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AUTHOR Eberhart, Nancy A.; Lloyd Margaret V.  
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ABSTRACT

Consisting of nine individualized inservice packets, the Teaching Teen Reading Series describes reading procedures applicable to instruction in all subjects in the elementary, middle, and secondary school. This seventh packet is designed to enable the teacher to utilize a sequential procedure in content reading. The objective of this is to provide students with the necessary skills to read the material, react to the printed word through independent thinking, and acquire the process and meaning of the discipline. Suggested applications with learners are presented for career education and math. A self-corrective posttest, a glossary of terms, and a bibliography are also included for use by the teacher. (LL)

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# The Sequence of the Reading Lesson

ED106759



**Individualized  
Inservice  
Packet  
Number VII**



**EDUCATIONAL  
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## **TEACHING TEEN READING SERIES**

**Ohio Department of Education  
Columbus**

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Prepared by  
Nancy A. Eberhart—Margaret V. Lloyd  
Reading Consultants

Virginia L. Kunkle  
Director, Division of Educational  
Redesign and Renewal

# FOREWORD

The American dream of opportunity through education has been an inspiration and a reality to millions and millions. Equipping students with the skills of reading is fundamental to this essential contribution of our schools. It is well recognized that the ability to read and the active use of reading are cornerstones supporting the foundation of lifetime learning. Personal fulfillment, positive self-concept, participating citizenship, and meeting the demands of job and society are dependent upon effective reading.

All teachers are teachers of reading, individualizing and personalizing learning of all students on the ability spectrum. Without the acquisition of reading skills, the content of any subject area remains untapped and inaccessible between the covers of books. The students presently enrolled in our schools will live part of their lives in the 21st century. The need is to assure them of reading skills with which to cope with the rapid and ever-expanding stockpile of information and book-stored knowledge.

The Department of Education is the agency through which the Ohio General Assembly expresses its response to the will of the citizenry on matters of education. Reflective of this, legislation was enacted which made provision for the department to make available inservice materials and services for elementary and secondary school teachers. Hence, the Division of Educational Redesign and Renewal is responsible for the development of stand-free inservice education materials which may be used individually by teachers or by teacher leaders working together with small groups of colleagues. The materials are designed to give condensed professional information which will meet an instructional need or interest.

Because reading incorporates the principles of accountability for all teachers, **The Teaching Teen Reading Series** was prepared as a helpful resource for the teachers of upper elementary, middle and secondary schools. The content fuses with the use of any print materials supplied within the schools.

The post-Vietnam period offers an opportunity—and an imperative—to strive for excellence surpassing all prior achievements in our nation's scholastic history. It is our hope that these and other inservice materials will be beneficial to teacher endeavor toward achieving that excellence.

*Martin W. Essey*

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# INTRODUCTION

The purpose of this **Individualized Inservice Packet** is to enable the teacher to utilize a sequential procedure in content reading which will provide students the necessary skills to read the material, react to the printed word through independent thinking, and acquire the process and meaning of the discipline.

Commonality exists in the components of a lesson procedure among all subject areas. Exemplary of this, experiential background of students is explored in relationship to the new learning, the meaning of key vocabulary is discussed, purposes for using the subject matter are set, content is read, and meaningful application is provided. Although these procedural steps do not always occur in the same order, they are included in the lesson experience. The teacher determines the areas of the lesson for emphasis, the pacing of the lesson, and the sequence of the procedure based upon daily awareness of the learning status of the students.

The content of this packet does not refer to any particular print material but is intended to be used with the text and supplemental books, reference sets, periodicals, and other print media already on hand.

The **INDIVIDUALIZED INSERVICE PACKET** is a practical resource for teachers who have a question regarding reading instruction which requires a condensed, readily usable answer. It is a means for securing a segment of information for immediate application in the classroom as compared to researching many sources.

A self-instruction process is incorporated beginning with steps of securing instructional information, including suggested uses in content teaching situations, and followed by a self-corrective post evaluation. The packet content is developed to provide the understandings summarized in the post evaluation. This form may be reproduced for the teachers' personal use. The responses may lead to continued study of the packet or to reading of the literature included in the bibliography.

# **THE SEQUENCE OF THE READING LESSON**

## **OBJECTIVE**

To enable the teacher to plan and implement a lesson sequence which will apply to content reading in a curricular area.

## **INSTRUCTIONAL CONCEPT**

The teacher-directed reading of content begins with the teacher's prior preparation and planning. The considerations which take place at this time are addressed to content analysis and the means which will be used to adjust the content to the range of interests and reading skills of the students.

The content is examined for the key concepts and generalizations it presents along with a listing of new vocabulary which carries the author's meaning.

Determinations are made as to how the teaching procedure may be modified in terms of differentiating the instruction to correspond with the reading capabilities and interests of the students. These adjustments include: grouping for particular help; variation of time to recognize ranges in learning rate and the treatment of the content; the objectives to be fulfilled and questions to be answered; and ideas of how to adjust the assignment in terms of enrichment, support, and length.

The instructional sequence embraces the following components:

## **I. Student Preparation for Reading**

### **A. Motivation**

Before the books are used, students are oriented to the content through developing meaningful background information. Graphics, teacher-given information, visual aids, group discussion, or a student report are some of the approaches. Care is taken that this section of the lesson is not so extensive that the need to read is diminished. This is a time when the teacher motivates interest and involves students in desiring to read the selection. The model of the teacher's own interest in the content is a major influence in securing student interest.

### **B. Purpose-setting**

Based upon the teacher's awareness of the concepts to be gained from the content, along with the background orientation and input of the students' related experiences, the teacher and students cooperatively establish what learning is to be acquired through the reading. This thinking may be expressed in the form of questions, an outline of key points, predictions of outcomes, or statements of problems to be solved. It is helpful for a student secretary or the teacher to write the purposes for the reading on the chalkboard. Another way would be for all of the students to write them as a part of notetaking. In addition, some students may want to identify individual purposes for reading.

### **C. Word Analysis and Meaning**

New vocabulary words are presented and discussed in terms of both pronunciation and meaning. The teacher's scan of the content for new and significant vocabulary is a basis for this instruction along with the awareness of the individual student's need for reinforcement of additional vocabulary. The words are written on the chalkboard or transparency, being presented as word units and in a sentence. Word structure is a determinant of which word attack skill may be used.

Although Packet V describes word attack skills and serves as an expanded reference for this particular teaching, the following enumeration is given for the reader's use in lesson planning:

#### **Visual Clues**

configuration—distinctive word shapes, pattern, Gestalt,  
words relating to illustrations, maps, or graphs

### **Meaning Clues**

root words  
prefixes  
suffixes  
compound words  
language usage  
    synonyms  
    homonyms  
    parts of speech  
contextual clues—use of preceding and following content to  
    gain word meaning  
derivation  
technical words which relate to a content area

### **Analytical Clues**

syllabication  
decoding (sounding through a word)

### **Dictionary Use**

guide words  
pronunciation using diacritical markings  
definition for particular content

In dealing with vocabulary, the teacher helps students learn that pronunciation and meaning are as closely related as the opposite sides of the same coin. Prefixes, suffixes, synonyms, homonyms, and derivation are some examples of this relationship.

Efforts are made to have students use the words in sentences and discussion, for reading vocabulary gains meaning as it is first imbedded in spoken language.

## **D. Language Patterns**

Prior to independent silent reading, the teacher also may deal with certain types of sentence patterns similar to those previously noted in the content. For example, complex sentences or the relationship of sentences may be illustrated to build an awareness of what to anticipate in the author's style.

In addition, teachers of subject matter assist students in acquiring reading competencies characteristic of the particular content area. The determination of cause and effect is typical of reading social studies as is the explanation of process in science; or the ability to read with exactness for given facts and what is required to be found out in mathematics. Students are assisted to understand and appreciate the wide range of forms along with figurative language in literature reading.

Some other sample patterns which may be taught at this stage of the lesson are:

    social studies—reading for chronological sequence, to make comparisons, to make judgments regarding fact or propaganda

science—reading for statements of fact, to classify, to follow directions in performing an experiment

mathematics—reading to deal with a problem pattern, to use symbols, formulas, and to adjust to the compactness of the content

In these and other content areas, students are taught the awareness of how to read particular content through the understanding of the style in which it is most generally expressed.

## **II. Purposeful Directed Silent Reading**

Of paramount significance is the student's independent silent reading of the content, for this is the thought-getting, book-using process which results in comprehending meaning—what reading is all about. Silent reading precedes oral reading as students are guided to:

—read for the previously established purposes

—utilize reading techniques which include:

- surveying to learn the organization of the print material (headings, graphics, paragraph and chapter make-up, length)
- skimming to gain an overview
- scanning for troublesome words
- adjusting rate and reading depth for meaning and to fulfill the purpose designated for the reading
- thinking while reading by forming mental pictures, gathering ideas, and making judgments

As need indicates, it may be necessary to teach or reteach these strategies to individuals or groups of readers.

## **III. Teacher Guidance During Independent Silent Reading**

Teachers and students work together during the silent reading of the content. This is when individual help is given in word recognition and the clarification of concepts. The art of the teacher's questions leads to locating main points, detecting unrelated facts, becoming aware of inferences, drawing conclusions, and keeping the reading on target.

During this time the teacher notes word recognition and comprehension differences and uses this information for follow-up teaching.

## **IV. Response to the Silent Reading**

The teacher asks the students to pool information gathered from their silent reading regarding the pre-determined purposes. Students respond and react expressing the meaning

gained from the reading in their own words. Ideas are discussed, evidence is stated, conclusions are drawn, and the significance of the content is evaluated.

## V. Rereading

Rereading may be either silent or oral. Silent reading gives the opportunity to clarify ideas, to assist in recall and to ponder critically. Oral reading may be used to find and prove answers; to support a generalization; to identify a new idea; to defend a conclusion or to read about a character or share a favorite section of the content. Silent reading is the basis for oral reading. Students should prepare to read a section of any length orally. Frequently, the use of the tape recorder is helpful in having students analyze their own oral reading. The model of the teacher's oral reading has great value, as well.

## VI. Application or Transmission

The value of reading lies in its use, not in the mere possession of skills. The meaning of what has been read serves primarily to solve a problem, increase information, and be applied to daily living. In addition, the reading lesson chains into related activities which follow individual interests. Examples of learning translations are: creative writing, independent related reading and research, outlining for recall purposes, notetaking, report writing, communication of ideas gained through art along with the many verbal communications such as discussion, debate, storytelling, drama, and informed conversation.

The steps for directed reading instruction in the content areas do not necessarily always follow the order which has been described. The reading status of the students within the group and the judgment of the teacher determine the sequenced order of instruction. However, it is noted that, although the steps may be reordered, they are planned for and included. Also, students can readily acquire an independent use of the sequential approach to reading; gaining background; setting purposes; surveying for new vocabulary and learning word pronunciation and meaning; surveying the content to determine the organization; reading for meaning; and using the information. In other words, a teaching method models an efficient learning method as well.

## SUGGESTED APPLICATION WITH LEARNERS

# I CAREER EDUCATION

### Content Example—Periodicals

**ARCTIC JOURNEY**  
Dick Harrington pursued the quest for the North Pole.

Coppermine, a frontier trading post located on the northern tip of Cornwallis Gulf in the eastern Canadian Arctic, was Harrington's starting point from the Arctic. He and three other men, including a geologist, set out on a 30-day journey into the interior of the Arctic.

In the day and a half it took to reach the first camp, a single mountain peak loomed in the distance. The mountain was a way from the mountains of the Rockies.

For the first 100 miles of the journey, the men traveled through the land of a tundra. The tundra is a flat, open plain with low-lying vegetation. The temperature is below freezing, and the wind is strong. The men had to wear heavy clothing and use special equipment to survive.

A steady, easterly wind blew across the tundra. Harrington had a perfect storm. The wind was strong and steady, and the temperature was just what he needed. The wind was a perfect ally. The temperature was just what he needed. The wind was a perfect ally. The temperature was just what he needed.

Harrington had never before in his life. The temperature was just what he needed. The wind was a perfect ally. The temperature was just what he needed. The wind was a perfect ally. The temperature was just what he needed.

Dotted line shows course of Harrington's trip in Arctic from Coppermine (A) to Ferry River (B) and Cambridge Bay (C).

Excerpt James B. Goiden, *Parade Publications, Inc.*

## SUGGESTED TEACHING—LEARNING ACTIVITIES

### Teacher Planning—Objectives

1. To utilize a true story to introduce the career in photography.
2. To enable the students to appreciate personal sacrifice in order to engage in rewarding work.
3. To provide students the experience of reading a style which conveys information through forceful description.

### Teacher Planning—Analysis of Content

#### Vocabulary

meager trading post  
lies athwart  
rigorous domain  
free-lance photographer  
solitude

#### Concepts

location of Coppermine  
environmental conditions  
extent of the Arctic adventure  
understanding of the main character  
appreciation of the work ethic  
comparison of the careers involved

#### Language Pattern

The style is journalistic reporting with an impact of information through effective description.

#### Questions / Directions

(Literal comprehension using the purpose-setting formula)

1. About whom is the article written?
2. Where does the adventure take place?
3. What is Harrington's new career?
4. How long will the adventure last?

(Interpretive comprehension)

1. Read to give your feelings about what it would be like to live at Coppermine.
2. Compare Harrington's two careers.
3. Give your impression of Harrington as a man.
4. Why do you think Harrington's new career meant a great deal to him?
5. Predict what you think Harrington's accomplishment in his new career may be.

## Student Reading Activities—Instructional Steps

### Motivation

For example, a student may show his pictures of visits to the historical mounds of Ohio: Fort Ancient, Hopewell, and Adena. Leading from this presentation, the students discuss photography as a hobby and also as a career. The career aspects include the personal qualifications which would be needed, work factors such as the involvement of extensive travel, and whether the work may be self employment or for an employer. At this point, the teacher introduces the article which tells about a man who chose photography as a career.

### Purpose Setting

After examining the illustrations and map which accompany the article, the students cooperatively establish purposes for reading the content. A student secretary lists these on the chalkboard.

1. To discover why the article is entitled an adventure.
2. To learn about the photographer's subjects and to determine if they are in any way similar to the ancient mound builders in Ohio.
3. To find out the advantages and disadvantages of working as a photographer.

### Word Analysis and Meaning

Students scan the article for new vocabulary and key words and learn their pronunciation and meaning. The words are listed by the teacher first as word units and then written in context. The teacher guides the selection of word attack approaches to be used.

- meager trading post—contextual clue  
(a small out-of-the-way store where merchandise is traded for goods—meager is noted as an adjective)
- lies athwart—dictionary use  
(a-thwart. thwart; a nautical term meaning across the course of)
- rigorous domain—phonetic analysis  
(do-main: a two syllable word—dō mān—The syllables are counted noting the o and the vowel diphthong ai)  
(locate the meaning of territory to fit into the content—rigorous is noted as an adjective.)
- free-lance photographer—contextual clue proven by dictionary use  
(to act or work as a free lance: compare with writers, artists, carpenters, and the like)
- solitude—phonetic analysis  
(sol/i/tūde: develop with synonyms—living alone; lonely; seclusion; isolation)

Students use the words in their own sentences to indicate grasp of meaning.

### Language Pattern

The teacher calls attention to the style of the writer who compacts information by structuring imagery through the use of meaningful modifying words.

### Silent Reading

The student follows the silent reading technique:

- Review the purposes for reading.
- Survey for organization of content (sequence, length of selection, number of paragraphs, placement of detail).
- Skim for overview. The teacher's questions for literal comprehension serve as guidelines.
- Read in depth to fulfill the purposes set for reading.

### Silent Reading Response

The students pool their information in discussing the purposes which were set prior to the silent reading. In addition, the teacher asks the questions which were previously planned to stimulate interpretive comprehension. During the discussion, students read orally the parts of the article to prove or enlarge the points which they have made.

The oral reading should evidence the understanding of the content, fluency, clear enunciation and the use of punctuation symbols.

### Application

1. Some students may research and report on types of camera equipment a commercial photographer uses.
2. Related reading is provided regarding the careers of successful commercial photographers.
3. Students may write a creative story about the work of a freelance photographer.

**Suggested  
Criterion  
Referenced  
Measurement**

Given reading experiences, students will draw inferences regarding the work of a career photographer

### SUGGESTED APPLICATION WITH LEARNERS

## 2 MATHEMATICS

### Content Example—Measurement



In 1790, the French National Assembly directed its Academy of Science to "deduce . . . an invariable standard for all the measures and all the weights."

Those scientists decided the basis for such a system should be both natural and permanent. With inherent simplicity and sense they determined that basis would be the earth itself. They carefully calculated the distance of the arc from the Equator to the North Pole, then divided that distance by 10 million.

Each of these divisions—the future standard for length, was called a meter from the Greek word for measure, *metron*. (A meter in the customary system is equivalent to 39.37 inches, slightly longer than a yard.)

All other basic units of measurement—for area, volume and weight—were directly related to the meter, using 10 as the unit for multiplying or dividing so that calculations could be made by simply moving a decimal point.

Multiples and divisions of the basic units are indicated by Greek or Latin prefixes.

#### THEY ARE

• KILO—1000	• DECA—10	• CENTI—0.01
• HECTO—100	• MILLI—0.001	• DECI—0.1

Thus, the prefix "centi" added to meter indicates that one centimeter is equal to 0.01 meter. Similarly, the prefix "kilo" (1000) added to the suffix "gram" indicates that 1 kilogram is equal to 1000 grams.

For the average layman, it will only be necessary to memorize and use about ten units for daily life.

- METER—a bit longer than a yard (about 39 inches)
- MILLIMETER—0.001 meter (thickness of a dime)
- CENTIMETER—0.01 meter (about 0.4 inch)
- KILOMETER—1000 meters (about 0.6 mile)
- GRAM—five are the weight of a nickel
- KILOGRAM—1000 grams (about 2.2 pounds)
- LITER—slightly larger than a quart, 1.07 qu.
- MILLILITER—0.001 liter (five make a teaspoon)
- HECTARE—2.5 acres
- TONNE—slightly more than a short ton

Excerpt Article by Steve Meiring, Mathematics Supervisor, Ohio Department of Education  
*Columbus Dispatch*, June 20, 1974, p. 45A

## SUGGESTED TEACHING—LEARNING ACTIVITIES

### Teacher Planning—Objectives

1. To use the article as an introduction to metric measurement.
2. To enable students to perceive mathematical relationships in metric measurement.
3. To encourage students to read for the main ideas which support the headline.
4. To assist students in understanding and use of the prefixes and suffixes which indicate a metric unit.

5. To nurture the drawing of inferences through the comparison of the known customary measurement system and the new information regarding the metric system.

### Teacher Planning—Analysis of Content

#### Vocabulary

deduce an invariable standard	kilometer	gram
inherent simplicity	hectometer	kilogram
customary system	dekameter	liter
distance of the arc	decimeter	milliliter
meter	centimeter	hectare
	millimeter	tonne

#### Concepts

Metrication is a method of measurement. The customary system is commonly used in the United States. The meter was calculated on an unvarying, permanent source. All other basic units of metric measurement, directly related to the meter, are calculated by multiplying or dividing by ten. Latin and Greek prefixes note the multiples and divisions of the meter.

#### Language Pattern

The writer's style is journalistic reporting with hard information. The mathematics references are more condensed than the narrative.

#### Questions

(Literal comprehension using the purpose-setting formula)

1. When was the system of metric measurement devised?
2. Who created the metric system?
3. What are the basic units of measurement?
4. What is the length of a meter expressed in customary measurement?

(Interpretive comprehension)

1. Why is the metric system invariable?
2. How are the metric units of measurement related?
3. Compare the metric and customary measurement systems in terms of simplicity, relationship of units and uniformity.
4. What do you view as the advantages or disadvantages of the system of metric measurement? Why?

### Student Reading Activities—Instructional Steps

#### Motivation

Having seen road signs expressing distance in kilometers along with noting volume or weight stated in metric measurement on labels of products in the markets, students initiate the interest to learn about metric measurement. The article is used as an example for introducing metrication along with many other books and periodicals.

### Purpose Setting

Students discuss what they want to learn from the article and state these purposes in the form of questions which they write on scratch pads.

1. Why was the metric system originated?
2. How was the metric system created?
3. Which is larger, a meter or a yard?
4. What are the other units of measurement in the metric system?

### Word Analysis and Meaning

Students scan the article for new vocabulary and key words and learn their pronunciation and meaning. The words are listed by the teacher first as word units and then written in context. The teacher guides the selection of word attack approaches to be used.

- deduce invariable—standard dictionary use  
(de-duce—dY-dūs—to derive as a conclusion from something known)  
  
(in / var / i / able—Meaning clue—root word—vary; prefix—in—meaning not; suffix—able—meaning able to)  
total word—meaning not able to vary or change
- customary system—teacher explanation  
This is the measurement system commonly used in the United States. The students list the terms: inch, foot, yard, mile, ounce, pound, bushel, acre, pint, quart, gallon.
- distance of the arc—dictionary use—or recall from geometric vocabulary  
arc—ärk—any part of a circle or curved line

### Metric Terms—Prefix Table

Greek Prefixes		Latin Prefixes	
kilometer	kilo—1000	decimeter	deci—0.1
hectometer	hecto—100	centimeter	centi—0.01
dekameter	deka—10	millimeter	milli—0.001

### Metric Terms—Suffix Table

meter—measure of length  
liter—measure of volume  
gram—measure of weight  
hectare—dictionary use  
hec-tare—hek / tar—meaning surface measure—or look up are—one hundred square meters—add prefix and arrive at the meaning of 100 ares or 10,000 square meters.  
tonne—derivation  
meaning—a little under a short ton

### Language Pattern

The teacher calls attention to the content which is narrative in nature followed by mathematical relationships.

## Silent Reading

The student follows the silent reading technique:

Review the purposes for reading

Survey for organization of content learning. The narrative section may be read fairly rapidly and slower rereading will be required for the mathematics relationships. A table is included for summarization of meaning.

Skim for overview. The teacher's guidelines for literal comprehension serve as guidelines.

Read in depth to write answers for the purpose-setting questions.

## Silent Reading Response

The students share their written notes regarding the answers to the questions they identified. They respond at this time to the interpretive comprehension questions which the teacher has previously prepared. The comparison of the customary and metric measurement systems is answered cooperatively by students writing notes on the outline placed on the chalkboard:

Customary System	Metric System
units	simplicity
relationships	variability
	uniformity

Oral reading is used to prove a point or reinforce relationships. During oral reading of any length the teacher is a diagnostic listener noting problems in the mechanics of reading or meaning of the content.

## Application

1. Following additional reading, students may prepare and debate the advantages and disadvantages of the metric system of measurement.
2. Some students may prepare a bulletin board classifying measurement units of the two systems, using the headings of

Length    Volume    Weight

3. Another assignment may be to research the origins of the units of the customary system and prepare a written or oral report.
4. An illustrated time line may be prepared to show the development of the customary system.
5. Additional reading may be done to find out: (a) which countries use metric measurement, (b) the present uses within the United States.
6. Students may prepare activity cards which give directions for others to measure items which are used in everyday life, using metric units.  
Example: How many meters is our hallway? How tall is Tom?
7. Scrapbooks may be prepared with picture collections of the uses of metric measurement.

**Suggested  
Criterion  
Referenced  
Measurement**

Given reading experiences, students will acquire the understanding of metric units and their coherence

# BIBLIOGRAPHY

- Artley, A. Sterl. "Are There Any Real Differences Between Reading Instruction in the Elementary and in the High School?" *Current Issues in Reading*, Vol. 13, Part 2, *Proceedings*, 13th Annual Convention, International Reading Association (1969).
- Collins, Douglas M., "Are We Really Improving Reading in the Content Fields?" *Current Issues in Reading*, Vol. 13, Part 2, *Proceedings*, 13th Annual Convention, International Reading Association (1969).
- Early, Margaret. "Are There Any Real Differences Between Reading Instruction in the Elementary and in the High School?" (pro challenger), *Current Issues in Reading*, Vol. 13, Part 2, *Proceedings*, 13th Annual Convention, International Reading Association (1969).
- Herber, Harold L., *Teaching Reading in Content Areas* (Frentee-Hall, 1970), Ch. 3.
- Huus, Helen. "Innovations in Reading Instruction: At Later Levels," *Innovation and Change in Reading Instruction*, 67th Yearbook of the National Society for the Study of Education, Part 2 (University of Chicago Press, 1968).
- Karlin, Robert, *Teaching Reading in High School* (Bobbs-Merrill, 1964).
- Niles, Olive S., "Reading Skills Common to the Content Areas," *Fusing Reading Skills and Content*, H. Alan Robinson and Ellen Lamar Thomas, eds. (International Reading Association, 1969).
- Robinson, Helen M., "Adapting Rate of Reading to Purpose and Materials," *Guidebook, Dimensions* (Scott Foresman, 1967).
- Shores, Harlan J., "Developing Purposeful and Flexible Reading in Grades Four Through Eight," *Recent Developments in Reading*, Supplemental Educational Monograph No. 95 (University of Chicago Press, 1965).
- Smith, Nila B., "Patterns of Writing in Different Subject Areas," *Journal of Reading*, 8 (October-November, 1964), 31-37, 97-102.
- Spache, George D., *The Teaching of Reading, Methods and Results: An Overview* (Phi Delta Kappa, 1972), Chapter 6.
- Stauffer, Russell G., *Teaching Reading as a Thinking Process* (Harper and Row, 1969), Chapters 2, 3 and 4.
- Zimtz, Miles V., *The Reading Process* (William C. Brown, 1970), 82-84, 254-257.

# SELF-CORRECTIVE POST TEST

1. Name two planning components which the teacher acquires from prereading the content.  
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.....
2. List four commonly used word attack skills  
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.....
3. Indicate three types of purpose-setting goals which may be established for silent reading.  
.....  
.....  
.....
4. Outline the steps in the silent reading technique
  - a.
  - b.
  - c.
  - d.
  - e.
5. Enumerate four related follow-up activities in which students may use content reading  
.....  
.....  
.....  
.....
6. Summarize the instructional steps for a lesson in content reading.
  - a.
  - b.
  - c.
  - d.
  - e.
  - f.



# COMPETENCY CRITERIA

The following characteristics of effective content-related reading instruction may serve as self-appraisal guidelines.

Students are enabled to gain information, knowledge, wisdom and enjoyment from reading, for my teaching procedures include:

- \_\_\_\_\_ Planning and tailoring my teaching to accommodate the wide range of reading strengths and weaknesses represented within the class.
- \_\_\_\_\_ Fusing reading with other components of language (listening, speaking, and writing) to reinforce meaning.
- \_\_\_\_\_ Relating the content to the varied experiential background of the students.
- \_\_\_\_\_ Encouraging students to react to the meaning of print content by thinking critically about it.
- \_\_\_\_\_ Utilizing many types of reading sources comprising multi-readability levels.
- \_\_\_\_\_ Teaching vocabulary and comprehension skills on various levels to assure that all students experience success.
- \_\_\_\_\_ Guiding silent reading through pre-reading preparation, vocabulary assistance, and skillful questioning.
- \_\_\_\_\_ Providing for varied uses of reading in problem solving, gaining information, and enjoyment.
- \_\_\_\_\_ Modeling positive attitudes for students by being a high interest reader myself.
- \_\_\_\_\_ Being committed to improve reading abilities and book interest within the class and school.