

1970

A comparison of the traditional group method with the multi-media, unipac method of teaching fourth grade social studies at the Assumption School, Dayton, Ohio

Barbara Ann Bertke
University of Dayton

Follow this and additional works at: https://ecommons.udayton.edu/graduate_theses

Recommended Citation

Bertke, Barbara Ann, "A comparison of the traditional group method with the multi-media, unipac method of teaching fourth grade social studies at the Assumption School, Dayton, Ohio" (1970). *Graduate Theses and Dissertations*. 1526.

https://ecommons.udayton.edu/graduate_theses/1526

This Thesis is brought to you for free and open access by the Theses and Dissertations at eCommons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of eCommons. For more information, please contact mschlangen1@udayton.edu, ecommons@udayton.edu.

A COMPARISON OF THE TRADITIONAL GROUP METHOD
WITH THE MULTI-MEDIA, UNIPAC METHOD OF
TEACHING FOURTH GRADE SOCIAL STUDIES
AT THE ASSUMPTION SCHOOL,
DAYTON, OHIO

RESEARCH PROJECT

Submitted to the Graduate Committee of the School of Education
University of Dayton, in Partial Fulfillment of the
Requirements for the Degree of Master of
Science in Education

by

Barbara A. Bertke

The School of Education

UNIVERSITY OF DAYTON

Dayton, Ohio

July 25, 1970

APPROVED BY:

[REDACTED]

Official Advisor

[REDACTED]

Official Reader

SMB

ACKNOWLEDGEMENTS

The writer wishes to express her deepest appreciation to all who made this project possible: her parents and "relatives" for their faith in the writer; Dr. Inglis for her inspiration; Brother Panzer for his patience and understanding; Dr. Frye for her counsel; Sr. Elizabeth for her time and assistance; and to Dr. and Mrs. Gray for their kind words, good food, strict criticism, and unparalleled understanding.

TABLE OF CONTENTS

Chapter		
I. PROBLEM AND THEORY		1
Introduction		
Purpose of the Study		
Background and Theory		
Summary		
II. REVIEW OF RELATED LITERATURE		8
Introduction		
Methods of Instruction in the Social Studies		
Traditional Group Method		
Multi-media, Unipac Method		
Summary		
III. METHOD OF INVESTIGATION		18
Introduction		
Hypothesis		
Sample		
Procedure		
Apparatus		
Data Analysis		
IV. RESULTS		35
Introduction		
First Test		
Second Test		
Third Test		
Fourth Test		
Preference Scale		
V. CONCLUSIONS AND RECOMMENDATIONS		44
Conclusions		
Recommendations		
APPENDIXES		48
BIBLIOGRAPHY		98

LIST OF TABLES

Table

1.	IQ of Students	20
2.	Test Grades for Four Units	25
3.	Grades of the Control Group	26
4.	Grades for the Experimental Group	27
5.	Unit Test Results	35
6.	Results of the Preference Scale	42

LIST OF ILLUSTRATIONS

Figure

1. Diagram for Constructing Unipacs 33

CHAPTER I

PROBLEM AND THEORY

Introduction

Learning is an individual process. Every child is motivated to learn by a different method, or series of methods, and as Walsh states, children do have different learning patterns and require a variety of instructional vehicles.¹

In the educational setting of many schools the teaching - learning pattern is not administered in a fashion that would allow for individual differences. The teacher often prepares a presentation of subject matter to be given to the class as a whole, and the individuals on all learning levels must assimilate the matter and make it meaningful for themselves. This traditional method of group teaching may be acceptable for some students but not for the majority of them.

The past several years have witnessed an emphasis on individualized instruction, as evidenced by numerous articles appearing in educational periodicals and journals. (Instructor, Social Education, Elementary School Journal, Social Studies, SRA Publications and others.) Some of these articles are devoted to a discussion of the benefits and advantages of the multi-media unipac method which allows the students to travel through a set of learning experiences at their own pace.

¹Huber M. Walsh, "Learning Resources for Individualizing Instruction," Social Education, XXI (May, 1967), 413.

Students are also permitted to choose from within a structure how they prefer to learn the content to be presented. The multi-media unipac method of individualization can be implemented in many ways, but in each situation it allows for individual differences in its application.

Purpose of the Study

The question arises as to which of the two methods of instruction, the traditional group method or the multi-media unipac method, in a given situation is most beneficial for the greatest number of students. Is any one method best for all students, or should methods be altered or combined to meet the students' needs?

There is also a question as to whether or not there is a difference in application in the two methods. Theoretically the two methods differ greatly, but in application within the classroom the differences may not be so great.

The purpose of the research study was to determine which method would be most beneficial for the greatest number of children and which of the methods would be most suitable in attaining behavioral objectives planned to meet the needs of the children. The experimentation was conducted in a fourth grade social studies class.

Background and Theory

If learning is to take place the educator must consider factors which influence effective education such as environmental social status, intelligence and motivation. The most controllable factor is motivation.²

²Bruce R. Joyce, "Evaluating and Individualizing Instruction," SRA Social Studies Extension Service, Unit Eight, May 15, 1968, 7-8.

Highly motivated students tend to learn more readily because motivation minimizes boredom and frustration in the classroom. Thus it seems paramount in learning to locate a method or combination of methods which will have the greatest motivational value for the greatest number of students.

Traditionally, students have been taught as a group. Not all children, however, are ready for a particular experience at the same time. The older a child becomes, the more personal and individual are his experiences.³ Education should seek to develop the maximum potential of each student at every stage of learning. This requires teaching-learning geared to the needs of individuals by means of individualized instruction.

The basic concept of individualized instruction stems from the tutorial process where the teacher and pupil worked and studied on a one-to-one basis. As schools grew, and the body of knowledge increased group instruction procedures were introduced. These group procedures resulted in schools attempting to meet the problem of individual differences by retention of students in a grade, or moving students ahead more than one grade. Individual differences were not adequately met in this way, and the ability-grouping of classes was introduced and developed as the next step. This allowed children to move at a pace set by their own group.⁴

The concept of individualized instruction has been implemented

³Willard C. Olsen, "Seeking, Self-Selection and Pacing in the Use of Books for Children," p. 2. (Mimeographed)

⁴Melvin Hetland, and Consultant Charles Elmlinger, "Individualized Instruction: A Definition and Historical Overview," SRA Individualizing Instruction Extension Service, Unit One, October, 1968.

in varied forms and methods. Through the use of the unipac approach the student can pursue knowledge on his own and at his own pace, within a given time structure.

Multi-media, Unipac

The unipac is a packet of information presenting one concept which can be constructed by the teacher and given to each student. Glatthorn and Swenson have described the unipacs as a "self-contained set of teaching-learning materials designed to teach a single concept or idea and structured for individual and independent use".⁵ It contains problems, activities and projects for each child to accomplish at his own pace. The packet begins with a description of the behavioral objectives in terms understood by the child, and an outline of the single concept to be learned. From there the child begins reading the lessons and choosing the activities that solve the problems posed by each lesson. The child may choose from a variety of learning materials (filmstrips, charts, reference materials, movies) and proceed at his own pace. After the child completes the activities for each lesson, he may begin working on any of the suggested "Quest" activities. These are activities designed as culminating projects for each packet.

In theory, each student has the opportunity to progress at a continuous pace. A block of time is scheduled for the study of certain subject matter. The student works independently during that time, then sets the work aside. At the next designated block of time the student can resume his work.

⁵ Allan A. Glatthorn and Gardner A. Swenson, "How To Prepare A Unipac," I/D/E/A UNIPAC, 1.

The unipac method differs in the manner in which reference materials are used. The package gives each student a plan for learning, including a careful programming of a series of learning activities. These activities lead the student through the type of educational experience which seems most relevant to interests and goals for the unit, for example, the students are able to choose a filmstrip or movie that is relevant to the lesson, or listen to tapes or records, read suggested texts and reference materials, or study charts. The students use these materials independently within the broad structure provided by the teacher. This freedom of choice in learning is to encourage students to seek knowledge on their own.

The most noticeable difference in the unipac method is in the role of the teacher, who is no longer the sole dispenser of information, but a guide to learning. The teacher develops and designs learning activities in the unipacs for the students, but gives the students freedom to choose their materials of learning and to work at their own speed.

Learning activities within each unipac are systematically ordered to guide each student in gaining the understanding of a central theme or concept. The student is given his choice of activity for each lesson within the unipac.

Traditional Group

In the traditional group method the students are part of the group, other members of the class. Frequently all students are taught as though they were all on the same intellectual level. Basically, the students respond to a common teaching pattern: assignment, study, recite, test. The teacher's oral questions and tests are usually based entirely

on the material from the prescribed text. Often the students are not challenged to think for themselves, but to merely repeat pertinent information.

The traditional group method relies heavily on the printed word, which is frequently a text book chosen by the school district, the school, and the teacher. Filmstrips or records can enhance the process of learning in the unfolding of the unit as described in the teacher's lesson plans. In the classroom, the students have little opportunity in the choice of materials, but rather must accept the materials used by the class as a whole. The use of learning on an individual basis is not generally provided. The class usually progresses together at some uniform speed through the prescribed text, all using the same materials simultaneously.

In the traditional group method the teacher is generally the sole source of information, constructing each unit within the scope of the text. The teacher usually decides the text content to be covered, which materials to use, and what activities the students are expected to do. The student is given practically no freedom of choice in any learning situation.

The strict traditional group method offers little individual variety. Students progress systematically, read as a class, listen to records or tapes as a class, or view filmstrips and movies as a class. Reading in the classroom is the most frequent activity in the traditional setting, allowing no one student to pace himself and his learning in a systematic manner individually.

Summary

By giving students a choice in their educational activities the students' incentive will increase, and they will enjoy learning. The use of unipacs is aimed to create a situation "that is most favorable to the development of each child as an independent, self-reliant, self-teaching, creative individual".⁶

There are educators, however, who are not totally convinced that any one method of teaching is the answer to the educational problems that are encountered by each child. Walsh feels that there is no universal skeleton key in teaching children, and Rogers states that a variety of approaches to learning are necessary for children, sepecially in the area of social studies.^{7,8} Ultimately, the most important factor in individualization is not one particular method, but the teacher.

⁶June Sark Heinrich, "Teaching Individuals Instead of Groups," SRA Teacher Education Extension Service, Unit One, October 1, 1967, 3.

⁷Huber M. Walsh, "Learning Resources for Individualizing Instruction," Social Education, XXXL (May, 1967), 413.

⁸V.R. Rogers, "Individualization Plus," Instructor, LXXVIII (January, 1969), 89.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Presently the social studies curriculum encompasses those aspects of history and the social sciences that are believed to be of the greatest value for the general education of students in elementary and secondary schools. This education should develop the rational powers of the mind--the ability to think--thus giving attention to self-realization, human relationships, economic efficiency and civic responsibility.¹

In order that education be made meaningful, the four broad objectives mentioned above should be transformed to specific behavioral objectives that can be evaluated. The method of teaching becomes important. How can these objectives best be realized in all students? Through which type of learning pattern can all students best develop the rational powers of the mind?

Many educators agree that every child has a different learning pattern. It is important, therefore, that steps are taken to insure that students have open to them a variety of ways to learn so that each individual can be reached.² In order to teach each individual, educators must review some of the present methods, thinking and practices.

¹John U. Michaelis, Social Studies for Children in a Democracy: Recent Trends and Developments. (Englewood Cliffs, New Jersey: Prentice-Hall, 1963), p. 137.

²Jack R. Fraenkel, "Learning Experiences and the Social Studies," Elementary School Journal, LXIII (March, 1968), 301.

Concern for the individual and his individual differences in learning has brought about a current re-evaluation of teaching and the method or methods that should be used. Because a variety of methods may be more beneficial to a greater number of students, it is necessary that the possibilities are explored and evaluated.

Methods of Instruction in the Social Studies

A variety of teaching techniques are now open to the Social Studies instructor. As evidenced by articles contained in educational journals and periodicals, attention is being directed to the development of individual capacities as well as the meeting of societal needs. Since individual capacities are the center of attention, the variety of methods should allow teachers to guide all students to develop at their own rate. Several of these changes within the social studies area will be reviewed briefly.

The arrangement of the curriculum itself is changing from the pattern of family-school-neighborhood to comparative studies of families, communities, and regions of the world.³ Previously all texts were designed to lead the young learner to progress from the study of the family structure outward to school, neighborhood, and finally, the world. However, some newer programs have been placing the emphasis on comparative cross-studies of families throughout the world. Attention to special events days, and current affairs are being encouraged to a greater degree.⁴ Unit plans and group inquiry are recommended where a

³ Michaelis, Social Studies in a Democracy, p. 137.

⁴ Ibid., p. 138.

strong teacher can guide the group successfully.⁵

New techniques for teachers in the social studies have been developed. For example, in problem solving the students work on their own a great deal of the time, recognizing the problem, and then attacking it in a specific manner; critical thinking emphasizes making an evaluation in terms of standards and criteria; and creative thinking encourages children to suggest new ideas or ways of doing things.

An abundance of instructional materials are providing a variety of services lending the richest possible learning environment.⁶ Supplementing the reading materials, teachers are encouraged to use recently developed graphic materials that can develop a realistic concept of political and human activities. Community resources, audio-visual materials, maps, and globes are an integral part of the resources available to the teacher to use in motivating the students to learn.

Traditional Group Method

In the traditional classroom the teacher planned the learning activities for the entire class as a group. In very recent times some attempts have been made to improve this group method by supplementing the traditional classroom activities with learning activities that are specifically directed to allow for individual differences. One such supplement could be work period activities that could be planned on a small group or individual basis for a portion of the learning time.

⁵Helen Sagl and Maxine Dunfee. Social Studies Through Problem Solving. (New York: Holt, Rinehart and Winston, 1966), p. 59.

⁶Michaelis, Social Studies in a Democracy, p. 301.

The following are a few more ways in which the teacher may attempt to teach for individual differences:

1. Adapt instructions to various levels of ability.
2. Provide for different progress rates in learning.
3. Teach to specific points of weakness.
4. Encourage individual and group self-direction and initiative.
5. Enrich learning to make it significant and useful.⁷

The above techniques applied in the traditional classroom may allow for many individual differences in developing skills which the social studies educators feel are important:

1. Work-study skills: Reading, outlining, map-reading.
2. Thinking skills: Critical thinking, problem solving.
3. Group-process skills: Leading or participating in groups.
4. Social-living skills: Acting responsibly, cooperating with others.⁸

In order to accomplish the mastery of these skills on an individual basis in the traditional classroom, the basic structure of the traditional method as previously discussed (p. 5) would have to be altered. Changes could be made within the traditional structure to accomodate the needs.

However, critics of the traditional system are doubtful of its success and find fault with many aspects of this method. The first area of criticism strikes the text, the basis of the traditional method, and attempts to render it inadequate on the following grounds:

1. Texts are not concerned with the latest findings of scholars.
2. Texts are written solely for financial gain.
3. Texts do not take courageous positions on major issues.⁹

⁷W.L. Chase, "Providing for Individual Differences: Middle and Upper Grades," Social Education, XXII, (May, 1967), 412.

⁸Clifford D. Foster, "Skills in the Elementary School Social Studies Curriculum," Social Education, XXI (March, 1967), 231.

⁹David Rossells, "In Defense of Good Textbooks," Peabody Journal of Education, XLIV (September, 1966), 89.

However, Rossells defends the texts against criticism on the following grounds:

1. Texts are written by scholars.
2. The author desires to assist in education, he believes in his theory, and is willing to work to put it forth.
3. The author tries to be fair to all sides, leaning no one way.¹⁰

Another criticism of the texts used in the traditional method is that the questions in the books are inadequate. A study conducted by Davis and Hunkin showed that, despite attempts at different approaches, the largest number of questions deal strictly with knowledge. They found that these questions were not challenging.¹¹

Perhaps the greatest criticism of the traditional method is stated by Moreland when he says that in a teacher-centered, group approach to learning the students are passive.¹² He is convinced that students must always be active in order to be learning, and that the traditional method does not allow for this.

In the light of these credits and supposed faults of the traditional group method of teaching, a newer method of instruction has been developed to give the individual student his own approach to learning.

Multi-media Unipac Method

The emphasis on the individual learner has fostered the growth of several new techniques in education (Programmed Instruction, Individual Learning Packages, Individualized Prescribed Instruction, Duluth

¹⁰Ibid., p. 89.

¹¹O.E. Davis, Jr. and Francis P. Hunkin, "Textbook Questions: What Thinking Process Do They Foster?" Peabody Journal of Education, XLIII (March, 1966), 285-292.

¹²Willis D. Moreland, "New Methods in Teaching Social Studies," Education, LXXXVIII (November, 1967), 116.

Plan), notably the multi-media unipac method. Due to the relative newness of this approach, research in the area is limited. Materials are written describing and defending this method, but comparatively few studies of its effectiveness are available at present. Even the national headquarters for the organization sponsoring this method does not have research materials for the method.

Definition

Since the unipac itself has been previously defined as a self-contained set of teaching-learning materials designed to teach a single concept, attention will be given now to "multi-media". Multi-media is an integral part of the unipac as it provides the materials by which the students can achieve mastery of the unipac content, the single concept. Basically, multi-media is the use of every type of audio-visual instructional and resource material available, including the following:

Bound Volumes, Microfilm, Flat Pictures, Posters, Displays, Sound Motion Pictures, Filmstrips, Slides, Transparencies, Audiotapes, Models, Field Trips, Instructional TV, Resource Persons.¹³

Educators, feeling that the use of audio-visual equipment is a beneficial approach, are adapting these materials to meet their own specific teaching needs. By developing audio-visual materials to teach a particular objective, and designing the audio-visual portions to teach specific objectives, different media are becoming increasingly influential in education.

¹³Henry C. Ruark, "It Takes More Than Materials," Educational Screen and Audio-Visual Guide, XLVI (August, 1967), 17.

Through the availability of media, there will be an increasing emphasis on its creative use. The creativity and variety of media and curricula will not standardize educational programs. Never have we so rapidly deviated from standardization. These new uses of media may lead to an educational system tailored to meet each child's needs and society's goals.¹⁴

For social studies as for other disciplines, educators feel that the importance of media is in the visual impressions it transmits to the student:

In teaching geography, verbal understanding at any class level can and should be supplemented with visual impressions. . . By failing to provide our students with adequate mental images, we relegate the reality of the earth's surface to an abstraction.¹⁵

And,

With the new instructional aids, we can reach the illiterate as well as those who can read--opening learning to all of our pupils. AV aids can imprint indelible visual images on the susceptible and retentive minds of youth. . . When a multi-media approach to learning geography and the social studies is adopted, elementary school pupils become more interested in and more concerned with people in other parts of the world.¹⁶

Research on the use of various instructional media indicates that increasing amounts of both visual and audio information do not necessarily lead to greater learning.¹⁷

By using the multi-media on an individual basis with one student or a small group of students, as in the uhipac, the pace of

¹⁴Richard Gilkey, "Instructional Media for Social Studies: A Glimpse Into the Future," Educational Screen and Audio-Visual Guide, XLV (November, 1966), 22.

¹⁵Philip B. Larimore, and Charles F. Gritzner, "Creating Visual Impressions," AV Instructor, XL (May, 1966), 350.

¹⁶C.F. Kohn, "Multi-media Approach Makes The Elusive Come Alive," Grade Teacher, LXXXVIII (October, 1965), 89.

¹⁷John P. DeCecco. The Psychology of Learning and Instruction: Educational Psychology. (Englewood Cliffs: Prentice-Hall, 1968), p. 537.

learning is geared to the individual. Within this framework the student can choose the activities provided by multi-media most appealing to him, and proceed at a pace unique to his individual ability.

Teacher's Role

The role of the teacher is modified in the multi-media unipac approach. Multi-media is not intended to replace the classroom teacher; the teacher becomes a guide, a promoter, organizer and poser of questions in an effort to effect a compatible union between media and machine and the live social studies teacher.¹⁸ Instead of lecturing or guiding classroom reading, the teacher lets the students find the information for themselves through the use of the unipac and the media, and then guides and questions students for the knowledge hopefully to be gained.

Effectiveness of Media

Research in the area, limited as it is, seems to confirm the effectiveness of media in the schools. One such study in media-saturation indicated that students working with media were judged to have learned more. This conclusion was based on the students' greater general awareness and well-developed vocabulary. The teachers agreed that media was the motivating factor in aiding the students to learn more.¹⁹

A review of research related to the contribution that various educational media have made to the achievement of educational objectives

¹⁸Leonard W. Ingraham, "New Strategies and Roles for the Social Studies Teacher," AV Instructor, XIV (April, 1969), 25.

¹⁹Frank Morakley, "The Effects of Media Saturation," AV Instructor, XII (June, 1967), 614.

was conducted by Edling. He found little evidence to support the concept that certain media contribute to more or better learning than other media. However, he did conclude:

There is considerable evidence to indicate that research and development activities involving media have:

- (a) helped clarify educational objectives,
- (b) contributed to the analysis and design of media that produce the specific learner behavior identified,
- (c) utilized learner responses to refine and develop more predictable learning experiences,
- (d) clarified the need for specific instructional strategies to attain given objectives, and
- (e) provided new potentialities to determine whether or not educational objectives have been obtained.²⁰

Variety of Uses

The application of the theory of multi-media depends upon the individual situation and teacher creativity. In Nassau County, New York, a forty foot trailer called the Mobile Instructional Media Center travels from school to school in one month intervals carrying the AV materials.²¹ In Hawaii, teachers use various means of instruction for social studies, ranging from color slides with tapes to airplane rides over the islands.²² Artifact kits, called Multi-Media Kits, containing books, films, building materials, craft items, flags, records and other items, are used in many schools.²³ Other schools set up their own learning laboratories where students go to make and use their own

I

²⁰ Jack I. Edling, "Educational Objectives and Educational Media," Review of Educational Research, XXXVIII (April, 1968), 179.

²¹ Jack Tanzman, "How To Get Rolling With Your Media Center," School Management, XIII (March, 1969), 90.

²² "New Media Techniques in Specific Subject Areas," AV Instructor, X (June, 1965), 483.

²³ "Multimedia Kits for the Classroom," Instructor, LXXVIII (May, 1969), 98.

Instructional Media.²⁴

Summary

Although differing in theory, both the traditional and the multi-media unipac methods are structured from the same base. Both the traditional and the multi-media unipac approach can be based on behavioral objectives, and both can be formulated and developed by the teacher.

The difference lies in the degree of freedom each method allows the individual student. The unipac is much more open and by nature allows the student more freedom of choice in learning materials. The traditional approach is more tightly structured, making a great deal of individual freedom within the structure difficult. On this basic difference is the comparison of methods based.

²⁴Jane Meyer, "Social Studies Fits the Systems Approach," Nations Schools, LXXIX (May, 1969), 74.

CHAPTER III

METHOD OF INVESTIGATION

Introduction

In the light of the information gained by the study of the traditional group method and the individualized instruction as offered in the multi-media unipac approach, a study was conducted to compare the two methods in a fourth grade social studies class.

Hypothesis

The twelve major hypotheses are contained in the set of the following three hypotheses for each of the four units/unipacs.

1. There will be no significant difference in mean t-test scores between the experimental (unipac) and control (traditional) groups at the .05 level of significance.
2. Within IQ levels, there will be no significant difference in the mean t-test scores between the experimental (unipac) and control (traditional) groups at the .05 level of significance.
3. There will be no significant interaction between the levels of intelligence of the experimental (unipac) and control (traditional) groups at the .05 level of significance.

Sample

The fourth grade of Mrs. Cheryl Smith at Assumption School, Dayton, Ohio, was divided into two matched groups on the basis of IQ scores as given by the SRA-TEA test, administered in September, 1969. Each group contained fifteen students.

Procedure

Prior to the actual teaching of the experiment, the writer made several visits to the classroom to observe the class, enabling the students to become accustomed to the presence of another teacher.

Each class period was approximately 30-40 minutes long, depending on the scheduling of the lunch period. The class time was divided in half. During the first fifteen or twenty minutes the writer, Teacher I, taught in the traditional manner to the control group, while Mrs. Smith, Teacher II, monitored the experimental group in the learning center. At the half-way point, the teachers exchanged rooms, leaving the control group to do an assignment. The experimental group was then supervised by Teacher I. The students proceeded in their work on the unipacs, consulting with, and discussing the material with, Teacher I as they progressed from lesson to lesson.

Control Group

The control group consisted of fifteen students ranging in IQ from 88 to 124 (see Table 1). These students remained in the classroom and were taught in the traditional group manner. Generally, the lessons (see Appendix A) followed the pattern suggested by the text and were supplemented with map studies, filmstrips, books and charts. Specifically, each daily lesson followed this pattern: Discuss - Read - Recite - Assign. Discussion on a specific topic included the entire class. The material from the text was read aloud or silently. Reciting consisted of answering the questions posed by the teacher, as directed in the teacher's edition of the text. The assignment was homework given at the end of each chapter. Each assignment was graded according

Table 1
IQ'S OF STUDENTS

Control		Experimental	
Pupil	IQ	IQ	Pupil
A	124	122	A ₁
B	119	118	B ₁
C	116	114	C ₁
D	113	111	D ₁
E	111	110	E ₁
F	110	110	F ₁
G	110	110	G ₁
H	109	109	H ₁
I	107	107	I ₁
J	106	106	J ₁
K	105	103	K ₁
L	103	101	L ₁
M	99	97	M ₁
N	96	94	N ₁
O	88	86	O ₁

to the grading scale used at Assumption School: S=Strong, A=Average, W=Weak. In addition to the test, approximately three assignments per week were graded.

After spending one class period on the introduction, work was begun on the first chapter, "The Indians Were The First Americans."¹ Class members took turns reading aloud, or the material was read silently and then discussed. Students were encouraged to discuss personal experiences relating to the subject matter. The first test on the first unit was given on Friday.

The second chapter, "The Northmen Find America,"² was begun on Monday of the second week. On Wednesday, the entire class shared a movie about the Vikings and their way of life and Leif Ericson. The movie, which covered material from the entire chapter, was followed by a discussion. The test was administered on Friday.

The third chapter began on Monday of the third week, and covered the importance of the Crusades and how they were instrumental in bringing the Europeans closer to America. For this chapter, two pertinent filmstrips were viewed and related to the text material. Again, the test was administered on Friday.

The final chapter began on the fourth Monday of February and dealt with Marco Polo, his discoveries, and their significance. The book, "The Adventures of Marco Polo," and a filmstrip were coordinated with the regular chapter studies. On Thursday, following the filmstrips, student leaders were chosen to lead the discussion and review

¹Don Sharkey, Sr. Margaret, S.N.D., de Namur, and Most Rev. Philip J. Furlong. *How America Began*. (New York: Sadlier, Inc., 1966).

²Ibid.

the material on Marco Polo. The final test of the experiment, the test on unit four, was given on Friday, February 26.

Experimental Group

This group contained fifteen students ranging in IQ from 86 to 122 (see Table 1). On the first day, each student was given a unipac entitled "The Indians Were The First Americans" (see Appendix B). The behavioral objectives were explained for all experimental students in terms of all of the activities involved for each lesson (see Appendix C). These packets were introduced and discussed with the students, who appeared to understand that their work was to be done independently of a teacher and that they were to progress through the unipacs at their own speeds, within the limits of one week. The students appeared to understand that for each lesson they had a choice of from three to five activities to fulfill the objectives.

The materials provided for these units included charts, maps, reference books, filmstrips and movies, in coordination with their own texts. For every activity other than reading their own textbooks, such as viewing a filmstrip, studying charts, or reading reference material, students reported to the experimenter. At this time, they were quizzed on what they had learned from the activity or activities they had undertaken. This was then recorded on a special record sheet (see Appendix D).

As the students answered the questions posed in their lessons within the unipacs, they recorded their information and answers on separate notebook paper. These answer sheets were kept with their unipacs and texts for the continuous work, carried on from day to day.

The first test was given on Friday, February 6. Because the experimenter neglected to read through the test with the entire class, there were many questions that had to be answered individually. The problem stemmed from the difficulty of the language. Later, when the tests were returned, they were explained in detail.

During the second week, students worked on the unipac about about the Northmen (see Appendix E). The unipac was introduced by the experimenter on Monday and students worked independently throughout the week. Periodically, groups of students, or one student, were questioned on the activity undertaken, and their responses were entered on the grading sheet. The language of the second test was simplified and thoroughly explained prior to the administration of the test on Friday.

The topic for the third week's unipac was the Crusades (see Appendix F). As in previous unipacs, the material was introduced on a Monday, students worked independently daily, and the unipac test was administered on a Friday.

Marco Polo and his travels was the chosen topic for the unipac for the fourth week (see Appendix G). Students progressed more rapidly through this unit as was evidenced by the fact that many students attempted the Quest Activities. The experimenter continued to review the material with those students doing extra activities, and the test for unipac four was administered on Friday, February 26.

To conclude the experiment, a preference scale was given to the experimental group on the Tuesday following the completion of the experiment (see Appendix H).

At the end of each week, the packets and answers from all the students were collected. These were then graded and recorded.

Evaluations

The students progress in both groups was reflected by their test scores recorded at the end of each weekly test. Both groups covered the same material during the same amount of time, and the scores were compared on a matched group basis (see Table 2).

The members of the control group were also evaluated on their performance in the assignments given every week. An average of three assignments per week were given to the control group. See Table 3 for this grade information.

The experimental group received no homework assignments; all written work was done within the structure of the unipac and graded with the entire unipac. If the student chose the minimum amount of work for learning the material of the lesson, that is, only reading the text, then only an "Average" grade was given. If more activities were undertaken and the information gained could be applied when questioned, a "Strong" was given. If no activity was completed, a "Weak" was given. Activities other than reading the text were recorded on the grading sheet. The student was then quizzed to determine if the significant points of information could be applied. These evaluations are found in Table 4.

The test given at the end of each week's activities was based on the behavioral objectives for each week. These were constructed by the experimenter.

The test for the first unit/unipac covered several cognitive levels, as explained in Appendix I, taken from Bloom's Taxonomy. The first question asked for a simple definition of terms from unit/unipac one, and then asked for a comparison to a word on the present-day

Table 2
TEST GRADES FOR FOUR UNITS

Level 1								
	Test I		Test II		Test III		Test IV	
	Con.	Exp.	Con.	Exp.	Con.	Exp.	Con.	Exp.
1.	73	81	90	62	76	78	100	62
2.	95	90	77	95	43	100	94	100
3.	87	76	70	80	48	76	95	87
4.	93	88	95	80	90	79	100	100
5.	85	80	97	90	69	100	95	100
6.	50	70	53	75	58	93	88	100
7.	85	73	80	60	70	76	100	100
8.	90	19	100	58	90	40	100	89
Level 2								
9.	85	72	80	90	100	65	100	100
10.	70	85	52	70	44	10	85	95
11.	50	76	80	40	76	67	85	53
12.	57	48	49	74	32	74	50	*
13.	68	21	85	66	56	35	90	83
14.	70	55	68	53	43	25	70	18
15.	45	13	79	12	64	12	55	40

* Score did not count as member of the exp. group was absent.

Table 3
GRADES OF THE CONTROL GROUP

	Week 1				Week 2			Week 3					Week 4			
	1*	2	3	T=1	1	2	T=2	1	2	3	4	T=3	1	2	3	T=4
A	S**S	S	S	73-A	S	S	90-S	S	S	A	A	76-A	S	A	A	100-S
B	A	S	S	95-S	A	***	77-A	W	A	A	-	43-W	A	A	A	94-S
C	-	S	W	87-S	W	W	70-A	W	A	S	W	48-W	-	A	-	95-S
D	A	S	W	93-S	A	S	95-S	A	A	S	S	90-S	A	A	A	100-S
E	A	S	S	85-S	A	A	97-S	S	A	W	A	69-A	A	S	W	95-S
F	W	A	S	50-W	S	S	53-W	A	A	S	W	58-W	-	-	-	88-A
G	S	-	S	85-S	S	S	80-A	S	A	A	S	70-A	S	S	A	100-S
H	S	S	S	90-S	A	S	100-S	S	A	A	S	90-S	W	S	A	100-S
I	S	S	S	85-S	W	W	80-A	-	A	W	A	100-S	-	W	A	100-S
J	-	S	W	70-A	A	W	52-W	A	A	-	W	44-W	W	-	-	85-A
K	-	S	A	50-W	W	-	80-A	-	S	-	W	76-A	A	A	A	85-A
L	A	-	A	57-W	W	A	49-W	A	A	W	W	32-W	W	-	W	50-W
M	S	S	W	68-W	S	S	85-S	S	A	W	W	56-W	A	-	A	90-A
N	A	A	S	70-A	A	S	68-W	W	W	W	W	43-W	A	A	A	70-A
O	A	A	S	45-W	A	S	79-A	A	W	W	W	64-W	-	A	A	55-W

LEGEND

**S - Superior A - Average

W - Weak

*The numbers above the grades correspond to the numbers for the assignments found in Appendix F.

***The dashes indicate that no work was turned in at all.

Table 4
GRADES OF THE EXPERIMENTAL GROUP

	Week 1				Week 2						Week 3					Week 4						
	L ₁ [*]	L ₂	L ₃	T-1	L ₁	L ₂	L ₃	L ₄	L ₅	T-2	L ₁	L ₂	L ₃	L ₄	Q ^{**}	T-3	L ₁	L ₂	L ₃	Q	T-4	
A ₁	***	A	A	A	81	***	-	-	-	62	A	A	A	A	S	78	A	A	A	S	62	
B ₁	A	A	A	A	90	A	A	A	A	A	95	A	A	A	A	-	100	A	S	S	A	100
C ₁	A	A	A	A	76	A	A	A	A	A	80	A	A	A	A	S	76	A	A	W	-	87
D ₁	S	S	S	S	88	A	A	A	A	A	80	W	W	A	W	S	79	S	S	S	S	100
E ₁	A	S	S	S	80	S	S	S	A	A	90	S	S	A	A	S	100	S	S	S	S	100
F ₁	S	S	S	S	70	A	A	S	A	A	75	-	-	-	-	-	93	A	A	W	-	100
G ₁	A	A	A	A	73	S	S	S	S	S	60	A	A	A	S	-	76	S	S	S	S	100
H ₁	-	-	-	-	19	-	-	-	-	-	58	-	-	-	-	-	40	W	A	W	W	89
I ₁	A	S	A	A	72	S	S	A	A	A	90	W	W	A	W	-	65	W	A	W	S	100
J ₁	A	S	A	A	85	W	W	A	W	W	70	W	W	A	A	-	10	A	A	A	S	95
K ₁	W	W	W	W	76	S	A	A	A	W	40	W	W	W	W	-	67	A	A	A	A	53
L ₁	A	A	A	A	48	W	W	W	W	W	74	-	-	-	-	-	46	Absent				
M ₁	A	A	A	A	21	A	A	A	A	A	66	W	A	A	A	S	35	A	A	A	-	83
N ₁	A	A	A	A	55	A	A	A	A	A	53	A	A	A	A	-	25	S	S	S	-	18
O ₁	-	-	-	-	13	W	W	W	A	W	12	W	W	W	W	-	12	W	A	A	-	40

LEGEND

* L - Lesson

** Q - Quest Activities

*** - - Indicates that no work was turned in at all.

**** S - Superior, A - Average, W - Weak

vocabulary. This corresponded to Knowledge of Terminology (1.11) and Comprehension (2.00) on the Taxonomy. The second question requested a description of Indian sign language, and whether it is important and relevant in today's society: Knowledge of Terminology (1.11) and Production of a Unique Communication (5.10). Knowledge of Specific Facts (1.12) was tested in the third question when students were asked to recall the route of the first Indians into America. The final question asked for an outline of five Indian tribes concerning their dwelling, food, dress and geographic location. This task was under Level 4.30, Analysis of Organization Principles.

The first two questions on the second test asked for Knowledge of Specific Facts (1.12): a detailed outline of the Northmen, their activities, and the importance of three Viking leaders. The third question solicited Analysis of Relationships (4.20) by requiring the students to construct comparisons of the differences between Vinland (Newfoundland) and Greenland. The fourth question dealt with the complexities and hazards of Viking travel as compared with those methods of today: Analysis of Relationships (4.20). The final questions covered map skills. The map was provided and students were directed to draw in the route of Leif Ericson as he found America.

Question one of the third test required a one-sentence definition of terms--simple recall, or Knowledge of Terminology (1.11) and Comprehension (2.00) on the Taxonomy. The second question demanded an understanding of the reasons why the Crusades were fought--Derivation of a Set of Abstract Relations (5.30). Knowledge of Trends and Sequences (1.22) were asked for in the third question relating the eventual outcome of the war. The fourth question dealt with the geographic

locations of the Crusades and the countries involved (Knowledge of Specific Facts, 1.12), while the fifth question called for Analysis of Relationships (4.20) in the contrast and comparison of methods of travel now and then. The final question demanded an understanding of the Crusades and their importance--Comprehension (2.00).

For the fourth week's test, the first question was a composite of several things. First the students had to understand why it took four years for Marco Polo to travel from Venice to China. Second, they were asked to describe the methods of travel used and to compare them with modern methods of travel (Comprehension, 2.00, and Analysis of Relationships, 4.20). The second and third questions asked for Knowledge of Specific Facts (1.12): the living conditions of the Far East and the name of the person the Polos visited. The fourth question was again recall, the length of time the Polos spent in China: Knowledge of Specific Facts (1.12). The final question asked for the importance of the Polos trip to the merchants of Europe and their plan to procure merchandise from the Far East: Synthesis, 5.00.

Apparatus

Control Group

Most activities used with the control group were based on the text, How America Began.² The covering of day-by-day material was conducted as suggested by the text in the teachers' edition, though a few changes were made. The following supplementary materials were used for the enumerated units:

1. Indians: Charts on Indian Life

² Sharkey, deNamur, and Furlong, How America Began.

2. Vikings: Charts on Vikings and Leif Ericson
Movie - The Vikings and Their Explorations
3. Crusades: Filmstrips - The Crusades and Their Significance
4. Marco Polo: Charts on Marco Polo
Filmstrip - The Adventures of Marco Polo

Experimental Group

The unipacs used for each of the four lessons by the experimental group were constructed in accordance with four guides which were:

1. Taxonomy of Educational Objectives by Benjamin S. Bloom³
2. Preparing Instructional Objectives by Robert F. Mager⁴
3. "Constructing Unipacs Easily" by Bobbie Deering⁵
4. How to Prepare a Unipac by Allan A. Glatthorn and Gardner A. Swanson⁶

The unipacs were constructed according to the diagram at the end of this chapter. This diagram is based on Deering's "Constructing Unipacs Easily" and serves as a good basic description of the process used. However, this is only an abbreviated explanation of the actual detail of constructing a unipac. The publication by Glatthorn and Swanson fully describes not only the process, but also the philosophy, embodied by unipacs.

As the outline states, every unipac began with a concept. In all cases, the experimenter chose the main concept for each unipac from the main concept of each of the four chapters of the text, How America Began.⁷ The sub-concepts were then formulated from the material

³Benjamin S. Bloom. Taxonomy of Educational Objectives. (New York: Longman-Green, 1956).

⁴Robert F. Mager. Preparing Instructional Objectives. (Palo Alto: Fearon Publishers, Inc., 1962).

⁵Bobbie Deering, "Constructing Unipacs Easily."

⁶Allan A. Glatthorn and Gardner A. Swanson. How to Prepare A Unipac. I/D/E/A UNIPAC.

⁷Sharkey, deNamur, and Furlong, How America Began.

selected in each of the chapters. In every case, the titles and content of the unipac matched basically that of the chapter in the text.

Constructing the behavioral objectives was done in accordance with Mager's Preparing Instructional Objectives,⁸ keeping in mind the levels of Bloom's Taxonomy of Educational Objectives.⁹ The goals for each unipac were relative to the concepts and ranged from Knowledge to Analysis as described in the Taxonomy (see Appendix I).

Several types of materials were used by the students in the experimental group. Each material fit into a specific lesson of a specific unipac. Below is a general list of all the materials used.

1. Indians: Charts - Indian Life, Indians of America
 Filmstrips - Indians of the Northwest Coast
 Indians of the Plains
 Indians of the Northeast Woodlands
 Indians of the Southwest
 Reference Materials - World Book Encyclopedia
 Fifteen books on Indians
2. Vikings: Charts - Great Explorers, Leif Ericson
 Movie - Vikings and Their Explorations
 Filmstrips - Leif Ericson
 The Vikings
 Reference Materials - World Book Encyclopedia
 Viking Ship Replica
3. Crusades: Charts - Life in the Middle Ages
 Filmstrips - When Knights Were Bold
 The Crusades and Their Significance
 Reference Materials - World Book Encyclopedia
 Two books on Crusades
4. Marco Polo: Charts - Marco Polo
 Filmstrips - The Adventures of Marco Polo
 Reference Materials - World Book Encyclopedia
 Two books on Marco Polo

⁸Mager, Instructional Objectives.

⁹Bloom, Educational Objectives.

Data Analysis

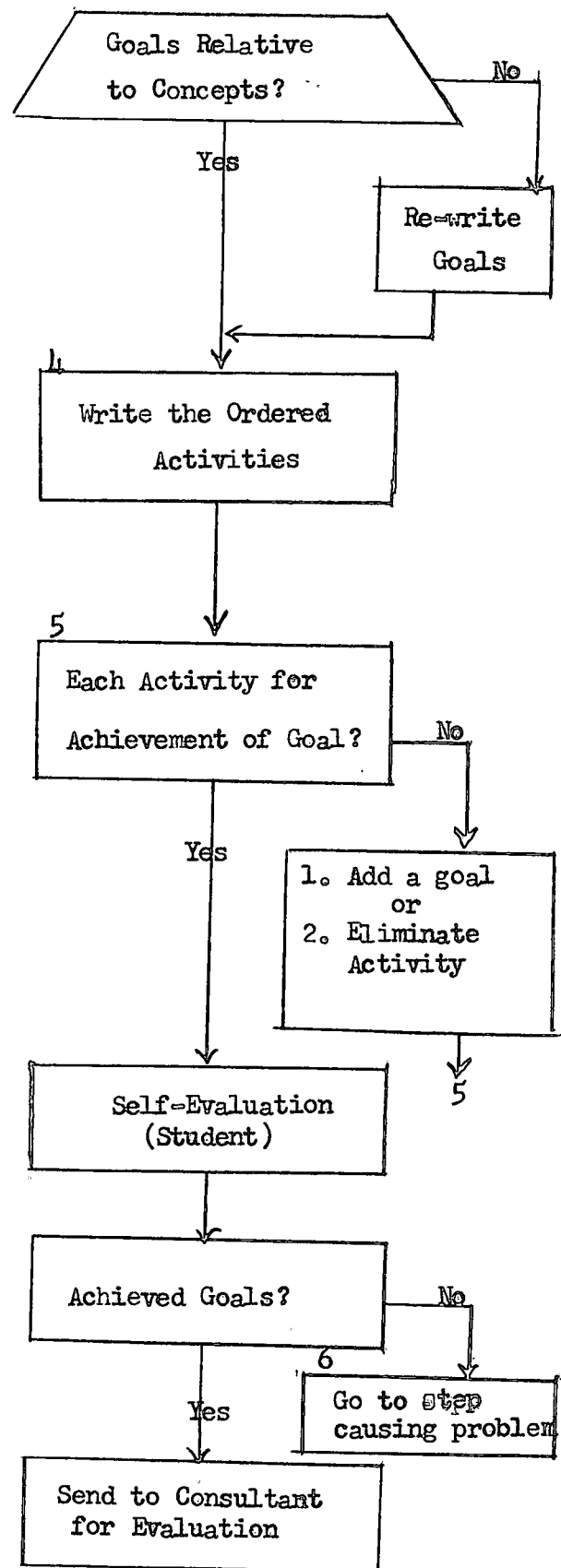
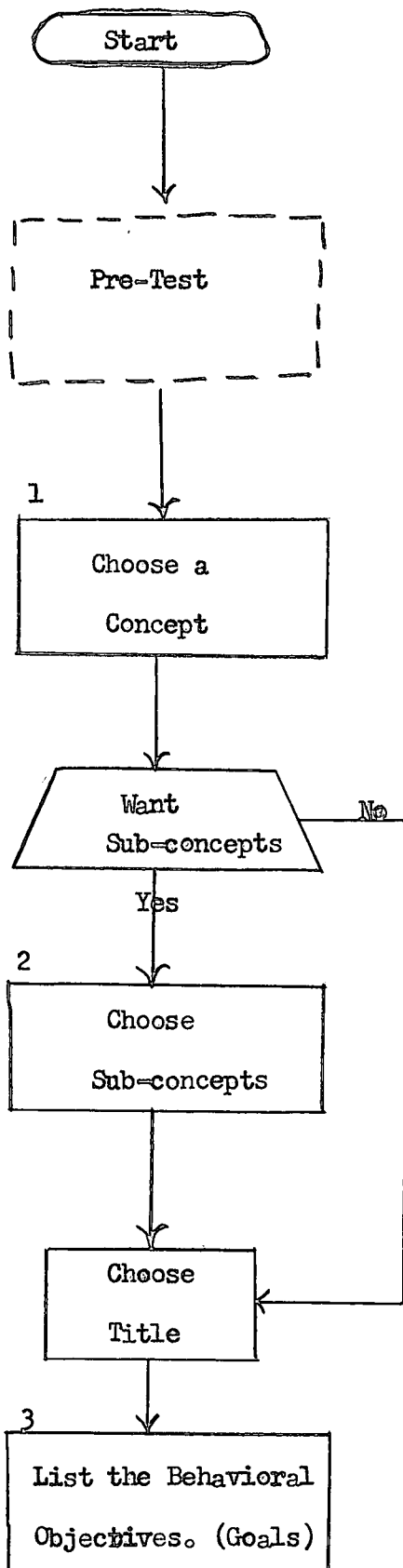
In all cases, computations were applied to the test scores as received from each of the four weekly tests; all computations were specific t-tests.

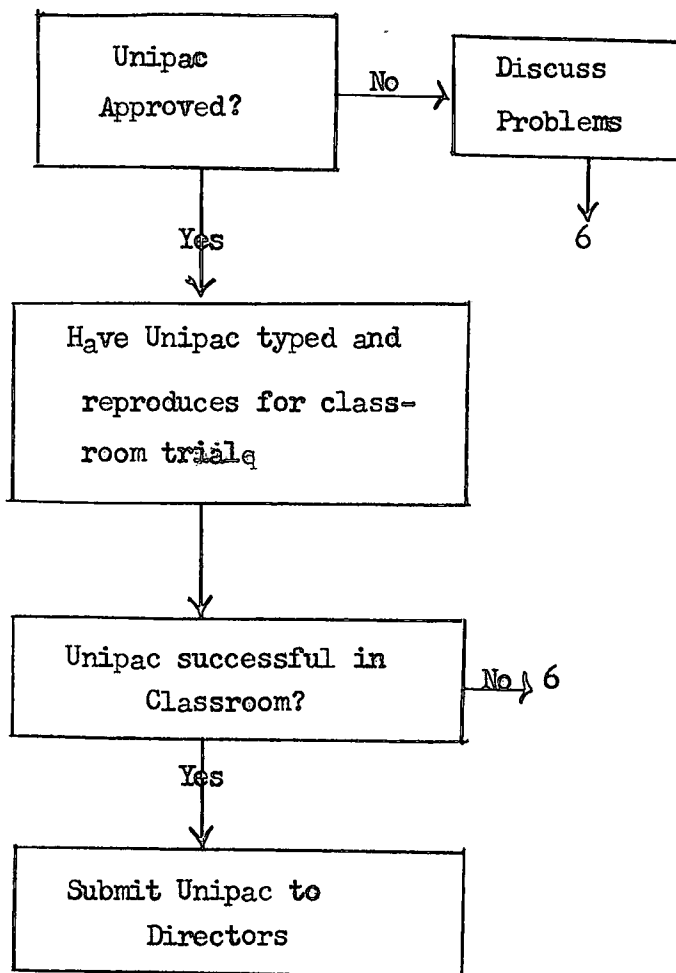
The first procedure was to determine the Estimate of Population Variance. Essentially, the test gave the estimate of how other fourth grade students would vary if they were subjected to this same procedure. This figure was then used in the three computations that actually were the evaluation of the results.

To determine the adequacy of the two methods if the entire class was taken as a whole, the Effect of Treatment was measured.

The Within Levels Effect assessed the difference between the two methods within IQ levels. For this procedure, the control and experimental groups were divided into two IQ groups: 109 and above, and below 109.

The Effect of Interaction was used to determine if the methods had differing effects for different IQ levels.





Glossary

1. Concept - An idea that is teachable.
2. Sub-concept - Small ideas which can stand by themselves, which when considered together, make up the main concept.
3. Behavioral Objectives - The specific, measurable goals which the teacher expects the student to reach. (Study Mager carefully.)
4. Ordered Activities - The procedures, content, and methods used, which must be related to the stated goals.¹⁰

¹⁰Bobbie Deering, "Constructing Unipacs Easily".

CHAPTER IV

RESULTS

Introduction

Each of the t-tests was applied to the separate tests for each week's unit/unipac. Therefore, each test has been discussed separately in the light of these results.

First Test

The results for the comparison of the two methods based on the scores received from the first unit/unipac test can be found in Table 5.

Table 5

UNIT TEST RESULTS

Source of Variation	1	2	Tests	3	4
Treatment	-0.70	-0.773	-0.325	-0.723	
Within Levels					
Level 1	-1.00	-0.864	-1.180	-0.460	
Level 2	-0.99	-1.310	-1.990*	-1.510	
Interaction	0.04	0.370	2.260**	0.840	

NOTE: Entries are t-test values.

* $p < .10$

** $p < .05$

The effect of Treatment indicated that no significant difference existed for the two methods. Likewise, the Within Levels Effect in Table 5 indicated that no significant difference could be found between the two methods even when comparing the two methods within their IQ groups. Neither Level 1 nor Level 2 was affected by the new method.

Also, the Effect of Interaction test value showed that no significant difference existed between the two methods. However, the fact that the t-test value was positive indicated that at both levels, the control group did better on this test. The formula for the computation compared each of the methods within their levels, and then compared both of these scores, thus pitting the methods and their levels against each other. The formula is as follows:

$$t = \frac{(M_{IE} - M_{IC}) - (M_{ZE} - M_{ZC})}{\sqrt{\frac{S_x^2}{n_1} + \frac{S_x^2}{n_2} + \frac{S_x^2}{n_3} + \frac{S_x^2}{n_4}}} = (A) - (B)$$

Thus, if a negative score was computed in the (A) position, it indicated that at Level 1, the control group did better. If a positive score was computed, the experimental group achieved better. Likewise, in the (B) position, a negative score indicated that the control group did better at Level 2. A positive score indicated that the experimental group was more successful.

Generally, low scores were achieved by both groups on the first test. Several factors may have contributed to these results. Perhaps the main factor was the type of test administered. All tests were essay type evaluations, and many students were unaccustomed to answering questions in this manner. The class had been receiving objective tests for the most part.

Another reason for the generally low scores could have been the inappropriate language of the test; it was not fourth grade level, but much higher. For example, the test asked students to "relate in paragraph form"; perhaps too sophisticated for the fourth grade. The experimenter also neglected to explain the test thoroughly to the class, resulting in much individual confusion. The experimenter spent the entire testing session answering questions about the test to individual students. In summary, the t-test values achieved from the test were not significant. On all three computations, neither method was shown superior.

Second Test

The findings for the second unit/unipac of work can be found in Table 5. Again, the Effect of Treatment indicated that in general, no significant difference was found. However, the results for the Within Levels Effect began to show a change. Though the test value itself was not significant at either Level 1 or Level 2, the trend across the table seemed to be developing that a distinct difference did exist between the two methods at the lower IQ level, Level 2. The experimental group of Level 2 had done more poorly than the control group at Level 2. This was also shown in the Effect of Interaction, though the test value was not significant at the .05 level.

The unit/unipac test itself was much more easily understood by the very nature of the vocabulary used; for example, "tell in one paragraph." The experimenter also explained the directions for the test to the class as a whole.

Because of the improved language, the second set of test values was probably more indicative of the true differences, if any. Although

none of the test values showed a significant difference at the .05 level, the results of this unit/unipac indicated the hint of a difference occurring within Level 2.

Third Test

The third set of findings indicated the greatest difference in the two methods of teaching (see Table 5). The Effect of Treatment again was not significant, indicating that in general, there was no difference between the two methods.

However, the Within Levels Effect indicated a significant difference at the .10 level, and nearly so at the .05 level. This showed that at Level 2 on the unit/unipac for the third week, the experimental group did more poorly. The t-test value for Level 1 was -1.18, and for Level 2 it was -1.99.

This result also was indicated in the Effect of Interaction. The figures for this test indicated that at Level 1, the experimental group did much better than the control group; but at Level 2, the control group did better than the experimental group. This difference was reflected in the significant score at the .05 level, 2.26.

The results would appear to be indicative of what was previously stated; that the Level 2 of the experimental group was not able to function as well under the multi-media, unipac system as under the traditional method. When left on their own to ferret out the information, either they were not capable of handling the situation, or they were not motivated to do so. It seemed that many students needed the structure of daily written, turned-in assignments and everyday oral review.

The test itself was the most simple in its construction and

detail. Again, it was explained prior to its administration.

Of the four weeks' tests, the results of the third week's showed the greatest difference between groups. The test value for the Effect of Interaction indicated a major difference in the comparison of the two levels at Level 2.

Fourth Test

Findings for the fourth set of test values, found in Table 5, were not significant. The Effect of Treatment value was not significant nor was the Within Levels Effect for Level 1 or Level 2. The Effect of Interaction showed that the control group was more effective for both levels, but only slightly so for Level 1.

The fourth set of test values showed a difference in Level 2 of the Effect of Interaction. The lower IQ group did more poorly.

Preference Scale

The final portion of the study was to determine if all the students in the experimental group were in favor of the unipac method, or if only those who achieved well grade-wise would recommend its adoption. A copy of the preference scale can be found in Appendix H, and a composite of all the answers in Table 9.

The first question was answered in a positive manner by all fourteen involved. (One student was absent.). Students offered five different reasons why they liked the unipacs, ranging from "fun-ness" to the reason that it was good to be away from the classroom and teacher.

The third question dealt with their favorite activity, and the Quest Activity rated the highest, with filmstrips and reading ranking second. Only one person enjoyed the charts the most.

The seventh question was interesting in that although originally all fourteen were in favor of the unipacs, only thirteen recommended using them on a regular basis in the classroom. One subject (H_1) changed her mind. It is the author's contention that she did not want to use the unipacs all the time because she knew that she did poorly with them. Her answer in this regard brings out the story of her work. She did not do any of the work and purposely discarded her unipacs, telling the author that she "lost" them at first, and later owing up to throwing them out. She also purposely discarded the tests rather than take them home to be signed by her parents and returned to the author. In the third week, the author phoned the parents to discuss the matter and contacted an extremely irate father. The author tried to describe the unipac method to the man, and his daughter's failure to work under this method in a manner befitting her capacity (IQ 107). He promised that her work in the future would improve. By checking Table 4, it can be seen that her work did improve drastically in the fourth week, including her test grades. However, it appears that she would rather not go through this again in the future, so she did not recommend the unipacs.

Most students said they felt they did their best on all lessons. However, three students admitted that they only worked their hardest for a few of the lessons. Some gave no comment in relation to that question.

The most outstanding final comment came from Tony, who did barely a thing for the entire four weeks. His comment was: "I tried to do my best on the test. I'm trying to do gooder." Then, in a Thank You note he made for the author, he put the following comment: "I am sorry I

have not been working. Can you forgive me?"

Apparently some students enjoyed the freedom and most used it wisely and benefitted from use of the unipac method. However, there were still those who just could not handle this type of learning experience at this time as well as they could the traditional method and "realized" it.

Table 6

RESULTS OF THE PREFERENCE SCALE

QUESTION ONE: Do you like using unipacs? Yes, 14. (Unanimous)

- REASONS:
- 4 Liked because out of classroom, without teacher.
(N₁, E₁, G₁, H₁)
 - 4 Liked it because of the different activities.
(M₁, K₁, B₁, J₁)
 - 3 Liked "fun-ness" of it. (O₁, I₁, D₁)
 - 2 For lazy reasons: No homework - C₁; had five days to do it - A₁.
 - 1 Liked the suspense of not knowing if answers were always right. (F₁)

QUESTION TWO: Which lesson did you like best?

- 5 Marco Polo: G₁, O₁, D₁, J₁, F₁
- 4 Crusades: H₁, E₁, K₁, C₁
- 3 Indians: N₁, I₁, B₁
- 2 Vikings: M₁, A₁

QUESTION THREE: Which was your favorite activity - what did you like to do most?

- 4 Quest Activity: C₁, O₁, B₁, K₁
- 3 Filmstrips: F₁, H₁, E₁
- 3 Reading: J₁, N₁, D₁
- 1 Charts: I₁
- 1 Finish package early: A₁

QUESTION FOUR: Which lesson did you work hardest for?

- 8 Marco Polo: I₁, F₁, J₁, O₁, G₁, A₁, M₁
- 2 Crusades: K₁, E₁
- 2 Vikings: Q₁, B₁
- 1 Indians: N₁
- 1 Undecided: D₁

QUESTION FIVE: Which test did you study the hardest for?

- 6 Marco Polo: O₁, H₁, F₁, D₁, J₁, I₁
- 4 Crusades: K₁, E₁, A₁, M₁
- 3 Vikings: G₁, B₁, C₁
- 1 Indians: N₁

QUESTION SEVEN: If you could choose how you would like to learn history, would it be with unipacs (packages) or with the regular classroom method?

- 13 Packets
- 1 Traditional classroom: H₁

COMMENTS: Did you try your hardest for these past four weeks?

- 8 Yes, for all lessons and unipacs: B₁, N₁, A₁, M₁, O₁,
F₁, D₁, J₁
- 3 Yes, on some of them: K₁, E₁, H₁
- 3 Unrelated answers: G₁, C₁, I₁

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Generally, the results did not indicate significant differences between the two methods of teaching social studies; a difference did exist, however, with students at lower IQ levels. The difference became apparent with the second set of findings for the second test. There could be two probable reasons for this. Several of the students in the experimental group were slacking off quite noticeably and apparently chose not to do any of the lessons of activities very well, if at all. The fact that very little, and in some cases, no actual work was accomplished is evident by the grades and work collected in the "completed" unipacs.

The students in Level 1 enjoyed the freedom of continuing their packets from where they had left off the previous day, and appeared to attack the learning with enthusiasm. They knew which activities they wanted to do, and structured the available time for the best use of the materials in the Learning Center. In using the unipac method, they were able to locate the significant facts and important information and to apply it to the learning situation. It appeared that, for them, the enjoyment of working alone, without a teacher, was an extra incentive for using the available time in wise study.

Many of the students in Level 2 had not grasped the significance of individual instruction and seemed to be incapable of structuring their own study. These students lacked the ability to build their own lessons and locate the important information contained in any of the available activities. Perhaps these students' inability could be explained by a general lack of experience in these types of skills, or that they were not "ready" for this experience. They seemed to need the structure of classroom activities to direct them, and, in some cases, push them to complete a learning activity. If given more instruction along these lines and encouraged to reach out at a gradual pace, it might be possible for them to grow into using the program in a beneficial manner.

Basically, the traditional method and the individualized use of the unipac method are the same in their behavioral objectives in that both methods asked the students to achieve the same objectives. Even though the unipac method may be structured from the use of one text, or three texts, or a series of materials, the behavioral objectives are the same. For students in Level 1, the method of learning was not as important because it appeared that they are generally motivated to learn, regardless of the technique. However, using the unipac method, they were given more freedom and encouraged to discover more on their own. But for the students in Level 2, the method of learning did make a difference. Although they may enjoy the freedom of searching for answers, they often did not locate the significant information, nor could they apply it.

It is the author's contention that perhaps the best teaching strategy for all concerned would be a union of the two methods. In that setting, those students who need the guidance of a traditional structured classroom would be able to function until such a time as they

chose to use, or were guided into the responsibility of, the individual method. By applying a composite of methods, those students really needing the direction and attention of the teacher would be receiving it. In this way, they could also be developing their skills for individual study and progressing in that direction at a gradual pace.

This research project pointed up the fact that there is no real difference in the demands on the students as stated in the behavioral objectives of each method and that the composite of the two systems might conceivably be very beneficial. In that both methods asked for the same thing behaviorally in their application, the union of these methods would allow the freedom for those who could use it wisely and maintain the structure for those who need it.

Recommendations

If the subject matter is reviewed again by this author or any other author, several changes would be recommended. A possible method of achieving more conclusive results would be to lengthen the study by another 2-4 weeks. This would yield a great deal more evidence and might result in more significant data.

It is a strong possibility that there is no significant difference between the two methods when used at a certain age level. This type of study could be applied to several grade levels to determine if there exists a "best age" for individual study, or if certain basic skills should be attained by a specific age-grade level in order for the students to benefit from the unipac method of study.

Some educators are recommending the unipac method for all types of learning, at all grade levels, even the very youngest. This author

disagrees, feeling that every child needs to develop basic learning skills prior to being left on his own. Along these lines of reasoning, the author also feels that it is the dynamic, enthusiastic and observant teacher who is the prime factor in learning, not strictly the method involved.

APPENDIX A
LESSON PLANS

Appendix A

Lesson PlansFirst Week

A. Monday

1. Examine text: Title, Table of Contents, Illustrations, Maps.
2. Read: Pages 4 to 7, independently.
3. Assignment: Choose one picture from pages 4-7 and write a description of it as if you were there. (1)

B. Tuesday

1. Read some of the classes writings. Discuss them, as well as questions on reading material.
2. Read pages 6 and 7 orally.
3. Assignment: Write about some national park visited or read about. (2)

C. Wednesday

1. Read pages 8-11, part orally, part independently.
2. Discuss these pages with questions provided in teachers guide.
3. Assignment: Do the Words To Know and Questions to Think About at the end of the Chapter. (3)

D. Thursday

1. Read pages 12-14, orally.
2. Discussion, as provided in teacher's guide.
3. Assignment: Do you Remember?, and study for the test

E. Friday

1. Test on chapter. (T-1)

Second Week

A. Monday

1. Discuss and Read pages 16-17.
2. Recite - Study pictures and maps, and their relevance.
3. Assignment: Do Words to Know & People Who Helped Make History. (1)

B. Tuesday

1. Return and go over tests of last Friday - entire period.

C. Wednesday

1. Discuss and read pages 18-20.
2. Recite: Questions in teacher's guide.
3. Assignment: Do You Remember and Questions to Think About. (2)

D. Thursday

1. Movie - Vikings and Their Explorations
2. Discussion on movie.

E. Friday

1. Test on chapter. (T-2)

Third Week

A. Monday

1. Read and discuss pages 22-24.
2. Recite: Discussion section in teacher's guide.
3. Assignment: Write story of own Crusade across the continent. Describe travel and findings. (1)

B. Tuesday

1. Read pages 25-26.
2. Recite: Discussion questions in teacher's guide.
3. Assignment: Words to Know and Working With Maps. (2)

C. Wednesday

1. Read pages 27-28.
2. Recite: Questions for discussion.
3. Assignment: Do You Remember (3)

D. Thursday

1. Filmstrips - When Knights Were Bold and The Crusades and Their Significance.
2. Discussion of information in filmstrip.
3. Assignment: Questions to Think About (4)

E. Friday

1. Test on chapter. (T-3)

Fourth Week

A. Monday

1. Read pages 30-31, orally and silently.
2. Recite: Relate the pictures and maps to the text material.
3. Assignment: Working With Maps (1)

B. Tuesday

1. Filmstrip - The Adventures of Marco Polo
Book - Marco Polo
2. Recite: Relate sections of the book to the actions in the filmstrip.
3. Assignment: Imagine yourself on trip with Marco Polo; write of your adventures. (2)

C. Wednesday

1. Read pages 32-33 orally.
2. Recite: Class chooses discussion leaders who lead class in discussing important ideas of the chapter.
3. Assignment: Do you Remember and Questions to Think About. (3)

D. Thursday

1. Read stories of adventures of Marco Polo.
2. Discussion on the effect of his journey on European life.
3. Assignment: Study for test.

E. Friday

1. Test on chapter. (T-4)

APPENDIX B

UNIPAC #1

The Indians
Were The
First Americans



The Indians Were The First Americans

This package will help you to understand how the Indians came to our country and where they lived. You will also learn about the different types of Indians, and why they were different.

After you finish this package you should be able to:

1. Demonstrate understanding of the following words by constructing a one-sentence definition for them. Compare these words to a word in our vocabulary for each.
papoose bison brave pueblo tepee squaw wampum
2. Relate in paragraph form the probable route of the first Indians on their way to America.
3. Name five Indian tribes and describe their manner of living in terms of the following:
a. Dwelling b. Food c. Dress d. Location on map
4. Describe the language of the Indian and its relevance in today's society. (Sign Language)

Do not write in this package, but put all your answers on notebook paper.

LESSON #1

Today it would be possible for any one of us to travel across our country in a very short time. If you were to travel by air, it would only be a matter of hours to fly from New York to California. By car on superhighways you could drive the length of the United States in a few days. Railroads cross the country even more quickly.

But many years ago it was not easy to cross the country. The pioneers who had no roads had to travel on foot through dense forests and over high mountains. They crossed the great western plains and deserts in covered wagons that traveled only a few miles a day.

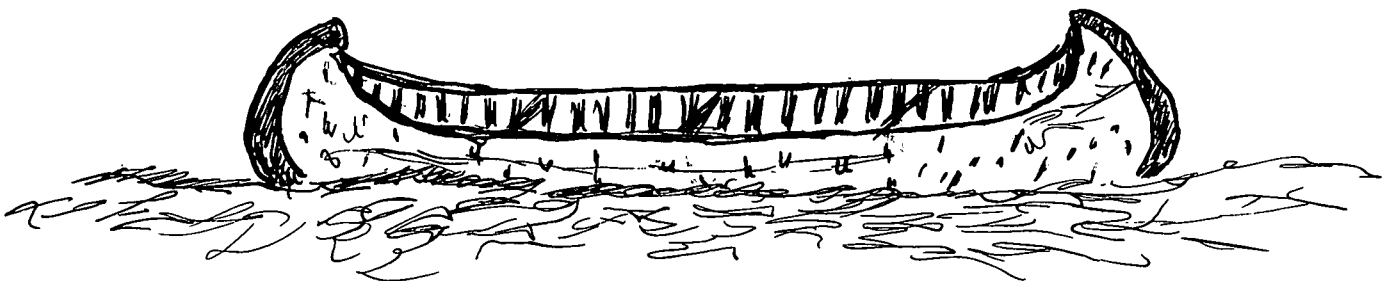
Yet even before the pioneers came to America, it was inhabited by Indians, whose only method of travel was on foot or by canoe. These people had inhabited all areas of our country long before the explorers even thought of discovering America.

How did these Indians get into our country?

Were they from a European country?

Activities:

1. Read page 13 in the History text.
2. Read pages 112 and 134-135 in the World Book Encyclopedia under Indians and report.
3. Read the book The Earliest Americans.



LESSON #2

When the Indians arrived in our country it was much different than it is today. Our entire country was a wilderness of one kind or another. One huge section was covered by a forest so thick that the sunlight could seldom hit the ground. In other parts of the country there were deserts and grass-covered plains, and rugged mountains. Everywhere the country was almost the same as when God had made it.

The Indians did not change the country but they lived in it just as it was. Where there were trees, they lived in log houses. On the desert they lived in houses of mud bricks. On the plains they lived in tepees made of buffalo skins.

These different types of Indians lived by different means - some fishing, some hunting, some growing crops. But often they roamed from place to place, not staying in one place very long.

Why didn't they stay in one place very long?

Where did they travel?

Did all the tribes live the same way?

Did all tribes have the same customs?

Activities:

1. Read pages 8-12 in the History book.
2. Study the charts on the different tribes and report.
3. View the four filmstrips and report.
4. Read pages 127-131 in the World Book Encyclopedia and report.

AMERICAN INDIAN

1. N.E. Woodland
a. Mohawks

2. Plains
a. Sioux

3. S.W. Indians
a. Pueblos

4. N.W. Coast
a.



LESSON #3

You have learned that there were many tribes of Indians living all across our country. These individual tribes had different customs and ways of living, so they also had different ways of talking.

Could all of these Indians understand each other?

Why or why not?

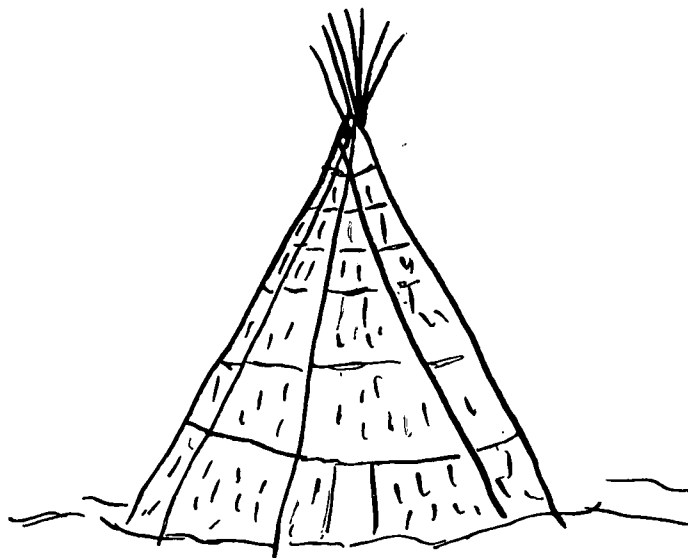
Activities:

1. Read the paragraph on pages 9-10 in the History text.
2. Read pages 132-134 in the World Book Encyclopedia, and report.
3. Read pages 122-123 in the World Book Encyclopedia and give a demonstration.

Bear



Deer



QUEST ACTIVITIES

1. Choose any one of the regional groupings of Indians in North America as found on the enclosed sheet or in the World Book Encyclopedia, and write a description of their way of life. Be sure to cover the following areas:
A. Food B. Clothing C. Shelter D. Customs E. Differences
2. Describe the craft items made by various tribes throughout America, including no less than six tribes. Reproductions of items would be helpful for class observation.
3. Write a report of the religious beliefs and ceremonies of the various Indian tribes. Use as many sources as possible in your search for information.
4. Assemble a costume of appropriate dress from any one of the tribes of North America and model it for the class.

APPENDIX C
BEHAVIORAL OBJECTIVES

APPENDIX C

BEHAVIORAL OBJECTIVES

The Indians Were The First Americans

1. Demonstrate understanding of the following words by constructing a one-sentence definition for them. Then compare these words to a word in our vocabulary.
papoose bison brave pueblo tepee squaw wampum tomohawk
2. Relate in paragraph form the probable route of the first Indians on their way to America.
3. Name five Indian tribes and describe their way of living in terms of the following:
a. Dwelling b. Food c. Dress d. Location on map
4. Describe the language of the Indian and its relevance in today's society. (Sign Language)

The Northmen Find America

1. Relate the contribution of the following three people to the founding of America by the Northmen:
a. Eric the Red b. King Olaf c. Leif Ericson
2. Describe the characteristics of the Northmen with regards to the following three points:
a. Homeland b. Method of Travel c. Life in Greenland
3. Contrast the differences between Vinland and Greenland in the following two areas:
a. Vegetation (Growth) b. Inhabitants
4. Compare the Atlantic Ocean as we know it today with the term "Sea of Darkness" as described by the Northmen, with regards to the following items:
a. Size of the Ocean - distance
b. Size of ships
c. Time needed to cross the ocean
d. Knowledge of destination
5. Trace the route of Leif Ericson across the ocean.

The Crusades Bring Europe and Asia Closer Together

1. Demonstrate understanding of the following terms by writing a one-sentence definition:
 - a. Spices - and name three
 - b. Crusades
 - c. Turks - name nationality
 - d. Arabs - name nationality
2. Tell in one paragraph why the Crusades were fought. In another paragraph tell what was the eventual outcome of the years of fighting and traveling.
3. Identify three reasons why the Crusades were so important.
4. Show on the map where the Crusades began, where they traveled, and the continents involved.
5. Compare and contrast means of travel to the Holy Land in the days of the first Crusade with those of today.

Marco Polo Visits the Far East

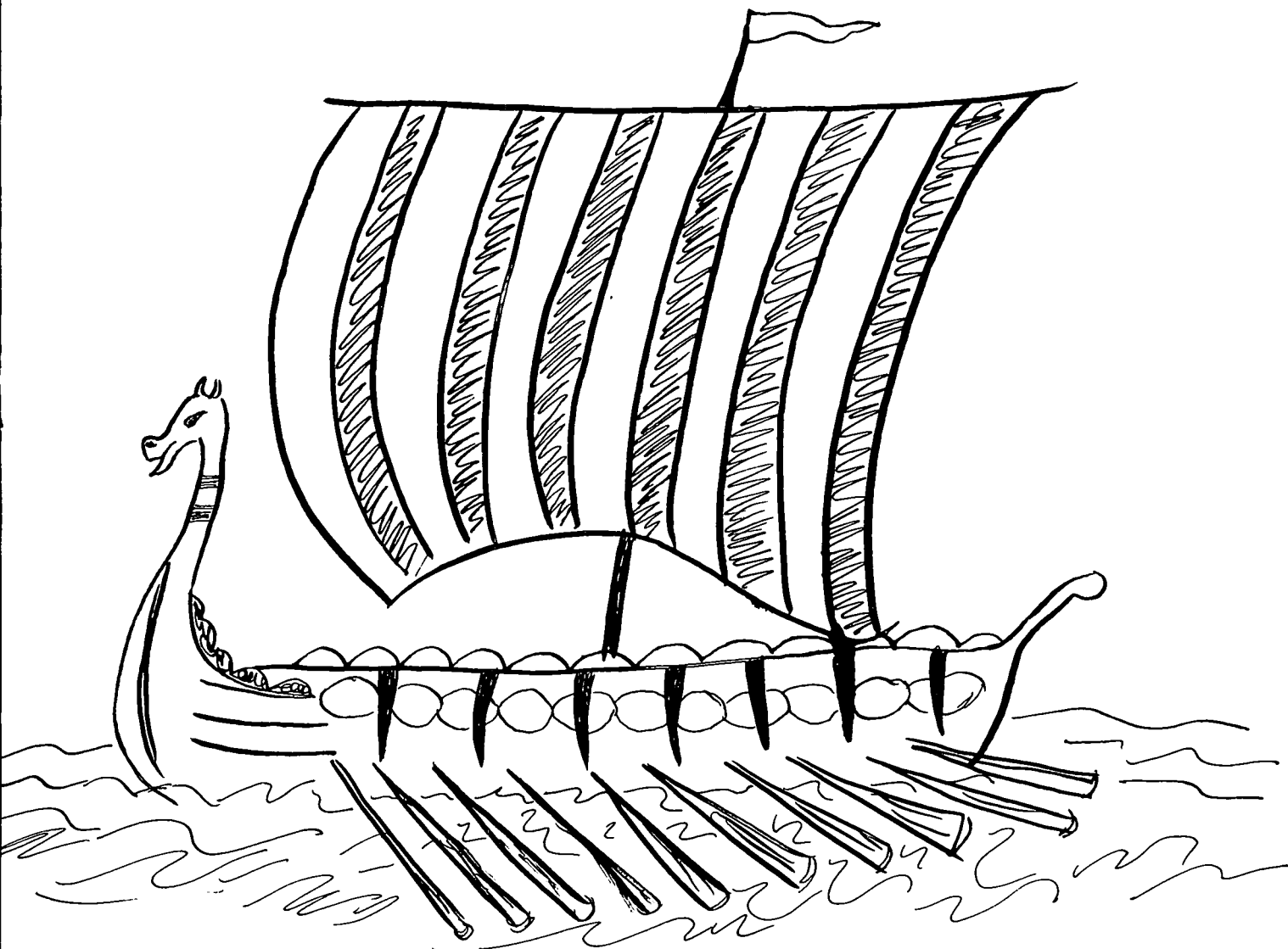
1. Identify the reasons why it took Marco Polo four years to travel from Venice to China. Compare this with the method of travel used today.
2. Relate the different ways of living Marco Polo found in the Far East with relation to the following:
 - a. Cities
 - b. Transportation
 - c. Riches
3. Describe in one paragraph the effect that the Polo's trip had on the people and merchants of Europe. The following three points should be included:
 - a. Goods cost less in the Far East.
 - b. Goods cost more in Europe because of the cost of travel over the land.
 - c. The merchants sought to find an easier way to transport the goods, knowing that water travel was cheapest.

APPENDIX D
GRADING SHEET

APPENDIX E

UNIPAC #2

THE NORTHMEN FIND AMERICA



The Northmen Find America

This package will direct your learning about yet another discoverer who found America. You will also learn about the Northmen, or Vikings, and how they found our country.

After you finish this package you should be able to:

1. Relate the contribution of the following three people to the founding of America by the Northmen:
A. Eric the Red B. King Olaf C. Leif Ericsson
2. Describe the characteristics of the Northmen with regards to the following three points:
A. Homeland
B. Method of travel
C. Life in Greenland
3. Contrast the differences between Vinland and Greenland in the following three areas: A. Vegetation B. Inhabitants
4. Compare the Atlantic Ocean as we know it today with the term "Sea of Darkness" as described by the Northmen with regards to the following items:
A. Size of the Ocean - distance
B. Size of ships
C. Time needed to cross the ocean
D. Knowledge of destination
5. Trace the route of Leif Ericson across the ocean.

Do not write in this package, but put all your answers on notebook paper.

LESSON #1

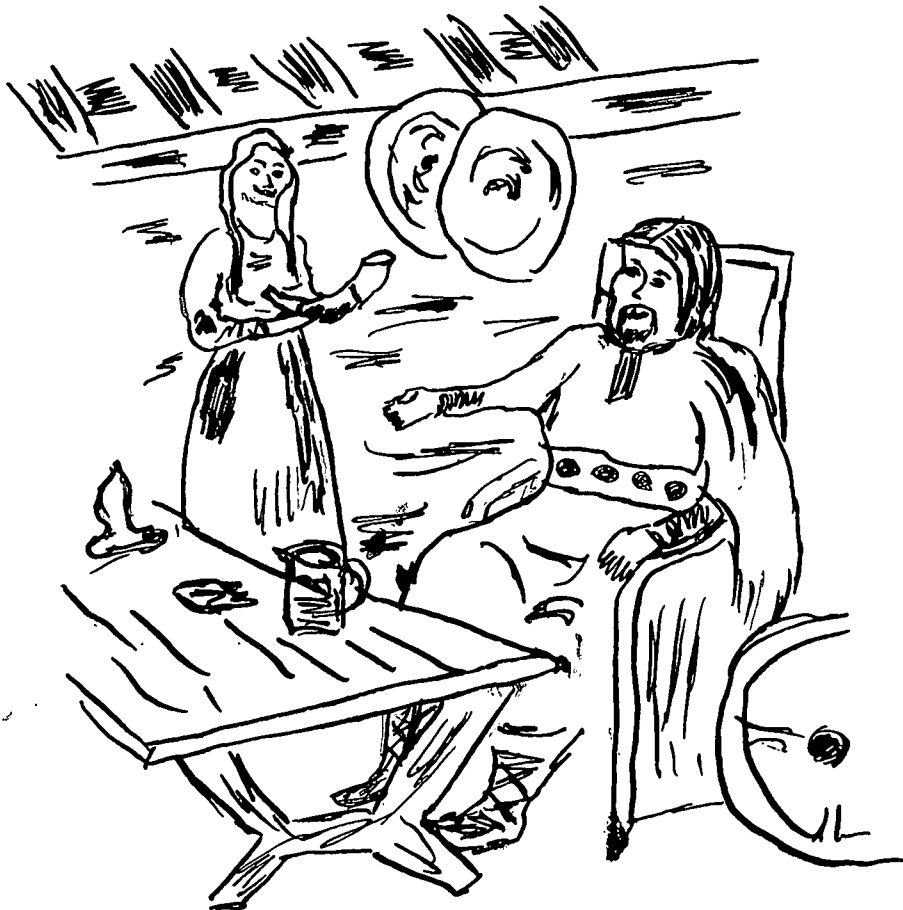
The Indians lived in America for a great many years before anyone else came. The next group of people to come to America were the Northmen, or Vikings. Among this group of people there were three Viking men who were very important to the discovery of America by these people.

Who were these three men?

For what will they be remembered?

Activities:

1. Read pages 16-19 in the History text.
2. Read pages 270-271 in "E" of the World Book Encyclopedia and report.
3. View the two filmstrips and report.



LESSONS #2

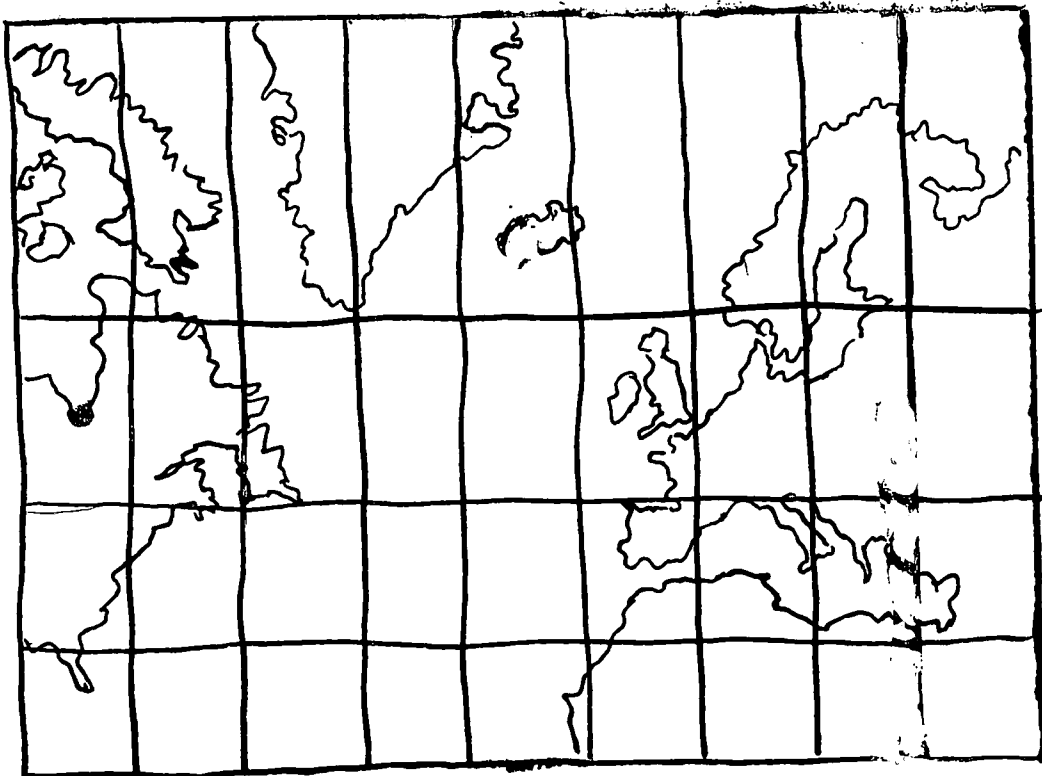
The Northmen traveled to many lands on the seas in their special ships. They traveled over many miles of sea to reach Iceland, then Greenland, and finally America. But the country from which they started their journey was many miles away.

What country was this?

Where was this country?

Activities:

1. Read page 16 in the History text.
2. Read "Vikings" in the World Book Encyclopedia, pages 294-295 and report.
3. View the filmstrips and report.



LESSON #3

The Northmen's ships were long and narrow wooden ships with a very high, cruved bow. Those ships were brightly painted and their sails were of colorful stripes. In case there was no winde, they also had oars.

How large were their ships?

How long did it take them to cross the ocean?

Activities:

1. Read page 20 and page 16 in the History text.
2. Read pages 294-295 in "V" of the World Book Encyclopedia and report.

LESSON #4

Quite by accident, Leif Ericson discovered America, or Vinland as he called it. When Leif and his men got to shore, they found many new and different characteristics of the land.

What were these differences?

Activities:

1. Read pages 18-19 in the History text.
2. View the two filmstrips and report.

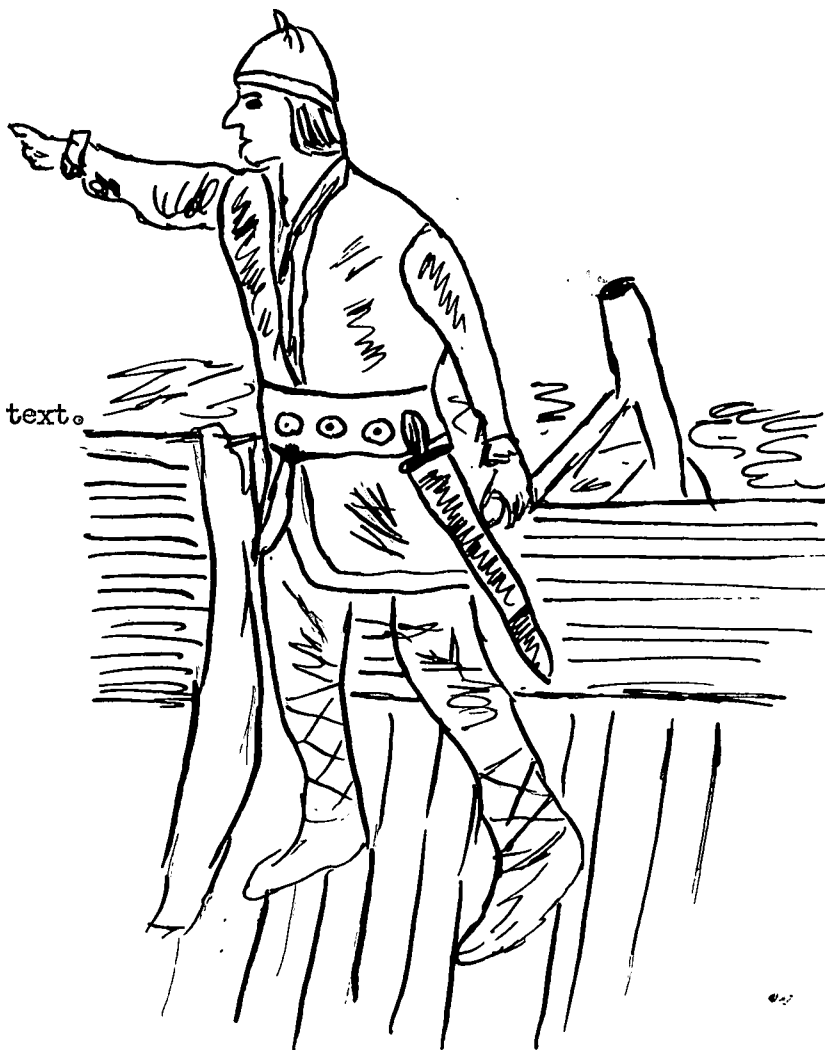
LESSON #5

When Leif sailed to America, he followed a different route, because his ship was blown off his regular course.

Just what was his new route?

Activities:

1. Read page 17 in the History text.
2. Read pages 295 in "V" of the World Book Encyclopedia.



QUEST ACTIVITIES

1. With another friend or two, write a story of three chapters length describing what you saw as you (Leif Ericson) and his crew landed in America.
2. If you were an Indian in America at the time of the Northmen's village, how would you feel about the "invasion"? Describe your reaction.
3. Make a replica of Leif Ericson's Viking ship. Compare it with present day American ships.

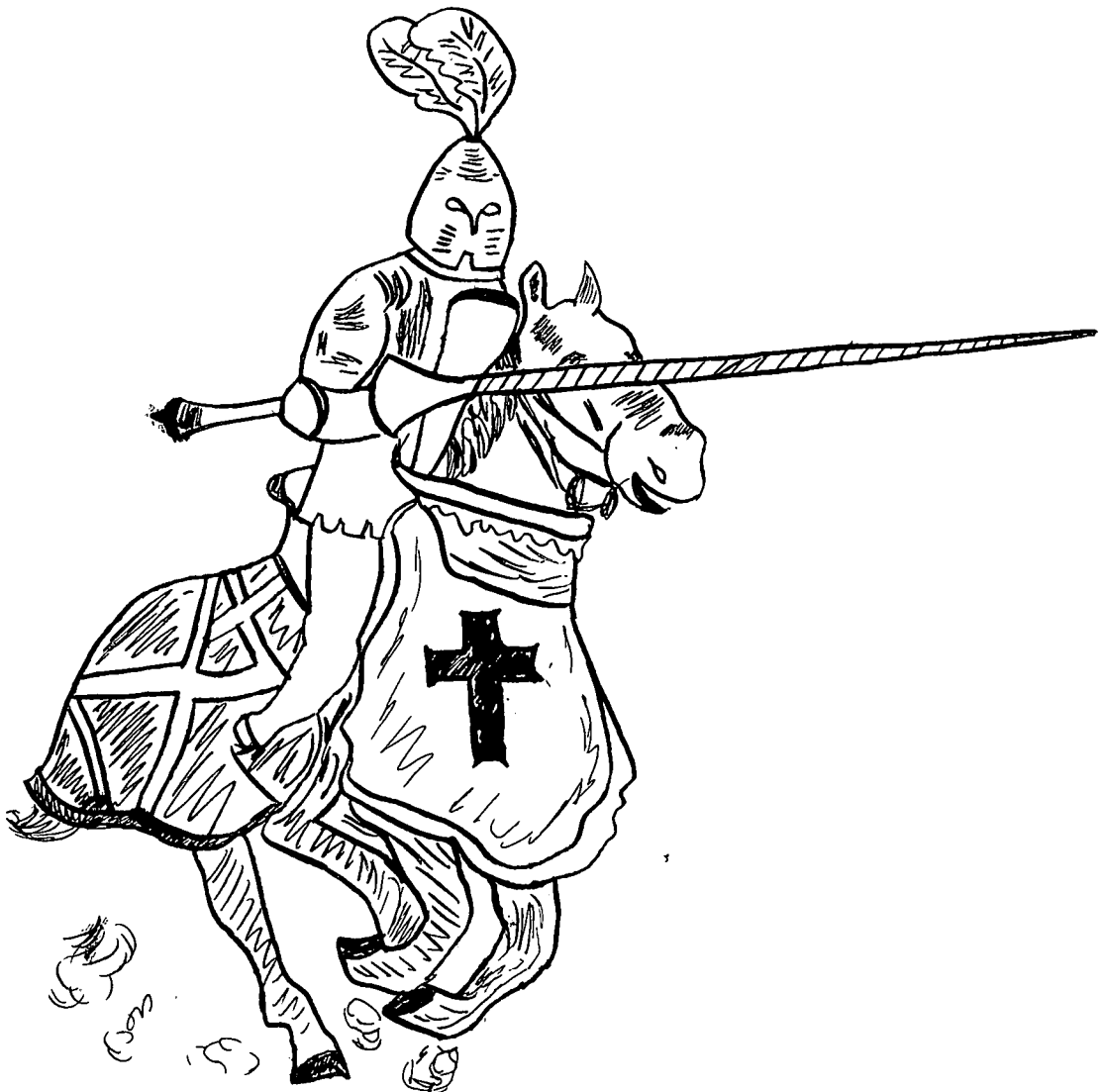
APPENDIX F

UNIPAC #3

THE CRUSADES BRING EUROPE

AND

ASIA CLOSER TOGETHER



The Crusades Bring Asia and Europe Closer Together

This package will help you learn about the Crusades. You will also learn the significance of the Crusades at this period of history.

When you complete this package you should be able to:

1. Demonstrate understanding of the following terms by writing a one-sentence definition:
 - a. Spices - name three
 - b. Crusades
 - c. Arabs - name nationality
 - d. Turks - name nationality
2. Tell in one paragraph why the Crusades were fought. In another paragraph tell what was the eventual outcome of the years of fighting and traveling.
3. Identify three reasons why the Crusades were so important.
4. Show on the map where the Crusades began, their destination, and the continents involved.
5. Compare and contrast means of travel to the Holy Land in the days of the first Crusade with those of today.

Do not write in this package - put all your answers on notebook paper.

LESSON #1

The story of Leif Ericson was soon forgotten in Europe. No one really cared about the "new land" across the sea at that time. The people of Europe were too busy just trying to live and take care of themselves, living in a period called the Middle Ages. At this time most of the people were very poor, were not educated, and did not care about any part of the world that didn't concern them.

But then the people became aroused and interested in far away lands. One of the main reasons for this was the Crusades, "Holy Wars".

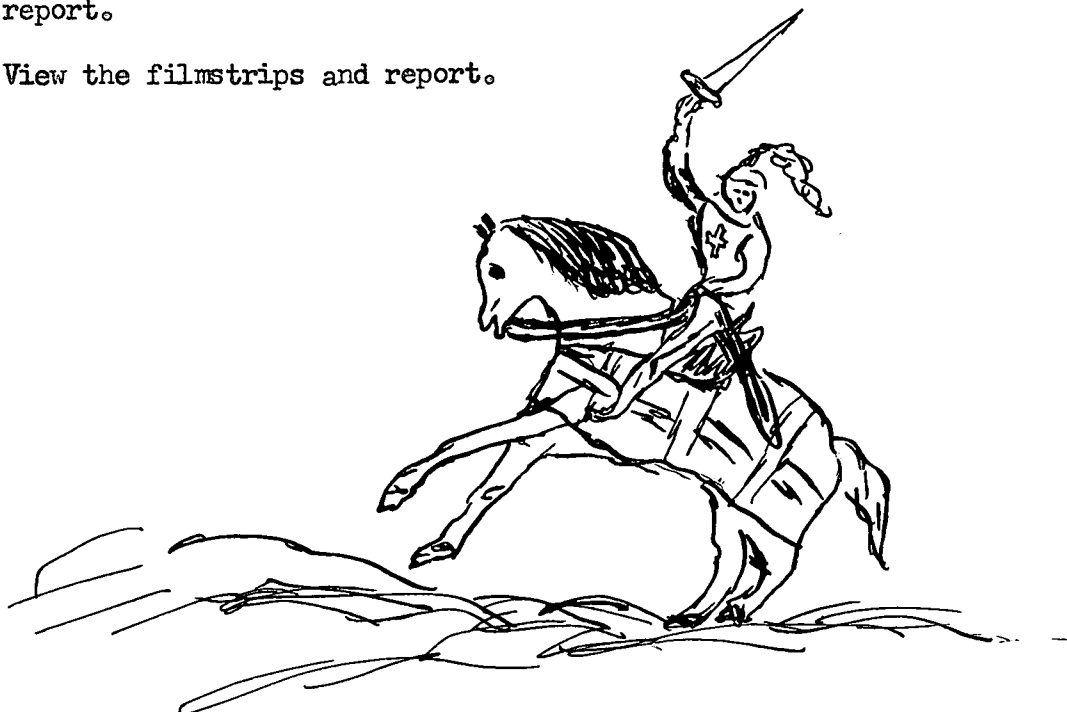
Why were these Crusades organized?

By whom?

Why were these wars called "Holy"?

Activities:

1. Read pages 22-24 in the History text?
2. Read pages 926 in "C" of the World Book Encyclopedia and report.
3. View the filmstrips and report.



LESSON #2

The Crusades lasted many years and thousands of soldiers went to the Holy Land from all over Europe. They traveled in many different groups and went through many countries. Some groups traveled by ship and some traveled on foot across the land. This type of travel wasn't very quick or easy.

Through what countries did most Crusades travel?

By what methods did they travel?

Activities:

1. Study the map on page 23 and read page 25 in the History text.
2. Read pages 926-927 in the World Book Encyclopedia and report.
3. View the filmstrips and report.

LESSON #3

As the Crusaders traveled through the many lands they saw how differently other people lived. Most of the men were exposed to many new and beautiful things.

What was it that they saw that was so interesting?

Activities:

1. Read pages 25-26 in the History text.
2. View the filmstrip and report.



LESSON #1

The Crusaders eventually re-captured Jerusalem, but only after many years of fighting. Because of their travels and finding these new and wonderful things the Crusades themselves had a more important affect on European life.

What was this?

Activities:

1. Read page 28 in the History text.
2. Read page 928 in "C" of the World Book Encyclopedia and report.
3. View the filmstrips and report.



QUEST ACTIVITIES

1. Make a display in miniature form of the way you would picture the Crusades if you were there, in the Holy Land.
2. Do you think the Crusades were important to you individually? Why or why not? Write it down in report form.
3. The Children's Crusade occurred later in history. Was it a successful Crusade? Write a report on it.
4. There were several Crusades that attempted to save the Holy Land from the Turks. Imagine that you are a knight or lady on one of the Crusades and write your story of the Crusade. Were you successful?

APPENDIX G

UNIPAC #4

MARCO

POLO

VISITS

THE FAR EAST



Marco Polo Visits the Far East

This package will study the trip of Marco Polo and his father as they journeyed to China. You will also learn the importance that this trip had in history.

After you complete this package you should be able to:

1. Identify the reasons why it took Marco Polo four years to travel from Venice to China. Compare this with the method of travel used today.
2. Relate the different way of living Marco Polo found in the people of the Far East in regards to the following:
A. Cities B. Transportation C. Riches
3. Describe in paragraph form the effect that the Polo's trip had on the people and merchants of Europe. The following three statements will be used as criteria for evaluation:
 - a. Goods cost less in the Far East.
 - b. Goods cost more in Europe because of the cost of travel over the land.
 - c. The merchants sought to find an easier way to transport the goods, knowing that water travel was cheapest.

Do not write in this package - put your answers on notebook paper.

LESSON #1

Because of the Crusades, the news of these spices and beautiful items from the Far East began to spread all over Europe. Wealthy people wanted to buy these products, and so a trade developed between Europe and the seaports of the Middle East. But these goods were still very expensive.

Soon some of the trading families began to travel all the way to Asia to buy merchandise for themselves. The tales told by such men made the Europeans still more interested in travel and life in other lands. One of these families of merchants was the family of Marco Polo. They set out to visit China and the Great Khan. It was many miles away.

How long did it take them to arrive?

Did they use one method of travel the entire way?

Was it like traveling today?

Activities:

1. Read pages 30-31 in the History text?
2. Read page 573 in "P" of the World Book Encyclopedia, and report.
3. Read Marco Polo, Chapters 1-6 and report.
4. View filmstrips and report.



LESSON #2

The Khan liked Marco so much that he wanted to keep him in Asia for a while. The Khan needed a man he could trust to work for him inspecting the land that the Khan ruled. So Marco went to work for the Khan traveling to many different places and seeing many new and different things.

What were some of these things?

Did people live the same way as the Europeans?

Activities:

1. Read pages 31-32 in the History text.
2. Read Marco Polo, Chapters 7-9, and report.
3. View the filmstrip and report.

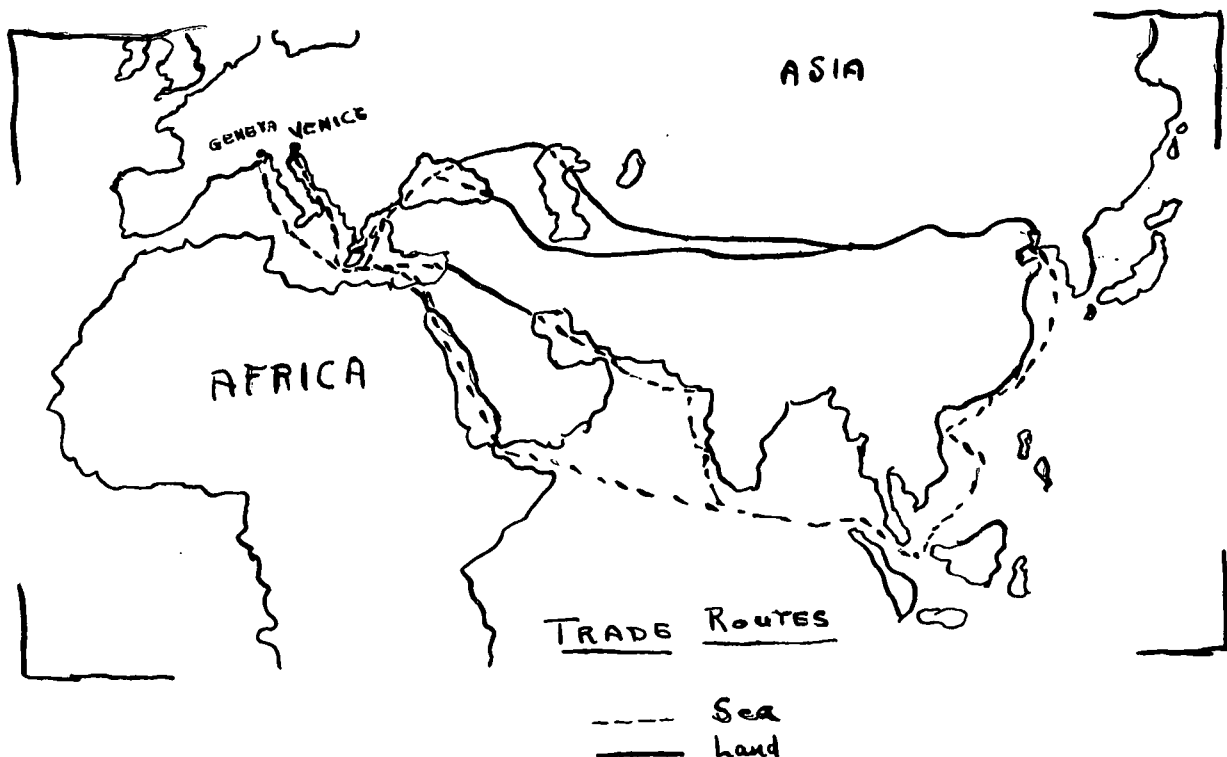


LESSON #3

Marco and his family worked for the Khan for many years. Soon they became lonesome for Venice and desired to travel back to their homeland. At first the Khan refused to let the Polo's return to Italy. But finally, after they had completed a dangerous voyage for the Khan, they left Persia and sailed back to Venice. When they returned to Venice they caused a great stir among the people and the merchants. Why was this? What did the merchants learn about the cost of items from the Far east? What was the plan they thought about?

Activities:

1. Read pages 32-33 in the History text.
2. Read page 573 in "P" of the world Book Encyclopedia and report.
3. Read Marco Polo, Chapters 10-12 and report.
4. View the filmstrips and report.



QUEST ACTIVITIES

1. Some influences of China and Persia are in our society and houses today. Do you have anything that was brought from the Far East? Did it cost a great deal? Why or why not? Does it cost very much and take a long time to travel to China now? Compare it with the cost of Marco Polo's time. Write a short essay on this topic, relating the past of Marco Polo to the merchandising of the present.
2. The customs and dress of the people of China was a great deal different from the Europeans at that time. Try to replicate some of the Far East clothing, jewels, and customs.
3. If you were Marco Polo on the journey to China, would you have done anything different? If so, relate it in story form as if you are Marco Polo telling the story of his travels.

APPENDIX H
PREFERENCE SCALE

PREFERENCE SCALE

Name _____

This is NOT a test!

1. Do you like using unipacs (packages)? _____

Why or why not? _____

2. Which lesson did you like best?

Indians _____ Vikings _____ Crusades _____ Marco Polo _____

Why? _____

3. Which was your favorite activity - what did you like to do the most? _____

4. What lesson did you work hardest for? _____

5. Which test did you study the hardest for? _____

6. If you have time to read, what kind of books do you enjoy?

7. If you could choose how you would like to learn History, would it be with unipacs, or with the regular classroom method?

Comments: (Did you work your hardest?) _____

APPENDIX I

CONDENSED VERSION OF THE
TAXONOMY OF EDUCATIONAL OBJECTIVES

Condensed Version of the
Taxonomy of Educational Objectives¹

Cognitive Domain

KNOWLEDGE

1.00 Knowledge

Knowledge, as defined here, involves the recall of specific and universals, the recall of methods and processes, or the recall of a pattern, structure, or setting. For measurement purposes, the recall situation involves little more than bringing to mind the appropriate material. Although some alteration of the material may be required, this is a relatively minor part of the task. The knowledge of objectives emphasizes most the psychological processes of remembering. The process of relating is also involved in that a knowledge test situation requires the organization and reorganization of a problem such that it will furnish the appropriate signals and cues for the information and knowledge the individual possesses. To use an analogy, of one thinks of the mind as a file, the problem in a knowledge test situation is that of finding in the problem or task the appropriate signals, cues, and clues which will most effectively bring out whatever knowledge is filed or stored.

1.10 Knowledge of Specifics

The recall of specific and isolable bits of information. The emphasis is on symbols with concrete referents. This material, which is at a very low level of abstraction, may be thought of as the elements from which more complex and abstract forms of knowledge are built.

1.11 Knowledge of Terminology

Knowledge of the referents for specific symbols (verbal and non-verbal). This may include knowledge of the most generally accepted symbol referent, knowledge of the variety of symbols which may be used for a single referent, or knowledge of the referent most appropriate to a given use of a symbol.

*To define technical terms by giving their attributes, properties, or relations.

*Familiarity with a large number of words in their common range of meanings.

¹Taxonomy of Educational Objectives--The Classification of Educational Goals--Handbook I: Cognitive Domain. Benjamin S. Bloom, Editor.

1.12 Knowledge of Specific Facts

Knowledge of dates, events, persons, places, etc. This may include very precise and specific information such as the specific date or exact magnitude of a phenomenon. It may also include approximate or relative information such as an approximate time period or the general order of magnitude of a phenomenon.

*The recall of major facts about particular cultures.

*The possession of a minimum knowledge about the organisms studied in the laboratory.

1.20 Knowledge of Ways and Means of Dealing With Specifics

Knowledge of the ways of organizing, studying, judging, and criticizing. This includes the methods of inquiry, the chronological sequence, and the standards of judgement within a field as well as the patterns of organization through which the areas of the fields themselves are determined and internally organized. This knowledge is at an intermediate level of abstraction between specific knowledge on the one hand and knowledge of universals on the other. It does not so much demand the activity of the student in using the materials as it does a more passive awareness of their nature.

1.21 Knowledge of Conventions

Knowledge of characteristic ways of treating and presenting ideas and phenomena. For purposes of communication and consistency, workers in a field employ usages, styles, practices, and forms which best suit their purposes and/or which appear to suit best the phenomena with which they deal. It should be recognized that although these forms and conventions are likely to be set up on arbitrary, accidental, or authoritative bases, they are retained because of the general agreement or concurrence of individuals concerned with the subject, phenomena, or problem.

*Familiarity with the forms and conventions of the major types of works, that is, verse, plays, scientific papers.

*To make pupils conscious of correct form and usage in speech and writing.

1.22 Knowledge of Trends and Sequences

Knowledge of the processes, directions, and movements of phenomena with respect to time.

*Understanding of the continuity and development of American culture as exemplified in American Life.

*Knowledge of the basic trends underlying the development of public assistance programs.

1.23 Knowledge of Classifications and Categories

Knowledge of the classes, sets, divisions, and arrangements which are regarded as fundamental for a given subject field, purpose, argument, or problem.

*To recognize the area encompassed by various kinds of problems or materials.

*Becoming familiar with a range of types of literature.

1.24 Knowledge of Criteria

Knowledge of the criteria by which facts, principles, opinions, and conduct are tested or judged.

*Familiarity with criteria for judgement appropriate to the type of work and the purpose for which it is read.

*Knowledge of criteria for the evaluation or recreational activities.

1.25 Knowledge of Methodology

Knowledge of the methods of inquiry, techniques, and procedures employed in a particular subject field as well as those employed in investigating particular problems and phenomena. The emphasis here is on the individual's knowledge of the method rather than his ability to use the method.

*Knowledge of scientific methods for evaluating health concepts.

*The student shall know the methods of attack relevant to the kinds of problems of concern to the social sciences.

1.30 Knowledge of the Universals and Abstractions in a Field

Knowledge of the major schemes and patterns by which phenomena and ideas are organized. These are the large structures, theories, and generalizations which dominate a subject field or which are quite generally used in studying phenomena or solving problems. These are at the highest levels of abstraction and complexity.

1.31 Knowledge of Principles and Generalizations

Knowledge of particular abstractions which summarize observations of phenomena. These are the abstractions which are of value in explaining, describing, predicting, or in determining the most appropriate and relevant actions or directions to be taken.

*Knowledge of the important principles by which our experience with biological phenomena is summarized.

1.32 Knowledge of Theories and Structures

Knowledge of the body of principles and generalizations together with their interrelations which present a clear, rounded, and systematic view of a complex phenomenon, problem, or field. These are the most abstract formulations, and they can be used to show the interrelations and organizations of a great range of specifics.

*The recall of major theories about particular cultures.

*Knowledge of a relatively complete formulation of the theory of evolution.

INTELLECTUAL ABILITIES AND SKILLS

Abilities and skills refer to organized modes of operation and generalized techniques for dealing with materials and problems. The materials and problems may be of such a nature that little or no specialized and technical information is required. Such information as is required can be assumed to be part of the individual's general fund of knowledge. Other problems may require specialized information at a rather high level such that specific knowledge and skill in dealing with the problem and the materials are required. The abilities and skills objectives emphasize the mental processes of organizing and reorganizing material to achieve a particular purpose. The materials may be given or remembered.

2.00 Comprehension

This represents the lowest level of understanding. It refers to a type of understanding or apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other materials or seeing its fullest implications.

2.10 Translation

Comprehension as evidenced by the care and accuracy with which the communication is paraphrased or rendered from one language or form of communication to another. Translation is judged on the basis of faithfulness and accuracy, that is, on the extent to which the material in the original communication is preserved although the form of the communication has been altered.

*The ability to understand non-literal statements.
(Metaphor, symbolism, irony, exaggeration)

* Skill in translating mathematical verbal material into symbolic statements and vice-versa.

2.20 Interpretation

The explanation or summarization of a communication. Whereas translation involves an objective part-for-part rendering of a communication, interpretation involves a reordering, rearrangement, or a new view of the material.

*The ability to grasp the thought of the work as a whole at any desired level of generality.

*The ability to interpret various types of social data.

2.30 Extrapolation

The extension of trends or tendencies beyond the given data to determine implications, consequences, corollaries, effects, etc. which are in accordance with the conditions described in the original communications.

*The ability to deal with the conclusions of a work in terms of the immediate inference made from the explicit statements.

*Skill in predicting continuation of trends.

3.00 Application

The use of abstractions in particular and concrete situations. The abstractions may be in the form of general ideas, rules of procedures, or generalized methods. The abstractions may also be technical principles, ideas, and theories which must be remembered and applied.

*Application to the phenomena discussed in one paper of the scientific terms or concepts used in other papers.

*The ability to predict the probable effect of a change in a factor on a biological situation previously at equilibrium.

4.00 Analysis

The breakdown of a communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit. Such analyses are intended to clarify the communication, to indicate how the communication is organized, and the way in which it manages to convey its effects, as well as its basis and arrangement.

4.10 Analysis of Elements

Identification of the elements included in a communication.

*The ability to recognize unstated assumptions.

4.20 Analysis of Relationships

The connections and interactions between elements and parts of a communication.

- *Ability to check the consistency of hypothesis with given information and assumptions.
- * Skill in comprehending the interrelationships among the ideas in a passage.

4.30 Analysis of Organizational Principles

The organization, systematic arrangement, and structure which hold the communication together. This includes the "explicit" as well as "implicit" structure. It includes the bases, necessary arrangement, and the mechanics which make the communication a unit.

- *The ability to recognize form and pattern in literary or artistic works as a means of understanding their meaning.

5.00 Synthesis

The putting together of elements and parts so as to form a whole. This involves the process of working with pieces, parts, elements, and arranging and combining them in such a way as to constitute a pattern or structure not clearly there before.

5.10 Production of a Uniques Communication

The development of a communication in which the writer or speaker attempts to convey ideas, feelings, and/or experience to others.

- *Skill in writing, using an excellent organization of ideas and statements.

- *Ability to tell a personal experience effectively.

5.20 Production of a Plan, or Propsed Set of Operations

The development of a plan of work or the proposal of a plan or operations. The plan should satisfy requirements of the task which may be given to the student or which he may develop for himself.

- *Ability to propose ways of testing hypothesis.
- *Ability to plan a unit of instruction for particular situation.

5.30 Derivation of a Set of Abstract Relations

The development of a set of abstract relations either to classify or explain particular data or phenomena, or the deduction of propositions and

relations from a set of basic propositions or symbolic representations.

*Ability to formulate appropriate hypothesis based upon an analyses of factors involved, and to modify such hypotheses in the light of new factors and considerations.

*Ability to make mathematical discoveries and generalizations.

6.00 Evaluation

Judgements about the value of material and methods for given purposes. Quantitative and qualitative judgements about the extent to which material and methods satisfy criteria. Use of a standard of appraisal. /The criteria may be those determined by the student or those which are given to him.

6.10 Judgements in Terms of Internal Evidence

Evaluation of the accuracy of a communication from such evidence as logical accuracy, consistency, and other internal criteria.

*Judging by internal standards, the ability to assess general probability of accuracy in reporting facts from the care given to exactness of statements, documents, proof.

*The ability to indicate logical fallacies in arguments.

6.20 Judgements in Terms of External Criteria

Evaluation of material with reference to selected or remembered criteria.

*The comparison of major theories, generalizations, and facts about particular cultures.

*Judging by external standards, the ability to compare a work with the highest known standards in its field--especially with other works of recognized excellence.

BIBLIOGRAPHY

JOURNALS AND PERIODICALS

- Allen, Dwight W. "Individualized Instruction," California Teachers Association Journal, (October, 1965).
- "New Media Techniques in Specific Subject Areas," AV Instructor, X (June, 1965), 483-485.
- Carpenter, C.R. "Adopting New Educational Media for Effective Learning By Students," Educational Record, XLVI (Fall, 1965), 416-420.
- Chase, Linwood. "Providing for Individual Differences: Middle and Upper Grades," Social Education, XXXI (May, 1967), 412-413.
- Conley, William H. "Adopting the Multi-Media," Catholic School Journal, LXVIII (October, 1968), 20-21.
- Davis, O.L. and Hunkins, Francis P. "Textbook Questions: What Thinking Process Do They Foster?" Peabody Journal of Education, XLIII (March, 1966), 285-292.
- Edling, Jack I. "Educational Objectives and Educational Media," Review of Educational Research, XXXVIII (April, 1968), 177-194.
- Foster, Clifford D. "Skills in the Elementary School Social Studies Curriculum," Social Education, XXXI (March, 1967), 230-232.
- Fraenkel, Jack R. "Learning Experiences and the Social Studies," Elementary School Journal, LXVIII (March, 1968), 301-311.
- Gilkey, Richard. "Instructional Media for Social Studies: A Glimpse Into the Future," Educational Screen and Audio-Visual Guide, XLV (November, 1966), 22-23.
- Gropper, George L. "Learning From Visuals: Some Behavioral Considerations," Audio-Visual Communications Review, XIV (Spring, 1966), 37-69.
- Ingraham, Leonard W. "New Strategies and Roles for the Social Studies Teacher," AV Instructor, XIV (April, 1969), 24-25.
- "Multimedia Kits for the Classroom," Instructor, LXXVIII (May, 1969), 98.

- Kendall, Lloyd. "Brighten Up Those Social Studies With Your Bulletin Board," Grade Teacher, LXXXIII (October, 1965), 432-433.
- Kohn, C.F. "Multi-Media Approach Makes the Elusive Come Alive," Grade Teacher, LXXXIII (October, 1965), 89.
- Koontz, Elizabeth. "See How They Learn!" Today's Education, LVIII (February, 1969), 15-30.
- Larimore, Philip B. and Gritzner, Charles F. "Creating Visual Impressions: Using Media in Geography Teaching," AV Instructor, XI (May, 1966), 349-352.
- Lichtenberg, Mitchell P. and Fenton, Edwin. "Using AV Materials Inductively in the Social Studies," AV Instructor, XII (May, 1966), 330-332.
- McAulay, J.D. "Criteria for Elementary Social Studies," Educational Leadership, XXV (April, 1968), 651-653.
- McGill, Bill. "Social Studies Made Interesting," School and Community, LIV (January, 1968), 6.
- Menser, David G. "Ideas and Objects: The Artifact Kit," Social Education, XXX (May, 1966), 343-345.
- Meyer, J. "Social Studies Fits Systems Approach," Nations Schools, LXXIX (May, 1967), 74.
- Moakley, Frank. "The Effects of Media Saturation," AV Instructor, XII (June, 1967), 614-615.
- Moreland, Willis D. "New Methods in Teaching Social Studies," Education, LXXXVIII (November, 1967), 116-118.
- Polos, Nicholas C. "Multimedia: A New Lamp for Learning," Clearing House, XLI (February, 1967), 3550-35502.
- Rogers, Vincent R. "Individualization Plus," Instructor, LXXVIII (January, 1969), 88-89.
- _____. "The Individual and the Social Studies," Social Education, XXXI (May, 1967), 405-407.
- Roselle, David. "In Defense of Good Textbooks," Peabody Journal of Education, XLIV (September, 1966), 88-90.
- Ruark, Henry C. "Social Studies and the New Media," Educational Screen and Audio-Visual Guide, XLVI (September, 1967), 23.

- _____. "It Takes More Than Materials," Educational Screen and Audio-Visual Guide, XLVI (August, 1967), 17.
- Smith, Ronald O. "Social Studies and the Media," Educational Screen and Audio-Visual Guide, XLVI (September, 1967), 24-25.
- Tanzman, Jack. "How to Get Rolling With Your Media Center," School Management, XII (March, 1969), 90.
- Thomas, John I. "Individualizing Instruction in the Social Studies," Social Studies, LX (February, 1969), 71-76.
- Trump, J. Lloyd. "Focus on Change: Organizing for Teaching the Social Studies," Social Education, XXX (March, 1966), 163-167.
- Thelen, Herbert. "Materials That Promote Inquiry and Thinking," Educational Screen and Audio-Visual Guide, XLIV (December, 1965), 25-26.
- Walsh, Huber M. "Learning Resources for Individualizing Instruction," Social Education, XXXI (May, 1967), 413-415.

BOOKS

- Bloom, Benjamin S. Taxonomy of Educational Objectives. New York: Longmans Green, 1956.
- Dunfee, Maxine and Sagl, Helen. Social Studies Through Problem Solving. New York: Holt, Rinehart and Winston, 1966.
- Jarolimek, John and Walsh, Huber M. Readings for Social Studies in Elementary Education. New York: The Macmillan Company, 1965.
- Mager, Robert F. Preparing Instructional Objectives. Palo Alto: Fearon Publishers, Inc., 1962.
- Michaelis, John U. Social Studies for Children in a Democracy: Recent Trends and Developments. Englewood Cliffs, New York: Prentiss Hall, 1963.

OTHER SOURCES

- Elmlinger, Charles and Consultant, Hetland, Melvin. "Individualizing Instruction in the Social Studies," SRA Individualizing Instruction Extension Service, Unit Six, March 1, 1969.

- Hauk, Richard. "The Multimedia Approach to Teaching," SRA Modern Trends in Education, Unit Five, February 15, 1968.
- Hedges, William D. "Individualizing Instruction," SRA Modern Trends In Education, Unit Four, January 15, 1969.
- Heinrich, June Sark. "Teaching Individualz Instead of Groups," SRA Teacher Education Extension Service, Unit One, October 1, 1967.
- Hetland, Melvin and Elmlinger, Charles, Consultant. "Individualized Instruction: A Definition and Historical Overview," SRA Individualizing Instruction Extension Service, Unit One, October 1, 1968.
- Joyce, Bruce R. "Evaluating and Individualizing Instruction," SRA Social Studies Extension Service, Unit Eight, May 15, 1968.
- Kleine, Kathy. "Individualized Instruction Key in the Middle School," Troy Daily News, October 28, 1968, 67.
- Olson, Willard C. "Spoking, Self-Selection and Pacing in the Use of Books for Children." (Mimeographed.)
- Wolfe, A. and Smith J. "Learning Activity Packages." (Mimeographed.)

70 477S 4V
76 0 17 100

R003640125

U. D.
COLLECTION

Thesis

71 04350