DOCUMENT RESUME

ED 278 961   CS 008 694

AUTHOR   Armbruster, Bonnie; And Others
TITLE   The Collaboration to Improve Reading in the Content
                Areas (The CIRCA Project). Reading Education Report
                No. 65.
INSTITUTION   Bolt, Beranek and Newman, Inc., Cambridge, Mass.;
                Illinois Univ., Urbana. Center for the Study of
                Reading.
SPONS AGENCY   National Inst. of Education (ED), Washington, DC.
PUB DATE   Apr 86
CONTRACT   400-81-0030
NOTE   51p.
PUB TYPE   Reports - Research/Technical (143)

EDRS PRICE   MF01/PC03 Plus Postage.
DESCRIPTORS   *Content Area Reading; *Cooperative Programs;
                Elementary Secondary Education; History;
                *Instructional Materials; *Reading Improvement;
                Reading Research; *Reading Skills; *Research Design;
                Research Projects; Study Skills; Teaching Methods;
                Theory Practice Relationship
IDENTIFIERS   Chicago Public Schools IL; *CIRCA Project;
                Collaborative Research

ABSTRACT
                The Collaboration to Improve Reading in the Content
Areas (CIRCA) project, a collaborative effort between the Center for
the Study of Reading and the Chicago Public Schools, is described in
this paper. Noting that the project was designed to translate
research about content area reading into practice, the first section
briefly discusses the background of the project and the development
of CIRCA instructional materials. The second section, comprised of
two parts, first discusses the following components of the CIRCA
materials: (1) a summary text, which includes essays about United
States history, a glossary matrix, and a timeline matrix; (2) a
student handbook, in which all of the lessons contain one to three
activities presented in a set format; and (3) a teacher manual, in
which all of the lessons contain a one-page overview, a lesson plan,
and an appendix. This is followed by a description of the research
basis and rationale for each major skill and strategy instruction
contained in the materials. Reading/studying skills and strategies
identified include: a four-step general studying strategy, organizing
information, developing vocabulary, and exploring question/answer
relationships. Writing skills and strategies identified include use
of the informative mode, and point of view. A reference list and 20
figures are provided. (JD)

CENTER FOR THE STUDY OF READING

Reading Education Report No. 65

THE COLLABORATION TO IMPROVE
READING IN THE CONTENT AREAS
(The CIRCA Project)

Bonnie Armbruster, Thomas Anderson, Jean Osborn
University of Illinois at Urbana-Champaign

Beverly Cox, Larry Friedman, Beau Jones
Sy Karlin, Mary Kazarian, Barbara Martin
Beverly Walker
Chicago Board of Education

April 1986

University of Illinois
  at Urbana-Champaign
51 Gerty Drive
Champaign, Illinois 61820

Bolt Beranek and Newman, Inc.
10 Moulton Street
Cambridge, Massachusetts 02238

Abstract

This report describes a curriculum that is the result of a collaborative enterprise between the Center for the Study of Reading and the Chicago Public Schools. The collaborative enterprise is called the CIRCA project (Collaboration to Improve Reading in the Content Areas). The report describes the background and goals of the project, as well as the instructional materials produced and the skills and strategies taught.

Part 1. A Brief History

Background and Purpose

The CIRCA project began in 1981. At the direction of the National Institute of Education, the Center for the Study of Reading took on a new mission--a close working relationship with an urban school district in the area of reading. Chicago became the willing partner, and reading in the content areas became the target.

Reading in the content areas was chosen as the target of the CIRCA project for several reasons: (1) a great deal of what children learn in school must be learned from reading their content area textbooks; (2) many children have difficulty learning as they read these textbooks; (3) many content area teachers do not have the training, time, or inclination to help children with their reading difficulties; and (4) much of the research conducted at the Center for the Study of Reading had studied how children read to learn from content area text.

The primary objective of the CIRCA project was to translate research about content area reading into practice. The intent was to apply research in cognitive science and reading to teaching reading. The decision was made to develop instructional materials to teach skills and strategies that would enable students to learn more effectively from their content area textbooks.

To accomplish this goal, the CIRCA project was established as a technical service unit within the Chicago Public Schools under the Bureau of Social Studies, within the Department of

Curriculum. CIRCA was staffed by personnel from both the Chicago Public Schools and the Center for t .udy of Reading. The core Chicago CIRCA staff consistec 'o instructional developers, one historian, one philc :, three classroom teachers, and a secretary. The core 'r for the Study of Reading staff included two senior scienti.ts. The CIRCA project was housed at the Board of Education offices in Chicago.

The CIRCA project began with the ontent area of United States history at the intermediate (7th and 8th grade) level. U. S. history was selected because it i. a subject taught nationwide, and it is usually taught at the 5th, 8th, and 10th grade levels; therefore, the materials developed would have broad applicability. In this report, "the CIRCA materials" refer to the instructional materials that were developed for a one-year curriculum in U.S. history at the 7th- and 8th-grade level.

Development of Materials

The actual writing of CIRCA materials began in 1983. First, the content of U. S. history was divided into four eras, or time frames, and the eras were further divided into 10 units of study. The unit titles are listed in Table 1.

Insert Table 1 about here.

Each of the ten units was developed in the following way. First, the CIRCA staff historian wrote the Summary Text essay for the unit. (See part II for a description.) She began with a careful reading of five to eight popular eighth-grade level

United States history textbooks for the target historical period.

Then the historian/writer summarized the important information

included in most or all of the textbooks. The accuracy of the

information in the Essays was checked by several historians hired

as consultants to the project. A graphic artist then prepared

appropriate accompanying graphics for the essay.

After the essay had been written, Vocabulary Matrix pages for

key vocabulary words were prepared. (See Part II for a

description.) The Vocabulary Matrix entry words and related

words were selected on the basis of their importance and

frequency in the resource textbooks and the essay.

Next, the CIRCA staff developed a Scope and Sequence chart

for the unit which identified for each lesson: (a) the target

content (the section of the essay to be read), (b) the vocabulary

to be introduced, and (c) the skills and strategies to be taught

or practiced. The CIRCA staff planned activities for teaching

all of these items and briefly described them on the Scope and

Sequence chart which also identified the research projects and

quizzes and tests for the unit.

Working from the Scope and Sequence chart, a team of five

writers (an instructional developer, a philosopher, and three

classroom teachers) developed the lessons which were reviewed by

members of the CIRCA staff and then revised. Next, the materials

were reviewed by the Department of Social Studies and a team of

editors at the Chicago Board of Education.

At all stages of development, the two senior scientists of

the Center for the Study of Reading staff worked closely with the

Chicago CIRCA staff. Center staff gave feedback on the essays, helped to develop the Scope and Sequence chart, and provided advice and feedback on the lessons.

In Spring, 1984, six Chicago teachers piloted the first four units of the CIRCA materials. Throughout, the CIRCA staff remained in close contact with the pilot teachers, noting their questions, comments, and suggestions. At the end of the school year, the pilot teachers participated in a one-day workshop, designed to obtain in-depth feedback about the CIRCA materials. On the basis of the pilot teachers' feedback, the first four units of the materials were revised over Summer, 1984, and work was begun on the remaining units of instruction.

In Fall, 1984, a field test/evaluation of the materials was undertaken. The major questions addressed were (1) how are the CIRCA materials being implemented? (2) how does the instruction affect student learning?, and (3) how do teachers and students like the materials? On the basis of the field test data, materials were revised once again during Summer, 1985, in preparation for a broader dissemination effort in the 1985-86 school year.

Due to budget restrictions, the Center for the Study of Reading was forced to withdraw its financial contribution to the CIRCA project as of September 30, 1985, as the last round of revisions was being completed. Shortly thereafter, the Chicago Board of Education also withdrew its support of the project. Consequently, the CIRCA materials have not been printed in final form and are not available for dissemination.

Part II of this report describes the CIRCA materials as they currently exist. It describes (a) the components of the CIRCA materials, and (b) some of the major skills and strategies taught in the CIRCA materials.

Part II. The Instructional Materials

Components

The CIRCA materials consist of three components: a Summary Text, a Teacher Manual, and a Student Notebook. These three components are described below.

Summary Text

A major goal of the CIRCA project was to help students read, study, and learn from their regular classroom textbooks. However, many different American history textbooks are used in Chicago classrooms, and some classrooms have no textbooks. Therefore, the decision was made to write a "Summary Text." This text contains important historical content that serves as a common reference for instruction, no matter what textbook is being used in the classroom.

The Summary Text has three parts: Essays about the content of United States history, a Glossary Matrix, and a Timeline Matrix.

Essays. The Summary Text essays were written using the best available knowledge about characteristics of informational text that make it "considerate," or easy for the reader to read and learn from (see, for example, Anderson & Armbruster, 1984; Duffy & Waller, 1985; and Jonassen, 1985). The writers worked to make the text as readable and appropriate to the audience as possible

by attending to vocabulary and sentence structure, by organizing it clearly and logically, by carefully monitoring the coherence of the text, and by incorporating informative graphic aids. Some features of each of the essays include:

(a) An introduction and conclusion. The introduction presents an overview of content to be covered in the unit as well as a description of how the unit is organized. The conclusion briefly summarizes the important ideas or "trends" of the unit and relates them to the next unit.

(b) Clear signalling of important content. Frequent headings and subheadings convey main ideas. In early units, each subheading is in the form of a question about the "main idea," which establishes a purpose for reading and directs attention to important ideas. Throughout the materials, the organization of the Essays is further signaled by expressions such as "First, second, third," and "On the one hand. . . On the other hand. . ."

(c) Graphic aids. Many types of graphic aids appear in the essays: maps, diagrams, charts, graphs, pictograms, political cartoons, and reproductions of original source documents. The graphic aids complement and reinforce the content. In order to relate the graphics directly to the text, captions usually include brief quotes from the relevant section of the text.

An example of a Summary Text page appears in Figure 1. Examples of some graphic aids are presented in Figures 2-5.

Insert Figures 1-5 about here.

Glossary Matrix. The Glossary Matrix is a glossary developed specifically for the CIRCA project. The Glossary Matrix is intended to encourage vocabulary growth by providing rich definitions and associations for important content words. The Glossary Matrix precedes the Essay in the Summary Text.

An example of a page from the Glossary Matrix appears in Figure 6.

Insert Figure 6 about here.

The Glossary Matrix has the following components:

(a) Entry - an important historical concept.

(b) Categories--Political, Economic, Social/Cultural, and International--with which the entry is most closely related. The entry words are assigned to categories so that students will know the broad domain with which the concept is associated.

(c) Definition - a standard definition for the Entry word within the relevant historical context.

(d) Key Features - a list of critical features of the concept given as an alternate form of the definition.

(e) Examples - important examples of the concept, where appropriate.

(f) Highlights - additional, interesting information about the entry word, in the form of text, graphics, or both.

(g) Sentence Context - a sentence that relates the Entry word to the historical context.

10

(h) Related Words - words that are related in meaning to the entry word. Related words are defined and used in a context sentence that explicitly connects them with the Entry word.

To determine the words to include in the Glossary Matrix, the vocabulary of several popular intermediate level American history textbooks was systematically analyzed. Those words appearing most frequently across textbooks and also appearing in the Summary Text were included in the Glossary Matrix.

Timeline Matrix. Like a regular timeline, the Timeline Matrix is a chronological record of important historical events. It differs from a regular timeline in that the events are classified into the same four categories used in the Glossary Matrix (political, economic, social/cultural, and international). Since events are seldom associated with only one of the categories, however, the events are usually also cross-referenced to other relevant categories. An example of a Timeline Matrix page appears in Figure 7.

Insert Figure 7 about here.

Student Notebook

There is a consumable Student Notebook for each unit which contains 12 to 15 lessons per unit. All lessons have the following organization.

Activities. One to three Activities are a part of every lesson, while Homework Activities are suggested for some lessons.

Each Activity involves students in an exercise designed to help them learn how to read and study more effectively. Most Activities require written student responses; the Student Notebook provides the space for such responses.

When a reading/studying strategy is first introduced in an Activity, it is presented in a "Reference Box." Reference Boxes contain an explicit explanation of the reading/studying strategy. Designed to provide an easy reference, these boxes appear when a strategy is first used. When the strategy recurs in subsequent lessons, students are referred back to the Reference Box.

Appendix. The Appendix contains copies of all Reference Boxes used in the instruction.

Teacher Manual

The Teacher Manual contains lesson plans for the 12-15 lessons included in each unit, facsimiles of the student activities that are a part of every lesson, and quizzes and unit tests. All lessons have the following organization.

Overview. The one-page Overview lists:

(a) brief statements about the most important content in the lesson,

(b) vocabulary words from the Glossary Matrix included in the Essay reading for the lesson,

(c) other vocabulary words appearing in the Essay reading that may need to be taught, and

(d) descriptive titles for Activities appearing in the lesson.

Lesson Plan. The lesson plan itself provides direction for one to three Activities designed to guide students in reading and studying the content for that lesson. The lesson plan includes:

(a) an explicit explanation of reading/studying strategies and recommendations for teaching the strategies. When a strategy is first introduced, information about the strategy appears in a Reference Box that is identical to the Reference Box in the Student Notebook. When the strategy recurs in subsequent lessons, the teacher is referred back to the Reference Box,

(b) recommendations for discussion, review, and explanation of content, and

(c) facsimiles of Activities appearing in the Student Notebook, including example answers where possible.

Appendix. The Appendix contains copies of all Reference Boxes used in the instruction.

The next section describes the major skill and strategy instruction contained in the CIRCA materials, including the research basis and rationale for each.

Skill and Strategy Instruction

General Description

Skill and strategy instruction in the CIRCA materials is functional. In functional instruction (1) the skills and strategies taught are those that readers need in order to understand what they are reading, (2) the skills and strategies are taught as students read the text, and (3) the text is assigned in order to teach content rather than to teach reading

skills and strategies (Herber, 1978). The CIRCA materials match these criteria: Students are taught the skills and strategies that they need in order to understand the content; the skills and strategies are taught as students need them; and the text is assigned in order to teach United States history rather than to teach reading skills and strategies.

The instruction includes the three main factors that Brown and her colleagues (Brown, Bransford, Ferrara, & Campione, 1983; Baker & Brown, 1984) have identified with successful cognitive skills training programs: (a) training and practice in the use of task-specific strategies (skills training); (b) instruction in coordination and monitoring of these skills (self-regulation training), and (c) information concerning the significance and outcome of these activities and their range of utility (awareness training).

In keeping with current thinking about the most effective way to teach comprehension and study skills (Anderson, Hiebert, Scott, & Wilkinson, 1985; Baumann, 1984; Palincsar & Brown, 1984; Paris, Cross, & Lipson, 1984; Patching, Kameenui, Carnine, Gersten, & Colvin, 1983), the instruction is explicit and direct. It specifies the steps students can use to execute the strategies, offers concrete models or examples, provides for plenty of practice, and prescribes feedback on performance.

The instruction moves from teacher direction to independence. That is, when strategies are first introduced, the teacher directs the instruction, and the student responses are

heavily prompted. As students become more familiar with a strategy, the prompts are removed, and students receive guided practice toward independence.

The next section discusses the skills and strategies taught in CIRCA materials. They are divided into those related to reading and studying and those related to writing.

Reading/Studying Skills and Strategies

The following are the most important reading/studying skills and strategies in the CIRCA materials.

SPaRC (Survey, Predict, Read, Construct). SPaRC is a four-step general studying strategy that can be applied to any content. First, students survey the text by skimming headings, subheadings, and graphics, and reading introductions and overviews. Then, students use the information they have gathered while surveying, as well as their prior knowledge of the topic, to predict what they will read about. Students then read the text, checking their predictions and noti;g other important information. Finally, in the construct step, students generate an oral or written product reflecting what they have read.

The steps of SPaRC correspond closely to recognized stages of reading and studying: prereading, reading, and postreading. For example, the Directed Reading Activity (Betts, 1946), used extensively in basal reader lessons, is organized around these three stages. Anderson (1978) attributes the same three stages to mature studying behavior. The Survey and Predict steps of SPaRC are prereading activities. These steps help students activate their prior knowledge of the topic, focus their

attention on important information, and set a purpose for reading. In the postreading stage, the Construct step of SPaRC helps students organize and integrate what they have learned. These steps are generally agreed to be critical processes in meaningful learning from reading (Mayer, 1984; Tierney & Cunningham, 1984).

SPaRC is designed to help students proceed independently through all three stages of reading and studying. In this respect, SPaRC is similar to the family of studying strategies related to the popular SQ3R method (Survey, Question, Read, Recite, and Review [see Robinson, 1946]). However, SPaRC differs from these methods in two important ways. First, students survey many parts of the text, including headings, introductions, graphics, and vocabulary, as well as their own prior knowledge, in preparing to make a prediction. Second, students create a specific oral or written product as a postreading activity.

The SPaRC strategy is used with all content in the CIRCA materials. Students are first carefully guided through the steps. By the end of the curriculum, students are using the strategy fairly independently, although the Activities in the Student Notebook still direct them to complete all the steps.

Organizing Information

The ability to organize information is important if students are to learn from reading their content area textbooks (Mayer, 1984; Shimmerlik, 1978). Therefore, the CIRCA materials give particular emphasis to teaching strategies for organizing information from content area textbooks.

Perhaps the most important way the CIRCA materials teach students to organize information is by using "frames." Frames, diagrams that depict patterns of organization in the content, define categories of important information associated with concepts and show how these categories are related. In other words, frames identify the "main idea" of the content. Frames are also general in the sense that they can be applied to several examples of the same type of content. Thus, frames can be used in independent study with other history or social studies texts.

A major frame in the CIRCA materials is the "Action Frame." The Action Frame makes use of the parallel between the structure of stories and the structure of historical episodes (Armbruster & Anderson, 1984) to help students achieve at least one level of understanding history. In stories, characters have goals or face problems, they act to reach the goal or solve the problems, and their actions result in outcomes. In addition, in historical episodes. groups of people, institutions, or nations have goals, take actions, and experience results. These three causally connected categories of information--Goal, Action, Results-- comprise the Action Frame.

The Reference Box for the Action Frame as it appears in the Teacher Manual and Student Notebook is presented in Figure 8. Note that scudents are taught to associate each category of information with a question which they can ask of the text they are reading.

Insert Figure 8 about here.

CIRCA materials also include two variations of the Action Frame: The Interaction Frame (Figure 9), which is appropriate for interactions involving conflict or cooperation between two groups and the Problem-Solving Frame (Figure 10), which provides a closer analysis of the problem-solving episodes than does the Action Frame.

Insert Figures 9 and 10 about here.

Another frame in the CIRCA materials is the Chain of Events Frame (Figure 11). Since it lacks identified categories of content, the Chain of Events Frame is not a frame in the strictest sense, but it does provide students with a strategy for organizing repeated patterns of information. With the Chain of Events Frame, students identify a chain of causally and temporally related events to answer questions of the form "What chain of events led to some new event?" (for example, What caused the Dust Bowl of the 1930's?) or "How/Why did one situation or state change to another situation or state?" (for example, How did feudalism change to nationalism?).

Insert Figure 11 about here.

18

Frames are used in all steps of SPaRC. Students use their knowledge of frames as they are surveying text and predicting the organization and content of the material. During and after reading, students record notes in "blank" frames (where only the category labels are provided). Finally, students use frames in the Construct step as the basis for writing summaries or other pieces.

Besides teaching a few broadly generalizable frames, the CIRCA materials also teach students to organize information into "compare-and-contrast charts." Figures 12 and 13 show two of the compare-and-contrast charts students use to organize information and to make comparisons and contrasts. In later units, students are taught to formulate analogies from compare-and-contrast charts (Figure 13). Just as they use frames, students also use compare-and-contrast charts as a framework for taking notes and as a basis for writing summaries.

Insert Figures 12 and 13 about here.

Vocabulary Development

Learning new vocabulary words and concepts is an intrinsic part of learning from content area textbooks. In the CIRCA materials, the purpose of teaching vocabulary is not only to aid comprehension of a specific passage but also, and probably more importantly, to help students learn and remember new historical concepts.

19

In CIRCA vocabulary instruction, words are taught in relationship to other words that are closely related in meaning. This approach is an important feature of successful vocabulary instruction in several research studies (Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983) and is advocated in at least one methods textbook on teaching vocabulary (Pearson & Johnson, 1978).

The focus of CIRCA vocabulary instruction is the Glossary Matrix, described earlier in this report. Vocabulary Activities ensure that students have a thorough understanding of the interrelationships among all the words on a given page of the Glossary Matrix. For example, in the Activity shown in Figure 14, students are required to use their knowledge of **corruption** (Entry), **graft**, and **scandal** (Related Words) to answer questions about a short selection illustrating all three concepts. Other vocabulary activities have students use analogies to explore similarities and differences among concepts, as shown in Figure 15.

Insert Figures 14 and 15 about here.

In keeping with research showing facilitative effects for preteaching vocabulary (Kameenui, Carnine, & Freschi, 1982; Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983), the CIRCA materials provide vocabulary instruction <u>before</u> students read a selection containing the target vocabulary.

Question-Answer Relationships

Research has shown that instructing students in the relationship between questions and the sources of information required to answer those questions improves comprehension; this finding is particularly true for lower achieving students (Raphael & Pearson, 1985). Therefore, the CIRCA materials include instruction on the three major types of Question-Answer Relationships taught in the Raphael-Pearson study, which in turn were based on the question taxonomy proposed by Pearson and Johnson (1978). In the CIRCA materials, the three question-answer relationships are: (1) All There--all the information required to answer the question is in the text, (2) Partly There--some of the information required to answer the question is in the text, but part must be obtained from other sources or inferred from the reader's background knowledge, (3) Not There--the information required to answer the question is "not there" in the text, but must be obtained from other sources or inferred from the reader's background knowledge (see Figure 16).

Insert Figure 16 about here.

In the CIRCA materials, students are often asked to identify the source of information they supply, either in answering standard questions or in completing a frame. When information is Partly There or Not There, students are encouraged to infer, or offer "best guesses" based on their knowledge of the topic or to consult their regular classroom textbook or other source.

Writing Skills and Strategies

The CIRCA materials take seriously the connection between reading and writing, particularly the research showing that at least some kinds of writing activities may improve reading (e.g., Rubin & Hansen, 1984; Taylor & Beach, 1984; Tierney & Leys, 1984). The CIRCA materials include writing instruction designed to improve reading and learning as well as writing. The materials encourage a great deal of writing, since writing is almost always involved in the Construct step of the omnipresent SPaRC strategy. Two main types of writing instruction are found in CIRCA--informative writing and "point-of-view" writing.

Informative writing. The main focus of CIRCA writing instruction is summaries. Summarizing is taught for several reasons: (a) Summaries include the main ideas that students should learn, (b) Summarizing is a common studying technique (Anderson & Armbruster, 1984), (c) Summarizing is a commonly reported metacognitive strategy for testing one's level of comprehension and retention (Baker & Brown, 1984), and (d) Summarizing has been successfully taught by explicit instruction (Day, 1980; Palinscar & Brown, 1984).

Students are taught to make use of text structure in writing their summaries. In particular, students are taught explicit rules for writing summaries from frames and from compare-and-contrast charts. Figure 17 shows instruction on writing a summary of an Interaction frame. (Students have already written summaries of the simpler Action frame.) Note that students are told explicitly what type of information to include in their

summaries. In conjunction with writing summaries from organized information, students are taught a general strategy for using "cue words" to express relationships between ideas (Figure 18).

Insert Figures 17 and 18 about here.

Informative writing is also practiced in research projects that require students to use their classroom textbooks or other resource materials. The research projects (at least one per unit) usually require students to gather and record information in some organized form (for example, a frame or compare-and-contrast chart) and then to translate these notes into a summary, newspaper article, or other piece of informative writing (Figure 19).

Insert Figure 19 about here.

Point-of-view writing. In point-of-view writing, students assume a particular perspective as they write about events they have studied. Point-of-view writing encourages student involvement in the issue itself, as well as in writing about the issue. The most common form of point-of-view writing in the CIRCA materials is the "journal entry" (Figure 20). The rules for writing journal entries encourage students to examine both sides of issues, to choose a side, and to defend their choice.

Insert Figure 20 about here.

Conclusion

The Collaboration to Improve Reading in the Content Areas is an innovative project. First, it is innovative because it involved the collaboration of two groups that are typically strange bedfellows--a university and a large urban school system. Second, the CIRCA project is innovative because it addresses the need for "reading in the content areas" by incorporating instruction in reading and studying skills and strategies into the regular social studies curriculum. Finally, the CIRCA project is innovative because it puts research into practice by translating the latest research in cognitive science and reading into viable classroom instruction.

References

Anderson, R. C., Hiebert, E. H., Scott, J. A., & Wilkinson, I. A. G. (1985). Becoming a nation of readers: The report of the Commission on Reading. Champaign, IL: Center for the Study of Reading.

Anderson, T. H. (1978). Study skills and learning strategies. In H. F. O'Neil, Jr., & C. D. Spielberger (Eds.), Cognitive and affective learning strategies. New York: Academic Press.

Anderson, T. H., & Armbruster, B. B. (1984). Studying. In P. D. Pearson (Ed.), Handbook of reading research. New York: Longman.

Armbruster, B. B., & Anderson, T. H. (1984). Structures of explanations in history textbooks, or So what if Governor Stanford missed the spike and hit the rail? Journal of Curriculum Studies, 16 181-194.

Baker, L., & Brown, A. L. (1984). Metacognitive skills and reading. In P. D. Pearson (Ed.), Handbook of reading research. New York: Longman.

Baumann, J. F. (1984). The effectiveness of a direct instruction paradigm for teaching main idea comprehension. Reading Research Quarterly, 20 93-115.

Beck, I. L., Perfetti, C. A., & McKeown, M. G. (1982). The effects of long-term vocabulary instruction on lexical access and reading comprehension. Journal of Educational Psychology, 74, 506-521.

Betts, E. A. (1946). Foundations of reading instruction. New York: American Book Company.

Brown, A. L., Bransford, J. D., Ferrara, R. A., & Campione, J. C. (1983). Learning, remembering, and understanding. In P. H. Mussen (Ed.), Handbook of child psychology (pp. 77-166). New York: John Wiley & Sons.

Day, J. D. (1980). Training summarization skills: A comparison of teaching methods. Unpublished doctoral dissertation, University of Illinois.

Duffy, T., & Waller, R. (Eds.) (1985). Designing usable texts. New York: Academic Press.

Herber, H. L. (1978). Teaching reading in content areas (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Jonassen, D. H. (Ed.) (1985). The technology of text: Principles for structuring, designing, and displaying text (Vol. 2). Englewood Cliffs, NJ: Educational Technology Publications.

Kameenui, E. J., Carnine, D. W., & Freschi, R. (1982). Effects of text construction and instructional procedures for teaching word meanings on comprehension and recall. Reading Research Quarterly, 17, 367-388.

Mayer, R. E. (1984). Aids to text comprehension. Educational Psychologist, 19, 30-42.

McKeown, M. G., Beck, I. L., Omanson, R. C., & Perfetti, C. A. (1983). The effects of long-term vocabulary instruction on reading comprehension: A replication. Journal of Reading Behavior, 15 3-18.

Patching, W., Kameenui, E., Carnine, D., Gersten, R., & Colvin, G. (1983). Direct instruction in critical reading skills. Reading Research Quarterly, 18, 406-418.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction, 1, 117-175.

Paris, S. G., Cross, D. R., & Lipson, M. Y. (1984). Informed strategies for learning: A program to improve children's reading awareness and comprehension. Journal of Educational Psychology, 76, 1239-1252.

Pearson, P. D. & Johnson, D. D. (1978). Teaching reading comprehension. New York: Holt, Rinehart and Winston.

Raphael, T., & Pearson, P. D. (1985). Increasing students' awareness of sources of information for answering questions. American Educational Research Journal, 22, 217-235.

Robinson, F. P. (1946). Effective study. New York: Harper and Brothers.

Rubin, A., & Hansen, J. (1984). Reading and writing: How are the first two "R's" related? (Reading Ed. Rep. No. 51). Urbana: University of Illinois, Center for the Study of Reading.

Shimmerlik, S. M. (1978). Organization theory and memory for prose: A review of the literature. Review of Educational Research, 48, 103-120.

Taylor, B., & Beach, R. (1984). The effects of text structure instruction on middle-grade students' comprehension and production of expository text. Reading Research Quarterly, 19, 134-146.

Tierney, R. J., & Cunningham, J. W. (1984). Research on teaching
    reading comprehension. In P. D. Pearson (Ed.), Handbook of
    reading research. New York: Longman.

Tierney, R. J., & Leys, M. (1984). What is the value of
    connecting reading and writing? (Reading Ed. Rep. No. 55).
    Urbana: University of Illinois, Center for the Study of
    Reading.

Table 1

Titles of Ten Units of CIRCA Instruction in U. S. History

Unit 1 - Exploration: Interaction of Peoples in the New World

Unit 2 - Development and Change in the English Settlements

Unit 3 - Revolution: Rebellion, War, and Independence

Unit 4 - Unity: America Faces the Challenges of An Emerging
          Nation

Unit 5 - Expansion I: America Faces the Challenges of a Growing
          Nation

Unit 6 - Civil War: Crisis, Conflict, and Reconstruction

Unit 7 - Expansion II: New Growth and New Problems

Unit 8 - Foreign and Domestic Crises Threaten American Values

Unit 9 - 1945-1974: Crisis in Modern America

Unit 10 - America since 1974: Using Past Knowledge to Solve
          Problems?

Social/Cultural Essay

Part 1: England Molds Its Colonies

Unlike other European countries, England expected its colonial settlers to live permanently in America. By allowing certain groups of people to move to the colonies, England solved some serious problems that it faced in the seventeenth century.

What kind of social and economic problems did England have? First, England had some serious economic problems. In the 1600s, many of England's citizens were unemployed. These people were becoming an economic burden to the English government. For example, there were farmers who had been forced off their land so that it could be used to raise sheep. Sheep gave England wool to make cloth. In addition, other English people were out of work. Some were the younger sons of well-to-do families who often found themselves cut off without an inheritance. Others were unemployed men and women imprisoned in English jails because they could not pay their debts. The English economy did not have enough jobs for all these people.

Second, England was troubled by religious problems in the seventeenth century. England had broken away from the Catholic Church and had made the Anglican Church the official church of England. However, some people were not happy with the Anglican Church. One group, the Pilgrims, wanted to break totally from the Church of England. Another group, the Puritans, wished to make changes in the Anglican Church. Because of their beliefs, both groups were persecuted (mistreated) by the English government. The English government looked upon these religious dissenters as a threat.

How did colonization help solve England's problems? Colonization helped solve some of England's economic and social problems (see Figure 11).
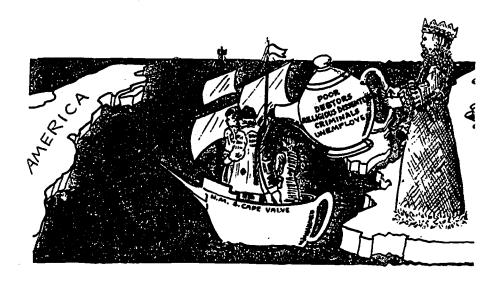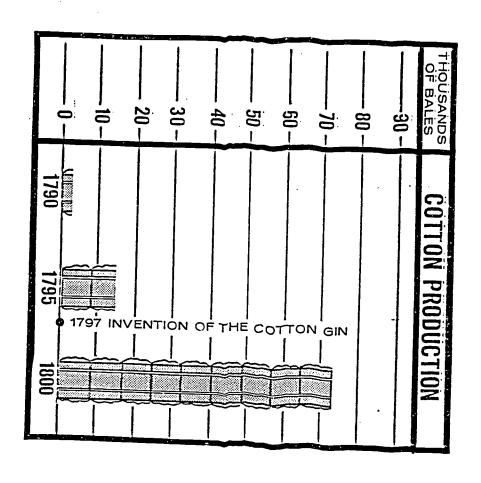

Figure 1:   Example of Summary Text Essay Page.

Figure 2. Example of Graphic Aid: Bar Graph Showing Production of
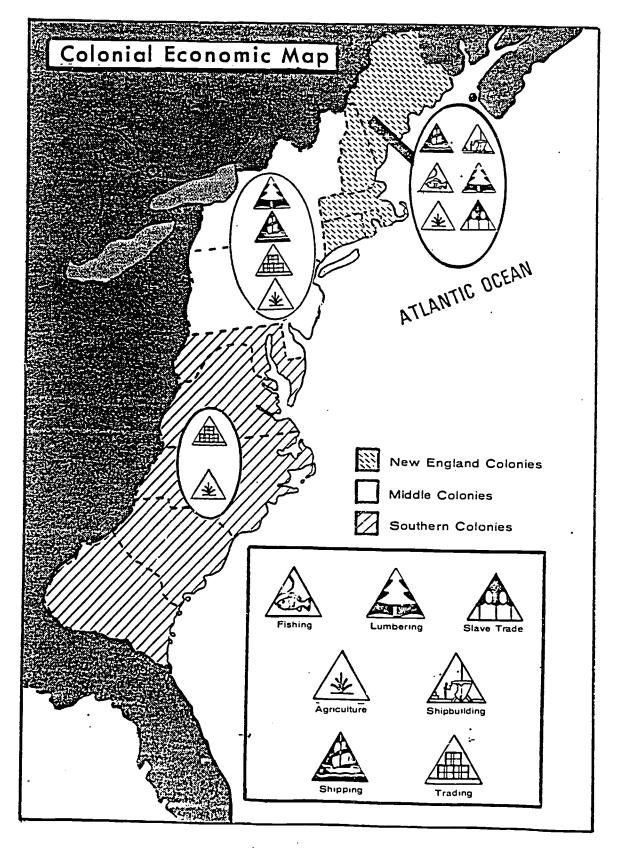Cotton Before and After the Invention of the Cotton Gin.

31

Colonial Economic Map

ATLANTIC OCEAN

New England Colonies

Middle Colonies

Southern Colonies

Fishing   Lumbering   Slave Trade

Agriculture   Shipbuilding

Shipping   Trading

Figure 3.   Example of Graphic Aid: Map Showing the Economic
            Regions of the Colonies.

DECLARATION OF WOMEN'S RIGHTS

...the patient sufferance of the women under this government, and such is now the necessity which constrains them to demand the equal station to which they are entitled.

The history of mankind is a history of repeated injustices and usurpations on the part of man toward woman having in direct object the establishment of an absolute tyranny over her. He has never permitted her to exercise her inalienable right to vote. He has compelled her to submit to laws...

Figure 4. Example of Graphic Aid: Original Source Document.

Figure 5. Example of Graphic Aid: Cartoon Showing Barring of Westward
           Expansion by the Proclamation of 1763.

34

ENTRY mercantilism (n)	CATEGORY Economic

DEFINITION

a nation s economic system for increasing its power and wealth by controlling trade and acquiring gold and silver

KEY FEATURES	HIGHLIGHTS
-a nation's economic system -for increasing its power and wealth -by controlling trade -by acquiring gold and silver	A FAVORABLE BALANCE OF TRADE

EXAMPLES

England's control of trade with its colonies

The goal of mercantilism was to establish a favorable balance of trade. A favorable balance of trade meant that a nation earned a profit because it sold more goods to other countries than it bought from them.

SENTENCE CONTEXT

Under mercantilism, England sold its products to Africa in exchange for slaves whose labor in the colonies then produced sugar and tobacco for England.

RELATED WORDS

1. balance of trade (n) the amount of goods a country buys in comparison to how much it sells (Under mercantilism, England tried to sell more goods than it bought from other countries in order to maintain a favorable balance of trade.)
2. exports (n) goods sold to other countries (Tobacco and rum were two chief exports in the English mercantile exchange.)
3. imports (n) goods bought from other countries (Mercantilism gave the colonies the opportunity to import hats, cloth, tools, and cooking utensils from England in exchange for the products they produced.)

Figure 6. Example of Glossary Matrix Page.

	POLITICAL	SOCIAL/CULTURAL	ECONOMIC	INTERNATIONAL
1651			P I England passed first Navigation Acts	
1663	SE Carolinas were founded	P Blacks attempted first major slave revolt		
1664	SEI Dutch lost New Amsterdam to the English			
1681	S William Penn founded Pennsylvania for Quakers			
1685				P King James II created the Dominion of New England colonies
1688				P "Glorious Revolution" established Parliament's power over the colonies
1732	SEI Georgia was established as a debtors' colony			
1733			P Molasses Act was passed	

A.D.

37

FRAMES

A frame is a set of questions that one can ?~`: about a given topic.

Action Frame

Reference Box: Action Frame_____

The action frame is a set of questions about events in history that were
caused by people. The questions are about the goals and actions of a
person or a group and the results of those actions.

Questions for the Action Frame   Action Frame

What person or group took action?   Action frame for _____

What were their goals?   GOALS_____

```
                                                  |                |
                                                  |                |
                                                  |_____|
                                                          |
                                                          V
```

What actions did they take to reach   ACTIONS_____
their goals?
```
                                                  |                |
                                                  |                |
                                                  |_____|
                                                          |
                                                          V
```

What were the results of the actions?   RESULTS_____
```
                                                  |                |
                                                  |                |
                                                  |_____|
```

Figure 8.   Reference Box for Action Frame.

38

Interaction Frame

Reference Box: Interaction Frame

The interaction frame is a set of questions that one can ask about how
two individuals or groups interact. Interactions may be cooperation,
conflict, or both cooperation and conflict.

Questions   Frame

What individuals or   Interaction frame for
groups interacted?

What were the goals of   GOALS   GOALS
each side?

What actions did each   ACTIONS   ACTIONS
side take?

How did the two sides   INTERACTION
interact?
                                     The interaction was one
                                     of

What were the results   RESULTS   RESULTS
for each side?

Figure 9. Reference Box for Interaction Frame.

Problem-Solving Frame

Reference Box: Problem-Solving Frame
The problem-solving frame is useful for understanding important
problems in history and attempted solutions for the problems. There
are six questions in this problem-solving frame one can ask about pro-
blems and attempted solutions.

Questions for the Problem-Solving Frame

1. Who had the problem? national government

Problem

2. What was the problem? a large national debt

3. What caused this problem? | 4. What were the negative effects?

debts from the Revolutionary War | America was a bad credit risk;
such as loans from other coun- | other countries would not lend
tries, loans from American citi- | money to the new nation; Americans
zens, back pay due to soldiers, | were fearful of investing their
and overdue bills from merchants | money in the government

V

Attempted Solutions

5. What actions were taken to | 6. What were the results of these
solve the problem? | actions?

Tariff Act passed | raised some funds but not enough

Hamilton proposed a financial
plan to--

1. pay war debts in full

2. assume war debts of the | greatly improved the nation's
states | credit rating, but many Americans
| and Europeans continued to distrust
| America's financial condition

3. establish a National Bank

4. pass an excise tax on | led to the Whiskey Rebellion in
whiskey. | Pennsylvania

Figure 10. Reference Box for Problem-Solving Frame.

Chain of Events Frame

The chain of events frame can be used to represent and understand the relationships connecting events. Therefore, the chain of events frame is useful for answering questions such as--

1. Why did one situation change to another situation?
2. What chain of events led to some new event?
3. How did one situation change to another situation?

Reference Box: Chain of Events Frame
_____

      Chain of events frame for _____

Question: (Example - What series of events led to World War II?)

```
+-------------------------------------------------------+
|                        EVENT 1                        |
+-------------------------------------------------------+
                            |
                            V
+-------------------------------------------------------+
|                        EVENT 2                        |
+-------------------------------------------------------+
                            |
                            V
+-------------------------------------------------------+
|                        EVENT 3                        |
+-------------------------------------------------------+
                            |
                            V
+-------------------------------------------------------+
|                        EVENT 4                        |
+-------------------------------------------------------+
                            |
                            V
+-------------------------------------------------------+
|                        EVENT 5                        |
+-------------------------------------------------------+
```

Figure 11. Reference Box for Chain of Events Frame.

Directions COMPLETE the chart using information from the Economic Essay,
Part 1 and the map in the Summary Text.

Farming and Other Occupations in the Colonies

	Southern Region	Middle Region	New England Region
Physical Features	(land and climate excellent for agriculture; fertile soil; good access to rivers and harbors)	(thick forests)	(thin, rocky soil; harsh winters)
Type of Farming	(plantations and small subsistance farms)	(small and medium sized subsistance farms)	(subsistance farms)
Type of Farm Help	(backcountry farmers, slaves, and indentured servants)	(farm families, slaves, and indentured servants)	(family members and slaves)
Farm Products	(tobacco, rice, maize (corn))	(wheat, rye)	(corn, pumpkin, beans)
Other Occupations	(trading)	(trading, lumbering, shipping)	(trading, lumbering, shipping, ship building, fishing)

Figure 12. Example of Compare-and-Contrast Chart for Occupations in the Colonies.

Activity B - Summarizing Expansion in the New South and the West [10 min.]

EXPLANATION

  1. The compare-and-contrast chart you completed in Activity
      A provided a description of how the South and the West
      developed economically.

  2. In summarizing information from a compare-and-contrast
      chart, you can make analogies by using information
      across the rows.

  3. Making analogies in history helps you remember important
      historical similarities.

DISCUSSION - What is an analogy?
(a statement that two things (A and B) are related in the same way as two
other things (C and D).

Note: If students have difficulty in remembering what an analogy is, have
students look at the Reference Box for Analogies on SN **.

EXPLANATION - One analogy you can make from the second row of the compare-
and-contrast chart is "Expansion in the New South is to blacks as expansion
in the West is to Indians."

DISCUSSION - What does this analogy mean?
(Expansion in the South hurt blacks and expansion in the West hurt
Indians.)

DIRECTIONS to the Students - LOOK at each row of the compare-and-contrast
chart to make an analogy.

DISCUSSION

  1. What analogy can you make from the first row?
      (New industries and increased cotton production were to
      the South as farming, mining, and raising livestock were
      to the West.)

  2. What analogy can you make from the third row?
      (Disfranchisement and segregation were to blacks as loss
      of independence and the buffalo were to Indians.)

  3. What analogy can you make from the last row?
      (Accommodation and protest were to blacks as fighting
      was to Indians.)

Figure 13. Using Compare-and-Contrast Charts in Forming Analogies

43

Homework – Vocabulary: corruption

EXPLANATION

1. One of the big problems during Reconstruction was corruption.

2. In order to learn more about what corruption involved, complete the homework assignment for this Glossary Matrix word.

<<<< STUDENT NOTEBOOK p. 66 >>>>

Instructions

. READ the Glossary Matrix page for corruption.

. READ the story below which tells about an act of corruption.

. USE the information from the Glossary Matrix and your knowledge about the period of Reconstruction to answer the questions which follow the story.

Corruption

Mr. I.M. Crafty was a state senator. Because he held this office, he felt that he could use his power to do favors for important business people. In return, these businessmen could do favors for him.

When Mr. Crafty heard rumors that the government planned to grant land within the state to be used for building a railroad line, he secretly contacted several railroad companies. Mr. Crafty wanted to know how much each company would pay him for the right to build a railroad line on this land. The Trans-Land Railraod Company indicated that it would give him $10,000 if it received the construction contract.

Mr. Crafty invited many of the state senators to his home for an elegant party. Over several weeks, he treated many others to fancy lunches and dinners. During these occasions, Mr. Crafty suggested that he was willing to vote for any bill or law that the senators wanted if they voted to give the contract to the Trans-Land Company.

When the Senate passed the bill granting the Trans-Land Company the right to build a railroad line through the state, Mr. Crafty received a small carpetbag from the company filled with dollar bills in appreciation for his efforts.

Figure 14. Vocabulary Activity Using the Glossary Matrix.

44

QUESTIONS

1. Why is Mr. Crafty's action an example of corruption?
   (He used his position of public trust to make money for himself.
   Rather than using his position to act on behalf of the voters, he used
   his position to benefit himself. In addition, he made promises to
   other senators to vote for bills and laws without considering if they
   would be in the best interest of the voters.)

2. How is Mr. Crafty's action related to graft?
   (He accepted money in return for ensuring that the Trans-Land
   Company received the railroad construction contract.)

3. In what way could Mr. Crafty's action turn into a scandal?
   (The action could be a scandal if people heard that Mr. Crafty
   took money from the railroad company in return for ensuring that the
   company got the contract. This action would be considered a scandal
   because it was an improper action that people found out about.)

Extra Credit

Instructions - USE your imagination to WRITE a brief continuation of the
story to describe how Mr. Crafty's action turned into a scandal.

(Example: As Mr. Crafty greedily reached for the little carpetbag,
he tripped and knocked the bag to the ground. The bag burst open
and dollar bills scattered all over the floor of the Senate. A newspaper
reporter who had been sent to report on the activities of the Senate
investigated to find out why Mr. Crafty was receiving a bagful of money.
When the full details of Mr. Crafty's actions appeared in the newspaper,
people decided that Mr. Crafty had acted most dishonestly.)

<<<< END >>>>

Figure 14. con't.

45

EXPLANATION

1. Segregation and disfranchisement both take away rights.

2. Segregation takes away civil rights, such as the right to live
    where one wants, and disfranchisement takes away the political
    right to vote.

3. This important similarity can be stated as follows:

    Segregation is to civil rights as disfranchisement is to voting
    rights.

4. This statement is called an analogy.

DIRECTIONS to the Students - READ the reference box for analogies on SN**.
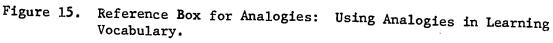
<<<< STUDENT NOTEBOOK p. ** >>>>

Reference box: Analogies

```
┌────────────────────────────────────────────────────────────────────┐
│ analogy - a statement that two things (A and B) are related to each  │
│           other in the same way as another two things (C and D)      │
│                                                                      │
│                                                                      │
│ analogy form:  A is to B as C is to D.                               │
│                                                                      │
│                                                                      │
│ example:  Segregation is to civil rights as disfranchisement is to   │
│           voting rights.                                             │
└────────────────────────────────────────────────────────────────────┘
```

<<<< END >>>>

EXPLANATION - In this and following units, you will use analogies to
remember important historical similarities.

Figure 15.   Reference Box for Analogies: Using Analogies in Learning
             Vocabulary.

Finding_Answers_in_Textbooks

Reference_Box:__Finding_Answers_in_Textbooks_____

When you read a textbook, you usually read to answer questions. The
answers may be all_there, partly_there, or not_there. The chart below
defines and explains these three terms.

	Definition	What To Do
All There	All of the answer is in the textbook.	Answer the question.
Partly There	Part of the answer is in the textbook.	Use what you already know to figure out (infer) the rest of the answer or look in other books.
Not There	None of the answer is in the textbook.	Look for the answer in other books.

Figure 16.   Reference Box for Finding Answers in Textbooks (Question-
Answer Relationships)

Activity B - A Written Summary of the Political Interaction between England
              and Its Colonies

Instructions

  . WRITE a paragraph summarizing the political interaction between England
    and its colonies on a separate sheet of paper.

  . USE the following references to help you write your summary:
    cartoon on ST 69, chain of events frame on SN 79, Reference Box: Cue
    Words.

  . BEGIN your summary with the following title and topic sentence:

    Title: The Growth of Political Tension between England and Its Colonies

    Topic sentence: During the period of colonization, political tension grew
                between England and its colonies.

  . USE the steps below to write your paragraph.

Hint: To see if you have written a good paragraph, READ it to yourself.
        If it does not make sense or read smoothly, CHANGE it so that it does!

Step 1   SUMMARIZE the actions that England took which caused increasing
         political tension between England and its colonies.

Step 2   GIVE an example of an English action.

Step 3   STATE why England took such actions.

Step 4   SUMMARIZE the colonies' responses to the English actions.

Step 5   GIVE an example of a colonial response.

Step 6   STATE why the colonies responded as they did.

Example paragraph.   The Growth of Political Tension between England and
                     Its Colonies

     During the period of colonization, political tension grew between
England and its colonies.   (After 1660, English royalty began to take more
direct control of the colonies [Step 1].   For example, the king revoked
the charters of some colonies [Step 2].   The king took such actions because
he was angered by the way the colonies were run [Step 3].   The colonies
resisted royal attempts to control them [Step 4].   For example, the
colonies became angry over the Dominion of New England [Step 5].   They
responded in such ways because they wanted to preserve their independence
from each other [Step 6].)

Figure 17.   Instruction on Writing a Summary of an Interaction Frame.

Cue Words

Reference Box: Cue Words
_____

1. When writing paragraphs or summaries you can use certain words or
   phrases to organize your ideas.

2. Words or phrases that show relationships between ideas can be called
   cues.

   Purpose   Example Cues

   to make a list   first...second...third
                                      to begin with, next, finally

   to put in   before, after, later, then, now
   chronological order   on (date), afterwards

   to compare and contrast   similarity: alike, like, both,
                                      similar to, similarly
                                      differences: different from, however,
                                      in contrast, on the one hand/on the
                                      other hand, however, but

   to show cause and effect   because, since, as a result, there-
                                      fore, this led to, consequently

   to give examples   for example, for instance
_____

Figure 18.   Reference Box for Cue Words.

Activity B - Textbook Research on Social/Cultural Characteristics of a Colonial Region [20 min.]

The teacher assigns one of the three regions in the colonies, New England, middle, or southern, to each of the students. The students then look through the classroom social studies text (or other available sources such as encyclopedias) to find descriptions of the colonies and colonial life in that region. The students use the diagram, Social/Cultural differences in the Colonies, and a topic guide in their Student Notebook to help them select appropriate information. In lesson 14 the students will write a newspaper report using this information.

Homework - Textbook Research on Social/Cultural Characteristics of a Colonial Region

The students complete research of the social/cultural characteristics for their region.

Figure 19. Example of Research Project Involving Informative Writing.

Appendix

Journal Entry

Reference Box: Journal Entry

```
  Journal entries are written from a point of view and should be based
  on historical fact.  These entries should include the following
  information:
    1.  an appropiate historical date
    2.  an identification of the geographic location
    3.  an explanation of the situation
    4.  an explanation of a view that opposes your point of view
    5.  an explanation of your point of view
    6.  an identification of the faction your point of view most
        closely represents




  Example:  Journal Entry




                                          (1)October 11, 1794


     Some people have no understanding of how important compromise is
  here in (2)Washington.  Although we finally have an agreement with
  England with the (3)signing of Jay's Treaty, the Republicans are still
  not satisf'ed.
     We convinced England to close its forts in the Ohio Valley
  and to pay for the American ships they seized, (4)but the Republicans
  do not feel that we were stern enough with the English.  They feel
  we should have insisted that England agree not to sell weapons to the
  Indians and not to seize any more American ships.  What the Repub-
  licans fail to realize is that Jay's Treaty kept America out of
  another war with England.  Have the Republicans forgotten that we just
  fought the revolution and are not anxious to fight another war with
  England which America may not win?  (5)Everyone should understand that
  this treaty was the best deal that America could expect at this time.
  (6)Because I am a Federalist, I am expected to feel this way, but
  I feel everyone should support Jay's Treaty.
```

Figure 20.   Reference Box for Journal Entries.