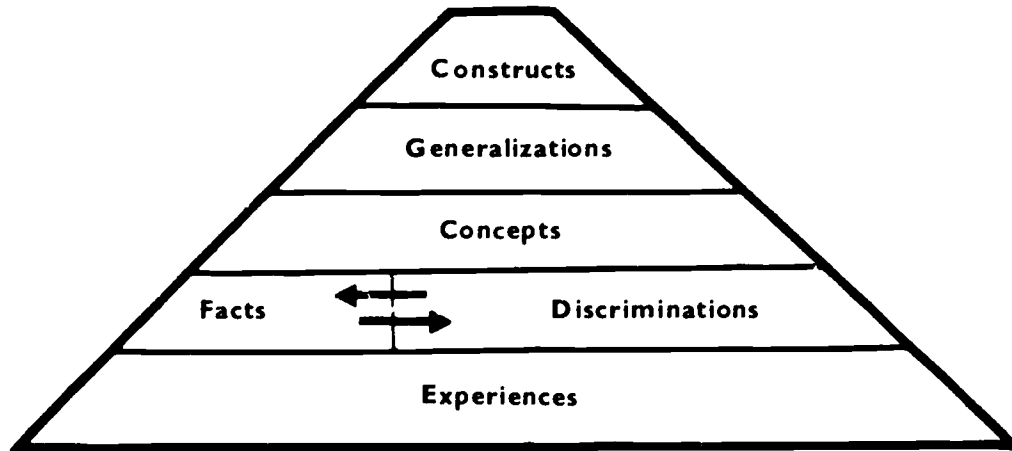
FIG. 1. HIERARCHY OF THINKING MODEL

At this point teachers may wish to dispute whether
the statements listed are facts or generalizations.
There is room for disagreement here. Some facts
are summaries of other facts. The term *understanding*
is often used to identify the bigger factual ideas;
so discrimination between facts and generalizations
is not necessarily a solution. The generalization,
people often pollute water resources through careless
use, may be used as an illustration. How is it re-
lated to the generalization, people often waste or

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destroy resources? The latter generalization is simply broader. It is a higher level of abstraction. Thus, there are differing levels of generality among concepts and generalizations.

Unfortunately, the principle--learning is based on experiences--sometimes receives little attention in social studies classrooms.' How does one explain the concept, pollution, :o students who have never ex- perienced s ench and filth or never found their favorite stream unfit for recreation? Would it be possible to relate the concept to their experiences with a clogged drain, uncovered garbage cans in the summer, or water that has been in a flower vase beyond the time when the flowers should have been discarded?

Teachers often make the statement: "Students cannot think inductively because they have so little back- ground knowledge." This statement is partially true. Students cannot think beyond their experience level, but neither can adults. Experiences are the base upon which thinking is built.

At the apex of the thinking pyramid in figure 1 is the development of constructs. A *construct* is an organization of interrelated concepts and general- izations. It represents a complex organization of as placed together because of their usefulness explaining specific phenomena. For example, the model illustrated in figure 1 is a construct.

Concepts, generalizations, and constructs all function within what is called the cognitive structure. The elements are hierarchically arranged because each higher element is based on the learnings attained at the lower levels. These meanings and experiences are capsulized in concepts which are developed through a process of distinguishing among pieces of information called facts. The higher levels of thinking--general- izing and developing constructs--are dependent upon such conceptualizations.

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WHY TEACH CONCEPTS?
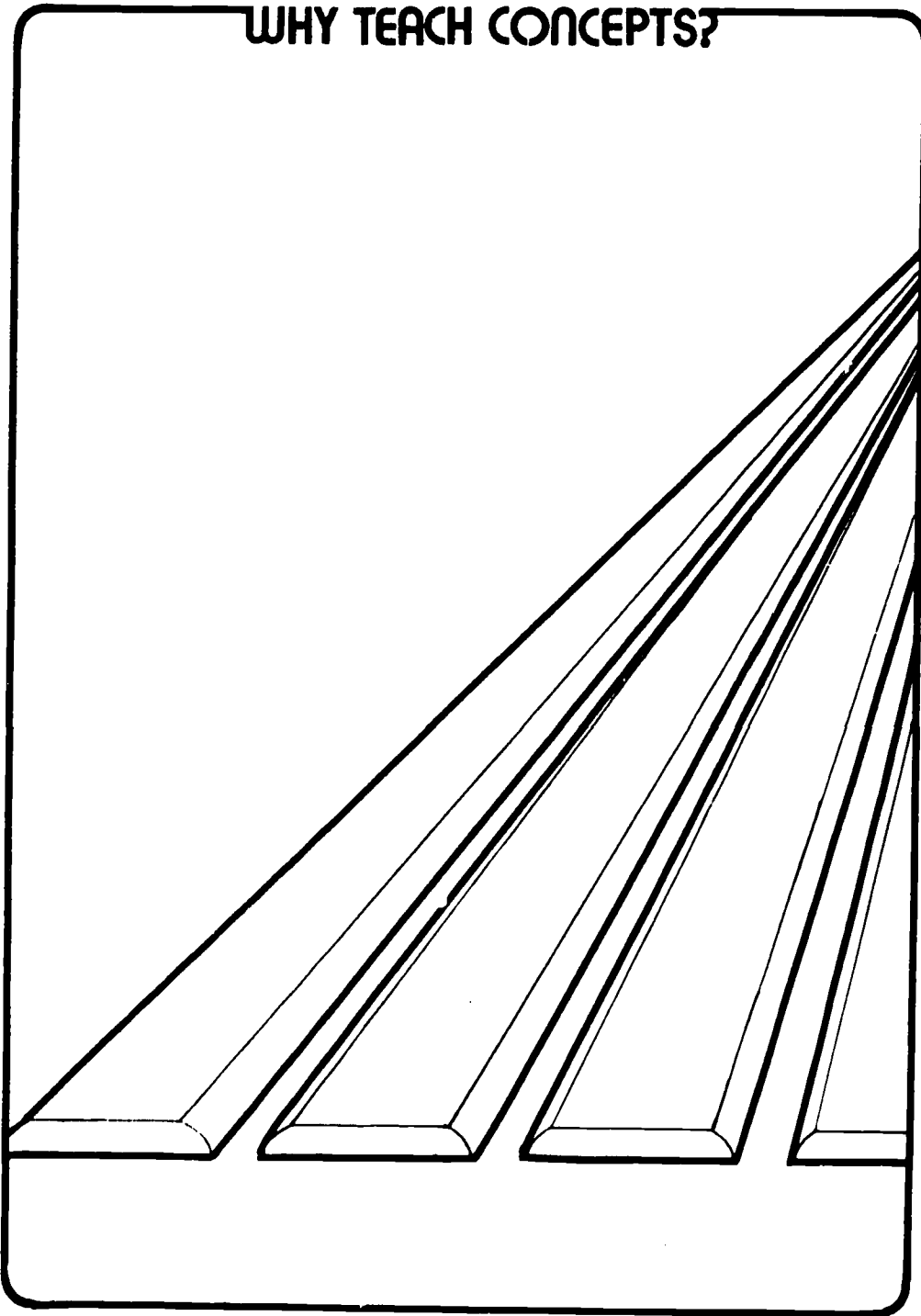
The use of conceptual thinking offers a number of
advantages to the learner. First, conceptual think-
ing permits the student to deal with generalities
rather than specifics. If we look at the generaliza-
tion, people use the resources of the place where
they live, we can use several categories of meaning
without listing all the individual resources which
are classified under animal, plant, and mineral
resources. Moreover, the generalized *people* allows
us to refer to all nations, levels of technology,
genders, and times. *Place* is applicable to plains,
mountains, and seashores. And generally the term
use translates into changes to make useful. All of
that meaning is a 10-word sentence which may be
used either in thought or to communicate with others.

Finding that this generalization is true in a few
instances also illustrates another advantage of con-
ceptual thinking: It allows the student to predict
what will happen in new situations. Finding a tribe
of primitives in a jungle or an advanced culture on
some distant planet, scientists will be able to guess
rather accurately what raw materials they use by
examining their physical culture. In other words,
knowledge of one culture is transferable to the study
of other cultures.

The ability to generalize from one situation to another
presents a third advantage: Students are able to gain
a deeper knowledge of a situation because they are
freed from redundant detail. Suppose a student has
studied the concept, specialization, in economics and
geography. This concept may be dealt with again when
the student studies biology. The situation is
different, but the student has the advantage of knowing--
without trial-and-error learning--that some organs per-
form one task while others are performing different tasks.
The student doesn't have to list under heart the special
task it performs or under lungs the special task they
perform in order to understand specialized body functions.

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The ability to conceptualize also allows the student
the advantage of mentally manipulating situations to
solve particular problems. We have learned through
our experience with animals that many of them will not
harm a person unless threatened. For example, while
working in the yard one may notice a number of bees
around the honeysuckle bush. The person may reason,
"If I don't disturb the bush, I can weed the area
around the bush without getting stung." Many children
do not reason this way. They may lack the experience.

The current information explosion, caused largely by
rapid, large-scale technological advances, poses a
major challenge to both teachers and students. Never
before has there been such an overwhelming and impossi-
ble amount of information to teach and learn. It has
been estimated that more than 2,000 pages of newspapers,
books, and reports are published throughout the world
each minute. In other words, enough printed material
to fill a thousand feet of bookshelves is published
each day. Even if it were possible for students to
memorize all this information, new discoveries and
technological advances would make much of it obsolete
long before they completed their task.

Therefore, students must have some logical structure or
system for organizing and ordering the overwhelming
volume of random information and experiences that face
them. This is where concepts enter the teaching-learning
picture. A curriculum organized around concepts can
provide the structure to enable students to understand
meaningful relationships and the stability necessary
for students to meet the challenges of our ever changing
world. Facts may change as new nations emerge, boundaries
change, the U.S. Constitution is amended, major food
sources change, and different value systems emerge, but
concepts such as nation, freedom, democracy, scarcity,
and values will remain part of the student's conceptual
framework to which new experiences and information may
be related.

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PRINCIPLES OF CONCEPT LEARNING

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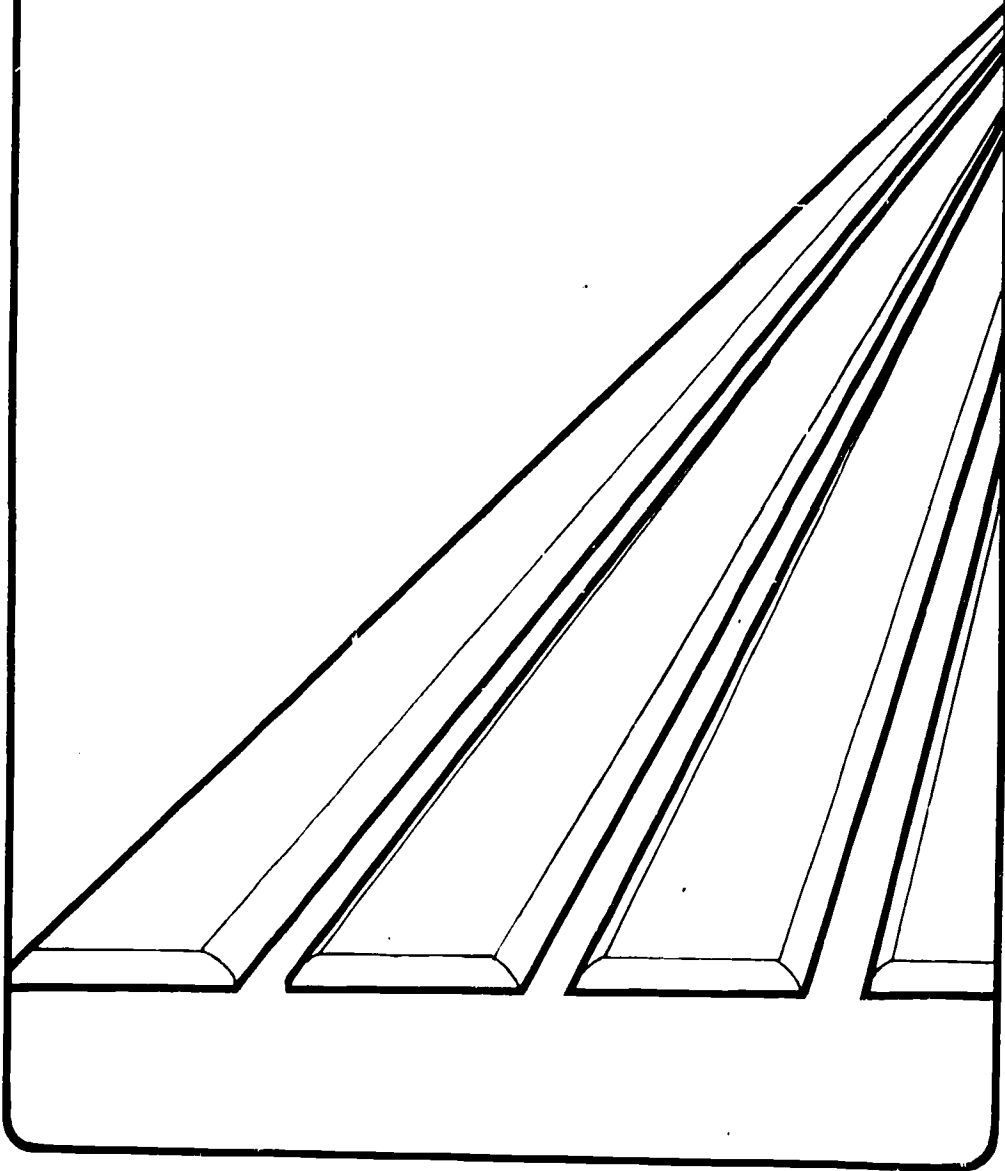
Although considerable research has been gathered on
the nature of concepts and their role in learning,
little has been done to translate the implications of
this research into meaningful terms for the class-
room. However, a number of principles are indicated
by these studies that the teacher should keep in mind
in order to facilitate the learning of concepts by
the students.

STUDENTS MUST BE ACTIVELY INVOLVED
IN THE LEARNING PROCESS

The teacher may identify a concept and have the stu-
dent memorize what someone else thinks the concept is,
but the learner cannot be expected to understand the
various aspects of the concept. The chances are that
knowledge of the concept will not go beyond the coy-
nitive level of recall. If higher cognitive levels
are to be attained, the concept must evolve in the
mind of the learner through a process of conceptual-
ization. The role of the teacher, therefore, is to
guide or facilitate the conceptualization process.

Teachers have available a number of strategies to
facilitate concept development. But, in almost every
instance, there is a need for the student to work
with both positive and negative examples of the
essential facets of the concept.

The following strategy is one example of how a
teacher could guide students in developing the con-
cept, resources:

- . Identify the concept.
- . Show the students several examples of items
  that are resources.
- . Show the students several examples of items that
  are not resources.

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. Show the students examples and nonexamples of
  resources and have them select the examples of
  resources.
. Ask the students to explain why the examples they
  select are resources.
. If the students fail to identify or explain the
  relationships correctly, introduce additional
  examples and nonexamples of resources.
\

CONCEPT DEVELOPMENT IS A GRADUAL, CUMULATIVE PROCESS

Another principle essential to understanding the
development of concepts and generalizations is that
the process is gradual, cumulative, and never end-
ing. A student's understanding of a concept grows
from the concrete to the abstract as each new ex-
perience is related to past experiences and as the
relationships are tested in a variety of situations.
As these conceptual structures are formed, others
created previously that are inconsistent are modified
or put aside to accommodate the new ones.

STUDENTS DEVELOP CONCEPTS AT DIFFERENT RATES

The rate at which each student develops concepts will
differ depending upon a multitude of variables such
as age, experience, motivation, and intelligence.
Therefore, the number of different experiences
necessary for mastery of a concept will vary from
student to student.

STUDENTS MUST BE LED TOWARD DEVELOPING CONCEPTS

Although concepts and generalizations may be developed
through trial-and-error learning, which is character-
istic of true inductive learning, this method of teach-
ing is usually too time consuming for the classroom.

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Most of the so-called inductive approaches used in the classrooms today are really guided discovery approaches in which the student's attention is focused on certain attributes or characteristics during each learning episode. One procedure to accomplish this follows:

- Determine whether the students understand the required conceptualization.
- Focus the students' attention on the desired attributes or characteristics.
- Have the students actively manipulate the data and make inferences.
- Assist the students in evaluating their inferences.
- Ask the students to generalize about what they have seen.

The student is led, step-by-step, toward a conclusion. The direction the conclusion takes can be either open or closed, depending upon the purpose of the instruction.

A learning packet developed by a teacher to show the influence of the Spanish culture on the culture of Mexico may serve to illustrate this approach. The concept the class is developing is cultural change. The generalization they are working toward is: When cultures come into contact, changes occur. The teacher plans to develop the concept and generalization through a study of architectural styles.

A cassette tape and several sets of pictures and sort cards are used to mediate the learning packet. The teacher begins with a pretest to determine whether the students beginning the packet already know the concept and generalization. The pretest also assesses the students' understanding of the concepts, contact, and culture. This is accomplished by having the students sort cards which are examples and nonexamples of the concepts in question. Their knowledge of architectual style is determined through selecting pictures which illustrate each style.

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The tape is used to give directions to the students, who are instructed to stop the recorder each time a task is assigned and start it again when the task is completed.

The first instructional activity is to present the answers to the pretest in such a way that the students receive knowledge concerning their test results and information on the building styles of the Indian, Spanish, and Mexican cultures. The next step requires the students to classify three pictures of architectural styles and to classify each as Indian, Spanish, or Mexican architectural styles. The students are then allowed to test their inferences and are provided feedback to assure them that the focus is on the proper characteristics.

Next, the students are asked: "Now that you have completed this activity, what can you tell about the effect one culture has on another when the cultures come together? Are there examples of this in your hometown today? Be sure) explain your answer to the last question."

Most of the students who complete the packet will answer: "It changes their way of life." That's pretty close to the generalization the teacher is attempting to achieve.

STUDENTS REQUIRE A WIDE VARIETY OF EXPERIENCES

In order for students to learn, textbook content must be related to the students' experiences. After all, if students are really learning social studies, learning about themselves, their environment, their environment's relationship to humanity, and people's' relationship to people, then the students' environment must be placed in the forefront.

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The textbook is only one of many resources available
to the teacher and should be used accordingly. The
teacher should select only those portions of the book
that fit the needs of the students. The textbook is
also a mediating device that can be used when it fits
into the teacher's instructional plan. It can be
used as a beginning source, and portions of it can be
used for culmination. Basically, however, it is
simply another instructional tool. Although textbooks
are important informational resources, pictures,
graphs, maps, and a variety of experiences are equally
important to the instructional process.

STUDENTS MUST BE HELPED TO ORGANIZE THE DATA FROM WHICH THEY ARE TO DEVELOP CONCEPTS AND GENERALIZATIONS

Teachers must use skill in recording information
where students can see it. Many teachers make out-
lines, but an outline is only one organizational
tool. Lists, charts, flowcharts, graphs, diagrams,
and tables are others that are even more useful to
students. These tools place information in front of
students where they can group, label, rearrange,
compare, contrast, and determine cause and effect.
Teachers should use chalkboards, bulletin boards,
chart stands, etc. to get the information students
gather in front of them for their examination.

Without helping students to organize data, teachers
cannot really lead productive discussions and the
students cannot explore ideas, evaluate facts, or
draw conclusions; nor can the class really examine
some of the assumptions that they have made in
reaching a conclusion.

In summary, one of the major goals of social studies
education is teaching students to think. To accomplish
this goal, teachers must focus on the tools of thought:
facts, concepts, and generalizations.

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STRATEGIES FOR TEACHING CONCEPTS

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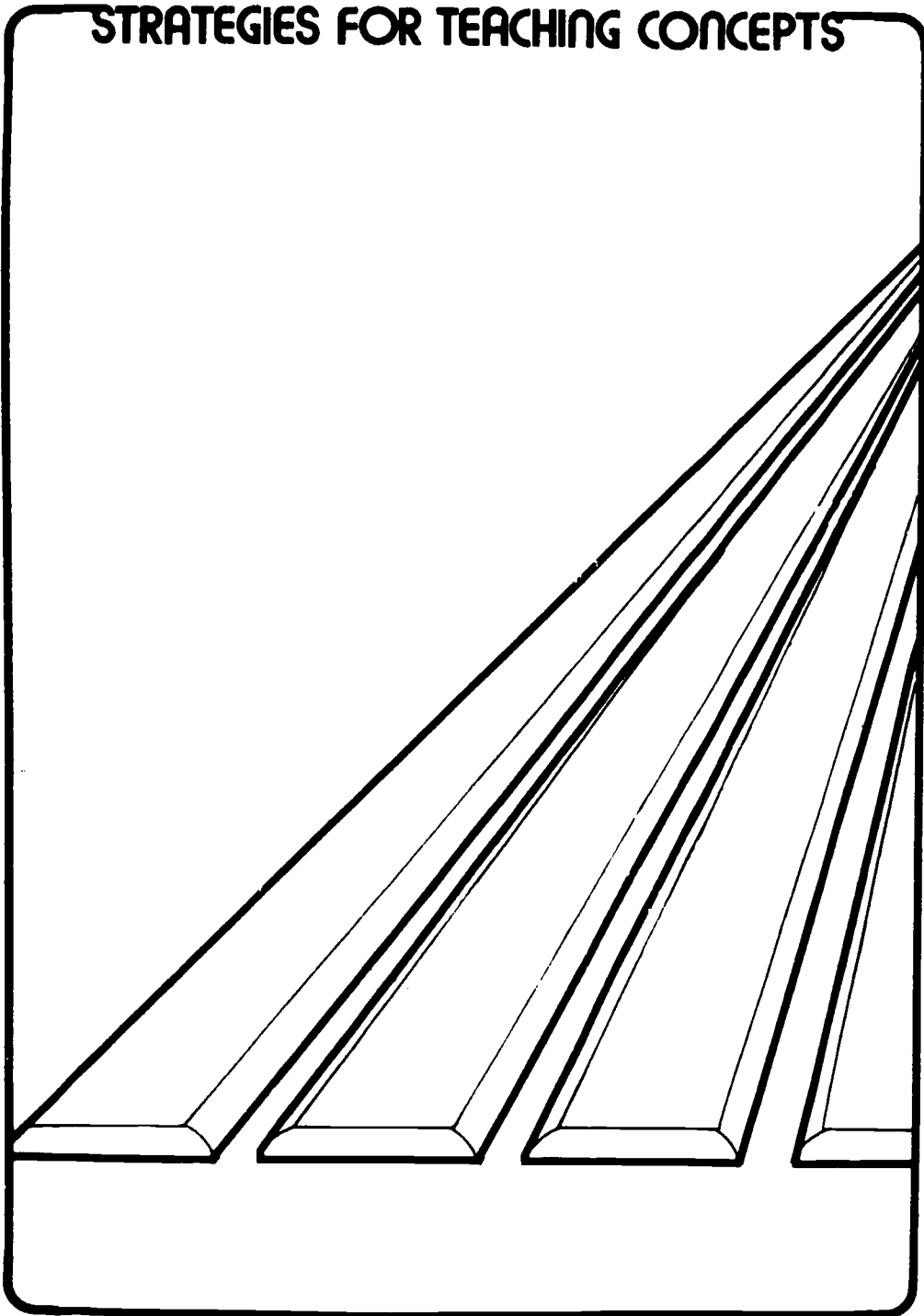
Two strategies for teaching concepts and general-
izations frequently used in the social studies class-
room will be discussed in more detail in this section.
It should be emphasized that neither of these strat-
egies is suggested as the best way to teach. The
most successful teacher may incorporate both strat-
egies.

THE DEDUCTIVE STRATEGY

The deductive strategy or approach is characterized
by the introduction of the concept or generalization
at the beginning of the instructional sequence.
Later the student is presented with a number of
examples or experiences and is afforded the oppor-
tunity to verify the concept or generalization.
Generally the deductive strategy includes the follow-
ing steps.

A Model for Mastery

From the beginning the student is given an idea of
what is to be achieved--a model for mastery.
Generally, in social studies, these models are of
three types: informational, skill, and attitudinal.
The informational model is used to give direction
to the student in securing and using specific infor-
mation such as outlines for oral reports or ques-
tions. An outline may also be classified as a
skill model if it is designed for general purposes
such as an outline of the correct form for a para-
graph. An attitudinal model is used to demonstrate
how people who hold certain attitudes behave in
selected situations. This model lends itself well
to the use of role playing and simulations.

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Information

As the deductive strategy is implemented it soon becomes apparent that the various steps cannot be neatly separated into categories. As the students move from one step to the next, the teacher often will find it necessary to provide additional information in order for the students to achieve success.

Active Response

After the students are provided a model for mastery and needed information, the teaching sequence is usually broken down into activities that encourage active response from the students.

Knowledge of Results

Students need knowledge of the results of their efforts in the learning of information, skills, and attitudes so that a comparison of their understanding can be made with the model for mastery.

Guidance

With knowledge of results, the students are able to continue progress toward their objective with the guidance of the teacher. The major role of the teacher is to diagnose any difficulties the students may be having, identify ways of correcting the difficulties, and supply additional information when the students are ready for it. The teacher must be careful not to provide too much information for fear of creating confusion. The important principle is to supply only the information needed to complete the task or solve the problem.

Perhaps an example of a demonstration which follows the deductive teaching strategy will provide a better understanding.

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The teacher initiates a social studies-science unit in
the third grade classroom and selects a field trip as
one of the learning experiences. The following de-
monstration is presented in preparation for the field
trip. Objectives:

Looking at a simple compass card, each student
will be able to identify the four cardinal
directions.

Looking at a compass needle, each student
will be able to read each of the indicated
cardinal directions.

When asked, each student will be able to
explain why he or she must make sure that
there are no metal objects nearby when
taking a compass reading.

The teacher begins the lesson by asking each student
to list the four cardinal compass directions on a
sheet of paper. As the students start to work, the
teacher goes from table to table checking the stu-
dents' papers. Of course, this activity is really a
pretest to determine whether the students know the
concepts.

Finding that two of the students did not know
these concepts, the teacher sends them to a
tape recorder to work with programmed ma-
terials adapted from a children's publica-
tion and then continues with the rest of the
class, "This morning we are going to learn to
read a compass."

Then the teacher places a compass on an
opaque projector so that the entire class is
able to view it on a screen and tells them,
"By the time we are finished this morning,
you will be able to show me north, south,
east, and west on a compass. You will all
be able to find these directions for yourself
from compass readings."

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Returning to the projector, the teacher
uses a pointer to indicate the cardinal
directions marked on the compass card.

"I'd like for you to mark these directions
on the compass I've drawn on your papers.
Would you do that for me, please?" Again
the teacher moves around the room checking
papers. (One of the two students working
at the tape recorder finishes the task.
The teacher briefly checks his or her paper
and asks him or her to be seated and to
work on the same task the other students are
now doing. The teacher then proceeds.)

"That's very good! Reading the compass simply
means that we say or write down what the com-,
pass shows us with its needle. Notice that
this needle is made like an arrow."

The teacher continues, "In order to read the
compass correctly, we must place north under
the head of the arrow." Then the body of the
compass is turned to align the needle and the
compass card. "Now the arrow is pointing
north," the teacher notes.

"But that's not north," one of the students
replies.

"That *is* North, Bobby," the teacher re-
sponds. "I'm making my compass read in-
correctly by placing it on this metal pro-
jector. Watch what happens when I place
this metal weight on the projector."

As the needle direction changes the teacher
focuses the attention of the students to
the new compass reading.

"Which way does our compass say north is
now? Please draw a needle on the second

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compass I have drawn on your papers. Be sure
to draw it in the same direction as the one
on the screen. Since you cannot turn the com-
passes I have drawn for you, draw the four
directions as they appear when I turn my com-
pass to the proper directions." Again the
teacher walks around the room checking the
students' answers.

"Who can tell us why this metal weight and
this projector make my compass read in-
correctly? Theresa."

"Because they are metal," Theresa replies.

"That's partly true," the teacher encourages.
"Is that the only reason?"

"Is the metal weight a magnet?" Sylvia
queries.

"Yes, it is." The teacher pauses to see
whether Sylvia can continue the analysis
alone. After a rather long pause, the
teacher poses another question: "What part
of the compass is a magnet?" "It must be
the needle," Jerry answers.

The teacher continues with the demonstration,
providing several opportunities for the stu-
dents to locate the other cardinal directions.
Later, the teacher plans to provide the stu-
dents opportunities to practice reading a
compass on their own.

In the above strategy the teacher is attempting to
supply the students with information and skills by
providing the principles and illustrating these prin-
ciples with examples. The steps in the deductive
procedure are:

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. providing a model,
. providing information,
. allowing active response,
. providing knowledge of results,
. guiding the students toward the modeled performance.

THE INDUCTIVE STRATEGY

Whereas the deductive strategy begins with general-
izations and proceeds to specifics, the inductive
strategy works conversely, beginning with specifics
and proceeding to generalizations which are tested.
One of the leaders in adapting the inductive strategy
to the teaching of concepts was Hilda Taba. Her re-
search paved the way for a number of strategies de-
signed not only to teach concepts and facts but also
to facilitate the construction of student concepts.

These strategies grew from a concern to improve the
level of thinking in the classroom by stimulating the
various cognitive processes. Taba believed that the
thought processes operate in sequential order, build-
ing from the concrete to the abstract, and that each
skill involved in the thought processes depended upon
the mastery of the skills that preceded it. Therefore,
the student must master the simpler thinking skills
before mastering the more complex ones.

Taba concluded that it was possible to teach students
to think at a higher cognitive level if the teaching
strategies followed the proper developmental sequence.
The major role of the teacher is to use questions and
other techniques to guide the students through the
sequence, keeping in mind at all times that the skills
involved in each step or stage of development must be
mastered before the student may proceed to the next
one.

According to Taba, the sequence for developing concepts
is in three stages:

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.   Brainstorming or identifying and listing data
.   Grouping or classifying
.   Labeling, conceptualizing

The purpose of the first stage is to bring the various
aspects of a concept into view by listing and identify-
ing relevant data. For example, assume a second grade
class is studying the concept, supermarket. To elicit
responses the teacher might ask such questions as:
What do you see when you go to the supermarket? What
do you buy when you go to the supermarket? What would
you need if you were to open a supermarket?

In many instances students will not have the experi-
ences or information necessary to brainstorm about
more abstract concepts. Therefore, the teacher may
find it necessary to provide a learning experience de-
signed to give examples of the concept being intro-
duced. One approach the teacher could use with the
concept, supermarket, might be to begin by showing
the students photographs of supermarkets and asking
them to identify what they see in the photographs.

Once the various aspects of the concept have been
listed, the students must then categorize them
according to common features. For example, the
teacher could ask: How can the photographs of the
various items we found in the supermarket be organized
into groups? Do you see some items on our list of
things we need to start a supermarket that belong to-
gether in a group?

The next step is to label the categories with a term
describing the element that they hold in common and
determine any relationships the categories may have.
Once the students have established the various re-
lationships among categories, they may develop a
mental diagram of these relationships and the hier-
archial order of the items.

The result is a concept, or a mental image of what the
students have been working with. The teacher could

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elicit student response with such questions as:
What would you call each of these groups of items?
What does each of the items in the group have in
common? What are the relationships among these
groups?

After they are introduced to a concept, students then
work with additional data to reinforce, broaden, and
refine their image of the concept.

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EVALUATING CONCEPTUAL TEACHING AND LEARNING

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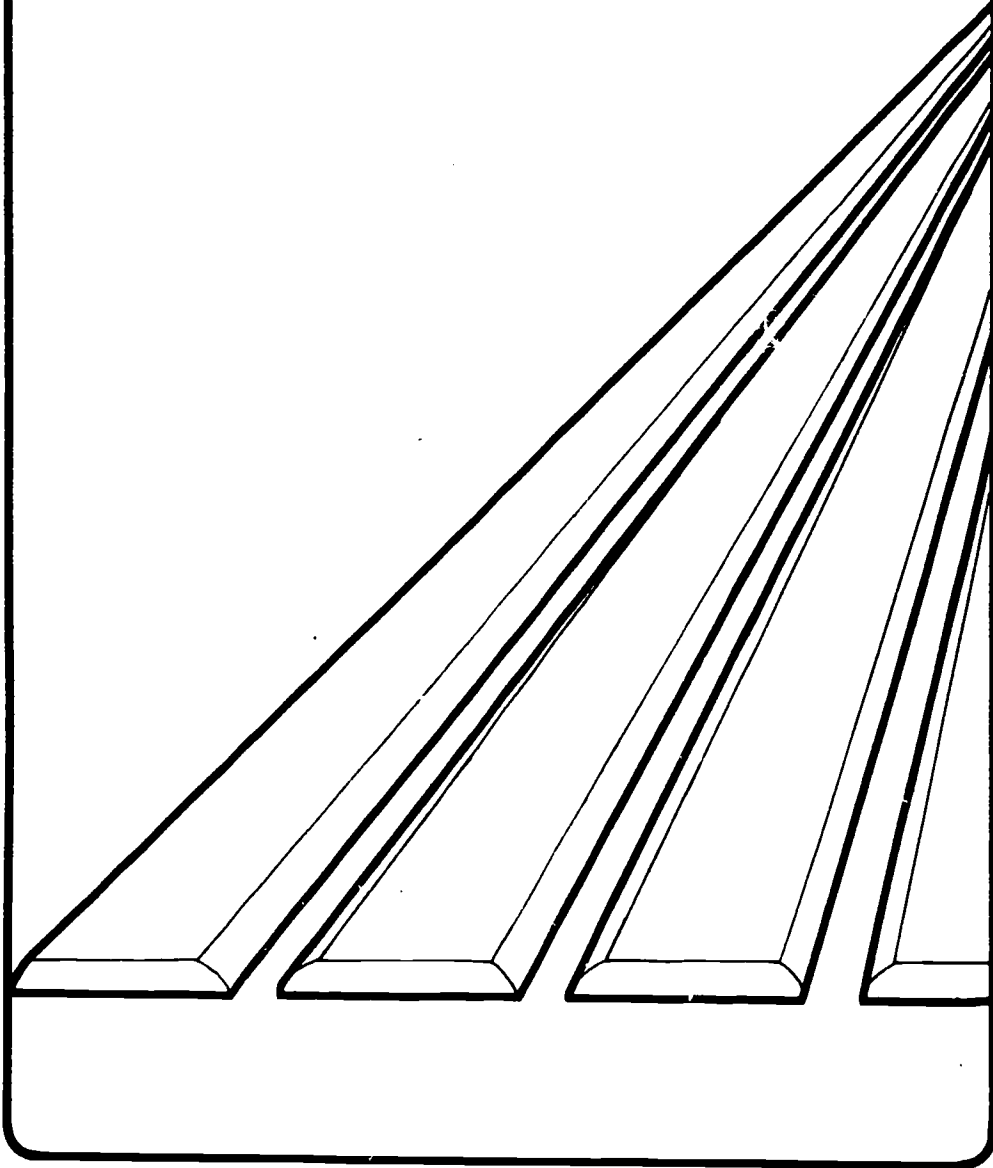
It is not uncommon for a teacher to perceive evalua-
tion strictly in terms of student behavior. However,
teacher behavior and the curriculum also should be
considered.

In order to understand the role of each of the three
aspects, teaching-learning must be considered an
interactive process. The teacher's behavior in-
fluences the student's behavior through the curric-
iculum--the planned activities that take place in
the classroom. Selecting a specific lesson which
is mediated through a film requires the student
and the teacher to play certain roles to ensure suc-
cess of the lesson. Teaching, then, is an inter-
active activity.

As professionals, teachers sometimes find it diffi-
·cult to analyze themselves or to allow others to
analyze their teaching behavior. Team teaching can
help as long as team members remain open with each
other. If teachers use specific strategies like
those discussed on the preceding pages, someone whom
they trust can objectively critique their teaching
because the steps are easily identifiable. Another
approach is to use a self-checklist such as the one
on the following page.

ANALYZING TEACHER BEHAVIOR

All three interactants are shown in the checklist.
The statements are presented from the teacher's point
of view, but the central focus of the evaluation is
directed toward the component being evaluated.
Analyzing teacher behavior first necessitates analyz-
ing what the teacher does to facilitate student parti-
cipation.

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Conceptual Teaching Evaluation
Checklist

Teacher Behavior:

	U usually	S sometime	N never

Teacher Behavior:

1. Do I ask student to clarify their ideas?
2. Do I give too much information?
3. Do I furnish information at appropriate times?
4. Do I help students evaluate their conclusions by encouraging wide participation in the class?
5. Do I present adequate models of mastery?

Curriculum:

6. Do I allow students to present their ideas and data?
7. Do I depend entirely on written material as a source of data?
8. Do I use group procedures to gather data?

Student Behavior:

9. Do I provide students adequate knowledge of results through regular evaluation?
10. Do I diagnose student's problems in a teaching episode?
11. Do I make room for individualized help?

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Active student participation requires the clarification of information presented. People definitely have different ways of perceiving things--conceptualizing. This becomes apparent when data is presented and clarified. The only way a teacher can be sure that everyone continues to participate is to be ensured that every student knows what is happening. The teacher can accomplish this through the clarification of ideas, "What do you mean by _____? Could you explain that a little?"

If the teacher is talking, the students are not. If students are to actively learn concepts and generalizations inductively, they must be given an opportunity to interact with the teacher, not merely to listen to the teacher's ideas.

The interplay of ideas among students is also extremely important. Adults do not see the world as children do. Students can learn a great deal about themselves by listening to other students. Nevertheless, the teacher must be there to encourage wide participation. Often, the teacher must resist the temptation to interject an idea to speed the process in favor of waiting and encouraging participation, bringing the challenge of additional data from the class. This process does much more for the students' egos than receiving more information from the teacher.

Item 4 on the self-evaluation checklist concerns helping students evaluate their conclusions, "What assumptions are you making? What facts are you using to support that position? Why do you think that is true?" All these questions help students to think logically and critically. Such queries should become a part of the classroom dialog.

Often models of mastery are the source of good group work. Most students do not come to school with the skills necessary to work well in groups. They must learn group problem-solving techniques. A combination of the deductive and inductive strategies in teaching

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good group work will produce the skill level required.
Here, too, the knowledge of results comes into play.
Students must know how well they have done. Groups
who work well together have focused on their progress
as group participants. The teacher who stops a group
at the end of the work period and praises it for its
success is giving the students knowledge of results.
Such action both rewards and motivates. This is the
kind of classroom in which one will find a great deal
of group unity. The students have made it, or they
are progressing toward a goal together. This growth
is vitally dependent upon the facilitative behavior
of the teacher.

THE CURRICU...'M, OR LESSON

One of the major implications of conceptual learning
is that it must be active. Students must form their
own concepts and generalizations. The teacher's
role is to provide them with the real or vicarious
experiences that will permit learning. That is why
the teacher must focus on the student as the presenter
of ideas.

These ideas cannot be taken solely from written ma-
terials. Taba's research indicates a very low cor-
relation between a student's ability to think ab-
stractly and his or her I.Q. as measured by group
tests. The reason for this apparent discrepancy, of
course, is the fact that scores on group I.Q. tests
depend on the students' ability to read. To allow
all students to actively gather data and analyze it,
emphasis should be upon work in small groups and the
use of a wide variety of print and nonprint materials.

For a number of years educators have acknowledged
that students learn at different rates and have had
differing kinds of experiences, but in many instances
students are still expected to be able to use spe-
cific concepts with equal ability. However, the use
of learning centers allows some flexibility that was

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difficult to achieve with earlier management techniques.

ASSESSING STUDENT BEHAVIOR

With the advent of learning centers student evaluation has moved away from the paper-and-pencil test toward a variety of instruments. Such tests are often graded and recorded individually by the students, providing them with continuous knowledge of results. Many of these tests also are fun for the students to complete. Following are some examples.

One teacher was interested in having students list the natural advantages of Texas under the proper headings. Students were asked to make a mobile of the items. When the answers were correct the mobile would be properly balanced. If the answers were wrong the mobile would be out of balance. This simple technique did both test and instruct.

Attempting to teach students the sequential order of events in meat production, a teacher drew railrc.d engine and boxcars on a series of cards. Each card was also labeled as a step in the production sequence. When the students completed placing all the cars on the train, they could check their answers by a code printed on the back of the engine.

A group of teachers produced a game similar to Monopoly on the settlement of West Texas. They designed reward cards: money, a house, a farm, a ranch, seed, and cattle. They also had obstacle cards: Indian raids, diseases, sandstorms, floods, tornadoes, and range fires. After the game was completed, the students were asked to tell

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about some of the problems and frustra-
tions the pioneers encountered.

For a completion test a teacher developed
a unit summary story with blanks where
important concepts were to be furnished.
Although the result looked a little like
rebus writing, the motivation it provided
students was exceptional. Another ingenious
device which also tested for important con-
cepts was a matching wheel. Along with the
wheel were 12 clothes pins. On a piece of
paper attached to each pin the teacher had
written an important concept which was ex-
plained on the wheel. To get the right
answer, the students had to clip the con-
cept on the proper explanation. When the
wheel was turned over, the concepts were
numbered correctly in a series.

Assessing student progress and determining whether
students need a lesson sequence are only two of the
purposes for pretesting. A third reason for assess-
ment is to determine whether a certain lesson or
sequence of lessons fit student needs. Al hough many
units of instruction are logical and educa ionally
sound, they are pointless unless their purposes and
objecti es are in line with the needs of the students.
Remember, those needs include knowledge, skills, and
value explorations. The greatest difficulty most
teachers have in analyzing individual problems is
seeing the subskills required in a student's achieve-
ment of a major skill. The question the teacher
should ask is, "What does the student need to be able
to perform this skill?" In addition, teachers should
become familiar with a taxonomy of skills such as
Benjamin Bloom's. Bloom organizes skills into knowl-
edge, comprehension, application, analysis, synthesis,
and evaluation. Using such a taxonomy, teachers can
diagnose learning tasks to determine individual needs.

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Determining the problem is only one step in diagnostic
teaching. The second step is treatment. Again a
taxonomy may help. Suppose a student cannot select
the words that describe natural resources from a
list of 10 words. Using Bloom's taxonomy, the teacher
knows that this is an application task which requires
a fairly high skill level. Since the student cannot
perform at this level. the teacher must test his or
her comprehension and knowledge levels. For example,
the student who can tell the teacher what a resource
is only by using the words that the teacher has fur-
nished is performing at the memory level of thinking.
Therefore, the teacher must lead the student to
generalize from the items that have been memorized to
other items. The student must be able to identify
resources in a new setting.

In summation, the evaluation of conceptual teaching
must be viewed more broadly than merely in terms of
the assessment of student behavior. Equally im-
portant to the process is an analysis of the curric-
ulum and teacher behavior.

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FOR FURTHER STUDY

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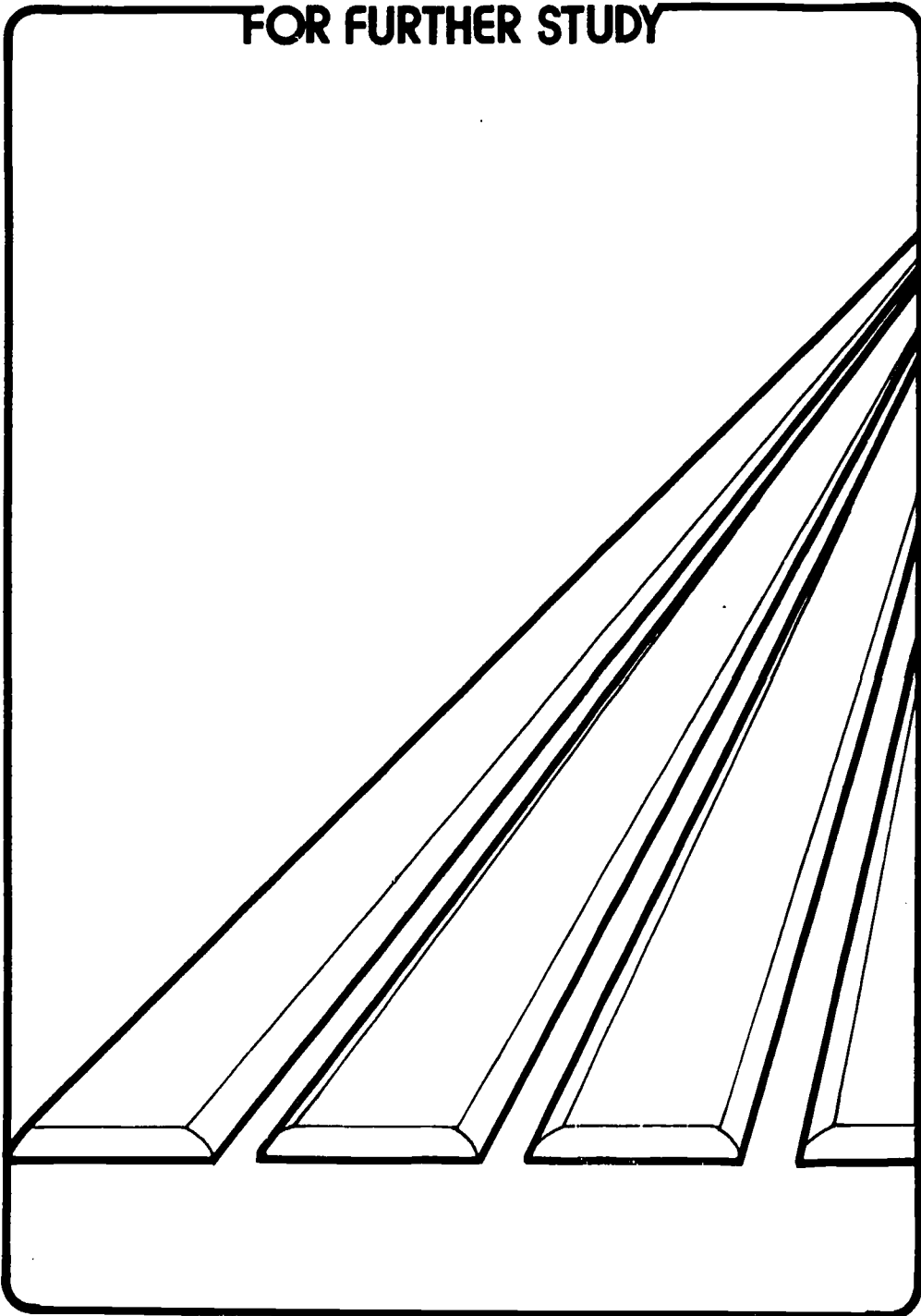
Numerous articles, books, and parts of books deal with
concepts and concept teaching and learning in social
studies. The following list is not intended to be
comprehensive; it merely identifies some publications
which may be extremely useful to those interested in
further study about concept teaching and learning.

Beyer, Barry K., and Penna, Anthony N., eds. *Concepts
    in the Social Studies*. Washington, D.C.: National
    Council for the Social Studies, 1971.
    A collection of articles by leading educators in
    concept learning and social studies teaching.
Bloom, Benjamin S., ed. *Taxonomy of Educational
    Objectives: Handbook I--Cognitive Domain*. New
    York: David McKay Co., 1956.
    Presents the basic theoretical framework and
    outline for the classifications of objectives and
    test questions.
Brandwein, Paul F. *Toward a Discipline of Responsible
    Consent: Elements in a Strategy for Teaching the
    Social Sciences in the Elementary School*. New York:
    Harcourt, Brace & World, Inc., 1969.
    Presents a discussion of concepts, concept-order-
    ing, concept-seeking, and the interplay of concepts
    and values.
Fancett, Verna S. *Social Science Concepts and the
    Classroom*. Syracuse, N.Y.: Social Studies Curric-
    ulum Center, Syracuse University, 1968.
    Reviews several definitions of concepts and dis-
    cusses inquiry.
Joyce, Bruce R.; Weil, Marsha; and Wald, Rhoada.
    Three Teaching Strategies for the Social Studies.
    Chicago: Science Research Associates, Inc., 1972.
    Contains an extensive section on concept learn-
    ing; designed to help teachers create vital social
    studies programs in their classrooms. The section
    emphasizes the nature of concepts, planning con-
    cept attainment exercises, and concept formation.

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Martorella, Peter H. *Concept Learning in the Social Studies: Models for Structuring Curriculum.* Scranton, Pa.: International Textbook Co., 1971.
    Contains an extensive review of the research on concept learning.
Morrissett, Irving, ed. *Concepts and Structure in the New Social Science Curricula.* New York: Holt, Rinehart and Winston, Inc., 1967.
    A collection of conference papers which focuses on concepts in the social science curriculum--specifically on concepts and the structure of knowledge, organizing a curriculum around concepts, and the relationships among concepts, process, and values.
Price, Roy A.; Smith, Gerald R.; and Hickman, Warren L. *Major Concepts for the Social Studies.* Syracuse, N.Y.: Social Studies Curriculum Center, Syracuse University, 1965.
    Presents brief descriptive statements of a selected number of substantive and value concepts drawn from the social sciences.
Rooze, Gene E., and Foerster, Leona M. *Teaching Elementary Social Studies: A New Perspective.* Columbus, Ohio: Charles E. Merrill Publishing Co., 1972.
    Contains two chapters which present an analysis of the foundational disciplines of social studies content and provide a process model through which the teacher can develop a conceptual instructional plan.
Taba, Hilda. *Teachers' Handbook for Elementary Social Studies.* Reading, Mass.: Addison-Wesley Publishing Co., 1967.
    Contains sections on the use of basic concepts for structuring content and concept formation as a teaching strategy.
Tanck, Marlin L., edited by Dorothy McClure Fraser. "Teaching Concepts, Generalizations, and Constructs." *Social Studies Curriculum Development: Prospects and Problems.* Washington, D.C.: National Council for the Social Studies, 1968.
    Article is directed entirely to concept learning in the social studies.

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Wehlage, Gary, and Anderson, Eugene M. *Social Studies Curriculum in Perspective: A Conceptual Analysis.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972.
   Provides an analysis of the fundamental elements found in the social studies curriculum, including concepts and generalizations.
Womack, James G. *Discovering the Structure of Social Studies.* New York: Benziger Brothers, 1966.
   Focuses on the types of social studies generalizations, functions of generalizations, and the relationships of concepts to generalizations.

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