SYSTEMATIC VOCABULARY DEVELOPMENT
AS A CONTRIBUTORY FACTOR IN
ACHIEVEMENT IN SOCIAL STUDIES

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CHAPTER I

THE PROBLEM AND ITS SIGNIFICANCE

Teachers today realize the importance of an adequate meaning vocabulary in the content fields. Without a well-developed meaning vocabulary the pupil is able to arrive at only a very few of the ideas presented in the printed or spoken materials which he sees or hears.

Since words are used as symbols of ideas, the more words one knows the better he can express himself, either in oral or written form. But before a word is of much value it must have a clear, established idea for the user. The practical value of a wide meaning vocabulary is obvious. It is essential as a means of exchanging ideas and acquiring new experiences.

Difficulties arising from an inadequate meaning vocabulary are far reaching. Oral and written language become inaccurate and ineffective to the pupil. The demands made upon the pupil are often accompanied by serious difficulties in recognition and comprehension. Writers agree that an inadequate meaning vocabulary is responsible for many bad intellectual habits and serves as "an inhibitor of unusual strength in mastering other types of information."¹

It is widely recognized that too little has been done in the past to extend systematically the meaning vocabularies of pupils. By the time the pupil has reached the fifth grade, it is presumed that he has learned to make use of a wide span of reading skills. It is assumed that the pupil has reasonable facility and accuracy in recognizing new words, attacking new words systematically, associating meanings with word symbols, grouping words into meaningful phrases and sentences, and possesses an adequate basic vocabulary.

Beyond the mere mechanics of reading is a large number of other abilities which are added to each grade level and pupils must be trained to use these effectively. Strang, for example, classifies them as fact-getting techniques, ability to locate material, aspects of reading ability involving reasoning, ability to remember, ability to apply what is read, reading to stimulate further reading, and ability to read orally.

But not all pupils acquire expertness in the basic habits and skills on which continued mastery depends. Many pupils continue through school misreading information and making false interpretations.

The social studies are concerned with the largest and most comprehensive phenomena with which the mind deals.

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Hence, reading in the social studies field presents many problems to which the pupil must adjust his abilities and skills.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study to determine the value of a systematic program of vocabulary development in social studies and the relative importance of the program to achievement in the social studies.

Purpose of the study. The experimental study had its origin in contrasting theories of methods of teaching the social studies. One group believed that teaching the social studies could be done more effectively if the meanings of words were secured from the context or from seeking the meanings from the dictionary as the need arose for the individual pupil. The other group assumed that reading the social studies could be taught as integrated subject material, with reading, and reading methods applied in the social studies to develop a meaning vocabulary. It was also assumed that this same method would develop independence on the part of the pupil in securing essential meanings.

It was the purpose of this experimental study to secure data concerning the two methods of developing vocabulary meaning in order to reach valid conclusions concerning the merits of the two methods of vocabulary development.
Importance of the study. Authors of textbook materials for the primary grades have, for many years, carefully graded the vocabulary used in their materials in the light of research. Pupils at the senior high school and college levels are able to cope with adult and technical vocabulary. It is easy to see the need of critical investigation of the vocabulary problem in the social studies area at the intermediate and upper grade levels because of the few researches in the field.3

Reading in the social studies requires a broad, general vocabulary. The reading includes many uncommon words of no historical or geographical connotation as well as the technical vocabulary. Word meaning that the pupil gets from his social studies must be clear and vivid.

The instructional program in the social studies covers a broad area. The lack of understanding of what is read results in misinterpretation with far-reaching results.

The problem of acquiring this vocabulary, which will result in a better understanding of what is read, takes on significance when we remind ourselves that much of the learning in the social studies is acquired through books, and that there is an apparent relationship between the failure of pupils to understand word meanings and their inability to grasp important ideas.

The social studies curriculum must, therefore, make use of reading methods as one essential medium of instruction and learning.

**Limitations of the study.** No attempt was made to measure attitudes in this study. For this reason, the informal tests were based upon outcomes in terms of understandings and information.

The personality of the pupil, and the background of experience brought to the course by the pupil, were recognized by the investigator as forces influencing the results obtained in the study.

The presence of other conditions, which were not recognized, controlled, or measured, could have influenced the results of this study.

II. DEFINITIONS OF TERMS USED

**Social studies.** The term used in this study is defined as a unification of the history and geography areas.

**Word meaning.** This term implies an understanding of the definition of the word and an understanding of the word as used in the context in which the word was encountered, as well as the ability to employ its use in other sentences.

**Word perception.** This term implies the combination of context clues with phonetic analysis to arrive at the meaning.4

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CHAPTER II

REVIEW OF THE LITERATURE

Much has been written about vocabulary development of reading at all levels. Research of many types has been reported in the field of reading, but there is little vocabulary research at the intermediate level in social studies. Numerous investigators have piled up evidence of the inability of pupils to understand and interpret what they read. The memorization of empty words results in verbalism and, consequently, misconception. Without a doubt, the same point holds true in social studies.

Leary and Gray report:

Teachers of the social studies are almost unanimous in stating that vocabulary is a great source of difficulty for students. Whether this means that the problem of vocabulary is the most important or the most obvious, one cannot safely say.

Leavell and Hollister made a study of recognition vocabulary in social studies in the upper grades. The data for this study were secured by the development and

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2 Leavell and Hollister, op. cit., pp. 287-293.
administration of vocabulary tests to determine the relative difficulty of the words unknown to the pupils. Their conclusions were that objective evidence had been given to show that there is a vocabulary problem which must be met by both authors and teachers in the use of social studies material in the upper grades. There was also evidence of the presence of too many unknown words which prevented the pupil from securing the larger thought from the printed page.

Haefner\(^3\) conducted an experiment with groups of college students to determine the value of casual contacts with words in learning their meanings. Two groups were used in the experiment. The experimental group was given a learning situation described as casual and not as a type of experience in which the individual believes he is under some obligation to put forth effort to acquire. Objective vocabulary tests were used as a pretest at the beginning of the learning period. The same objective test was used as a retest at the end of the learning period. The scores on the vocabulary tests, of the multiple choice type, showed distinct superiority of the experimental group over the control group. Such results indicate that carefully planned steps which

direct attention to important words and their meanings have distinct value in promoting vocabulary growth.

Artley\(^4\) conducted a study of eleventh-grade pupils who were tested for general reading comprehension and comprehension of materials in the social studies. These tests purported to measure knowledge of facts in social studies, as well as the command of the vocabulary to use the facts. The author found that a command of the specialized vocabulary was at least as important as the knowledge of social studies facts. He also reported that the social studies teacher who develops effectively the skills essential to adequate comprehension in this area probably will note a general improvement in other content fields. The vocabulary should be developed in a functional manner in connection with the development of other reading skills rather than as an isolated drill on words.

CHAPTER III

THE EXPERIMENT

Preparation of the experiment. The experimental study began with the selection of three units of study from the social studies. These units were selected from the course of study of the school system in which the experiment was made. The three units appear in Appendix A. They were:

I. Early Explorers: Finding a New World
II. Northeastern and Middle Atlantic States
III. Southeastern States

Each unit employed material to which systematic vocabulary development could be applied.

The subject matter of each unit was within the ability range of the groups. This factor was determined through the use of the unit tests constructed by the investigator for each unit as shown in Appendix C.

Individual differences were cared for by the use of a variety of activities for each unit. This same variety also took care of individual preferences.

Each unit was so constructed as to provide for the integration of the reading and social studies areas.

Organization of the experiment. In this experiment, the merits of direct and systematic development of vocabulary were compared with the development of vocabulary from the
context alone. General purposes of teaching, materials used, and the total amount of time given to each method were factors controlled during the experiment.

**Description of the groups used in the experiment.** The experiment was carried out with two classes of the 5B grade in the Meridian School in Brazil, Indiana. Twenty pupils participated as members of the experimental groups and twenty pupils participated as members of the control group. Groups were equated on the basis of scores obtained from the administration of intelligence tests the first week of school.

Inasmuch as the work of the fifth and sixth grades in this particular school is strictly departmentalized, the program of classes was planned by the principal in such a manner as to give each 5B group two consecutive thirty-minute periods in order that the reading and social studies might be taught as integrated subjects. Two thirty-minute periods were given each group each day for study, research, or creative activity.

A minimum of adjustment had to be made by investigator and pupil personalities in the initial stages of the experiment. Abilities and talents of the group members were known from previous association and by evaluation of the material recorded on the cumulative records in the office of the principal.

The total time used for conducting the experiment was one semester or eighteen weeks. The final administration
of the Stanford and Metropolitan Achievement Tests occurred in the nineteenth week. There were three unit tests prepared for the three units. Each unit was of six-weeks' duration. The test for each unit was used as a pretest at the beginning of the unit and as a retest at the end of the unit.

**Equate the groups.** The nature of the study implied the equivalent groups method. It was understood at the beginning of the first week of school that the groups would be reclassified as was necessary.

The first step in the organization of the equivalent groups was to determine the mental ability of the pupils to be used in this study. For this purpose the Kuhlmann-Anderson Intelligence Test for Grade V was administered by the investigator.

Chronological ages were obtained from the cumulative records on file in the office of the school.

Horn says, "Scores on intelligence tests must be interpreted very cautiously."¹ With this in mind, the groups were then equated on the basis of intelligence quotients derived from the test as shown in Table I.

### TABLE I

**CHRONOLOGICAL AGES, MENTAL AGES, AND INTELLIGENCE QUOTIENTS OF THE CONTROL AND EXPERIMENTAL GROUPS**

<table>
<thead>
<tr>
<th>Pupil</th>
<th>Chronological age</th>
<th>Mental age</th>
<th>Intelligence Quotient</th>
<th>Pupil</th>
<th>Chronological age</th>
<th>Mental age</th>
<th>Intelligence Quotient</th>
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</thead>
<tbody>
<tr>
<td>J.M.</td>
<td>9-8</td>
<td>11-6</td>
<td>119</td>
<td>M.L.</td>
<td>10-0</td>
<td>12-5</td>
<td>120</td>
</tr>
<tr>
<td>B.P.</td>
<td>10-1</td>
<td>12-0</td>
<td>119</td>
<td>A.S.</td>
<td>9-10</td>
<td>11-6</td>
<td>117</td>
</tr>
<tr>
<td>S.M.</td>
<td>10-0</td>
<td>11-8</td>
<td>117</td>
<td>J.S.</td>
<td>10-3</td>
<td>11-8</td>
<td>113</td>
</tr>
<tr>
<td>L.S.</td>
<td>10-2</td>
<td>11-5</td>
<td>112</td>
<td>J.F.</td>
<td>9-9</td>
<td>11-0</td>
<td>113</td>
</tr>
<tr>
<td>J.J.</td>
<td>10-1</td>
<td>11-3</td>
<td>111</td>
<td>A.K.</td>
<td>9-8</td>
<td>11-10</td>
<td>112</td>
</tr>
<tr>
<td>J.S.</td>
<td>10-2</td>
<td>11-0</td>
<td>108</td>
<td>W.H.</td>
<td>10-6</td>
<td>11-7</td>
<td>110</td>
</tr>
<tr>
<td>M.F.</td>
<td>10-5</td>
<td>11-3</td>
<td>108</td>
<td>D.F.</td>
<td>10-6</td>
<td>11-6</td>
<td>109</td>
</tr>
<tr>
<td>M.B.</td>
<td>10-5</td>
<td>11-0</td>
<td>106</td>
<td>E.W.</td>
<td>10-6</td>
<td>11-3</td>
<td>107</td>
</tr>
<tr>
<td>P.L.</td>
<td>10-5</td>
<td>10-10</td>
<td>104</td>
<td>D.H.</td>
<td>10-5</td>
<td>10-10</td>
<td>104</td>
</tr>
<tr>
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<td>10-5</td>
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<td>K.P.</td>
<td>10-2</td>
<td>10-7</td>
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<td>M.C.</td>
<td>10-6</td>
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<td>M.D.</td>
<td>10-4</td>
<td>10-4</td>
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<tr>
<td>E.H.</td>
<td>10-0</td>
<td>10-0</td>
<td>100</td>
<td>F.W.</td>
<td>10-3</td>
<td>10-3</td>
<td>100</td>
</tr>
<tr>
<td>N.S.</td>
<td>11-0</td>
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<td>98</td>
<td>V.S.</td>
<td>10-3</td>
<td>10-3</td>
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<tr>
<td>H.W.</td>
<td>11-0</td>
<td>10-6</td>
<td>95</td>
<td>J.P.</td>
<td>10-4</td>
<td>10-1</td>
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<tr>
<td>R.G.</td>
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<td>10-2</td>
<td>94</td>
<td>J.M.</td>
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<td>10-11</td>
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<td>E.B.</td>
<td>11-5</td>
<td>10-6</td>
<td>92</td>
<td>E.O.</td>
<td>10-3</td>
<td>9-4</td>
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<tr>
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<td>10-2</td>
<td>91</td>
<td>R.M.</td>
<td>12-1</td>
<td>10-9</td>
<td>89</td>
</tr>
<tr>
<td>D.L.</td>
<td>11-0</td>
<td>9-8</td>
<td>88</td>
<td>E.S.</td>
<td>11-8</td>
<td>10-4</td>
<td>88</td>
</tr>
<tr>
<td>D.N.</td>
<td>11-1</td>
<td>9-7</td>
<td>86</td>
<td>D.L.</td>
<td>10-4</td>
<td>9-0</td>
<td>87</td>
</tr>
<tr>
<td>E.J.</td>
<td>11-10</td>
<td>10-1</td>
<td>86</td>
<td>H.N.</td>
<td>11-9</td>
<td>9-9</td>
<td>83</td>
</tr>
</tbody>
</table>

| Mean  | 10-5              | 10-7       | 101.4                 | Mean  | 10-5              | 10-7       | 101.9                 |

Each member of the experimental group was chosen when his intelligence quotient was identical, or nearly so, with that of some member of the control group. The intelligence quotient was the sole basis for pairing members of the two groups.
Table I reveals that the mean mental and chronological ages were the same for each group. The mean intelligence quotient for the experimental group was higher by .5. This was probably due to the fact that in the computation of the intelligence quotient, the pupil was given the benefit of the doubt and the fraction was in his favor. This table also reveals that the range of intelligence quotients for the experimental group was 83 to 120 with a mean of 101.9. The range of intelligence quotients of the control group was 86 to 119 with a mean of 101.4. The slight difference in favor of the experimental group was not considered significant as any intelligence score is to be considered as representing a range rather than a point; for example, an intelligence quotient of 100 is more likely to represent a range of 95 to 105 than exactly 100.

Methods of teaching used in the two groups. The general method of teaching procedure was the same in the two groups. Time allotment for class work and study periods were the same. At the beginning of each unit, the same approaches were made for both groups. The difference in teaching procedure occurred only in the development of the vocabulary. The development of vocabulary included general and technical words in the field of social studies.

In the control group, the investigator provided no guidance in vocabulary development, except as individual pupils asked for help or as the pupil consulted the dictionary.
on his own initiative. During the class period, word meaning came from the use of the context alone.

In the experimental group, the investigator provided specific vocabulary help. This specific help occurred before and during the assimilative period for reading and social studies. The semester plan for systematic vocabulary development followed the plan suggested by Gray.²

At the beginning of each unit, words were selected from the text which was to be read by the group during the course of the unit. This list of words did not include words from any source other than the one general text to be used by the group. This list of words was given to each member of the experimental group. Each list consisted of approximately one hundred words. During the class period, the list of words was developed according to word form, structural analysis, and phonetic analysis. Individual use of the dictionary was made during the study period. A detailed plan for the development of the vocabulary is included in Appendix B.

At this grade level, much use is made of the dictionary. The pupil used the dictionary when he encountered a word in his reading which was unknown to him. This procedure provided the use of the dictionary as a learning tool. Individual diction-

aries were kept by the pupils, in which these words were entered. This procedure gave additional practice with dictionary techniques learned during class periods.

A check on the mastery of word meaning was given as a part of each unit test. Words were chosen from the vocabulary list used for specific vocabulary development. The Unit Tests are included in Appendix C.

Following the directed study of the new words, the pupils engaged in the study of the text, reference books, library books, and the preparation of special reports. Pupils were given the opportunity to work with the group of their choice. At the close of each week, groups made a report of their findings. Class discussion provided the opportunity for tying up the results of the findings as well as the growth of vocabulary during the week. The procedure of class discussion following the assimilative period was identical in both groups. This period was informal in order that the pupil might exhibit his understanding or lack of understanding of what had been read.

During the latter part of the unit both groups engaged in modeling, drawing, dramatization, and other activities in order to clarify their thinking and give further expression to what had been learned in the unit. At the end of each unit, the results of the creative activity were presented as a part of the school assembly program or at the Parent-Teacher Association.
A daily record of each day's proceedings was kept.

Techniques employed for the evaluation of the methods of instruction used. The planning of a program of instruction for an experiment in the development of vocabulary was followed by the development of techniques by which the results could be measured. The techniques presented were designed to evaluate (1) a knowledge of word meanings, (2) the growth of achievement in the field of social studies. Results secured from the administration of these tests will be presented in Chapter IV. A description of the techniques in the evaluation of the two methods of vocabulary development follows:

A. Unit Tests. The evaluation of the methods used in the teaching of vocabulary should determine the efficiency of the methods. The core of the specific units chosen was taken from the social studies area. It was, therefore, necessary to secure an evaluation of the growth in the knowledge of word meanings and information gained in this area during the period of instruction for each unit.

An informal objective test was constructed for each unit which would check on the gain made in the knowledge of word meanings and information gained from the study of each unit. Three tests were constructed to cover the work of the three units.

Each unit test had four parts with a total of one hundred points. The test consisted of true-false, completion, multiple choice, and matching exercises. Each test was
designed to measure the achievement of each group in the social studies area.

In order to secure the gain made in each unit, the test was administered as a pretest before the instructional period began and again as a retest at the close of the instructional period. By comparing the results of the tests, it was possible to measure the amount of growth made and thereby determine the efficiency of the two methods used in teaching vocabulary and the effect on achievement in social studies.

B. **Standardized Tests**. Additional evaluation of vocabulary development and achievement in the social studies was made by comparing the status of the pupils of the two groups as measured by standardized tests. After a careful study of the standardized tests, it was found that no standardized test measured social studies adequately on the elementary level. History and geography were measured in the separate fields, rather than as a unified subject.

The New Stanford Achievement Test was used to determine the initial and final status of the groups in word meaning and history and geography. This test provides for the average score of history and geography as well as the grade equivalent, which is comparable from test to test. Form E was administered by the investigator in September and Form F was administered in January.
The Metropolitan Achievement Test was also used to determine the initial and final status of the groups in word meaning and history and geography. However, in this particular test, averages of the history and geography tests are comparable on the basis of grade equivalents only. In the tables shown in Appendix D and in Chapter IV, only grade equivalents will be used. Form R was administered in September and Form S in January.

With the use of both informal and standardized tests, it was intended to arrive at some conclusions as to the relative merits of the direct and incidental methods of vocabulary development on achievement in the social studies.
CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

Evaluation of the methods of teaching used for the development of vocabulary in the social studies was made by the use of the tests described in Chapter III. The purpose of the informal objective testing program was twofold: (1) to measure the initial knowledge of word meanings and information in the social studies which would be encountered by the pupils during the course of each unit, and (2) to determine the grasp of the same work at the end of each unit.

The standardized tests were included in the testing program as an additional measure of knowledge of word meanings and information of a general nature in the social studies. The informal tests evaluated the knowledge of specific areas in social studies taught in each unit. The standardized tests determined the achievement of the pupils with test materials that had not been seen in the same form. They are accompanied by test norms, age and grade equivalents which are comparable from test to test. A composite average can be made which makes possible the comparison of growth from one test to another.
I. ANALYSIS OF THE UNIT TESTS

A unit test was constructed for each unit. Each test was administered before and after instruction.

**TABLE II**

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Retest</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>19</td>
<td>66.4</td>
<td>47.4</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>19.7</td>
<td>84.8</td>
<td>65.1</td>
</tr>
</tbody>
</table>

Table II reveals that the mean score of the control group was 19 while that of the experimental group was 19.7. The mean score on the pretest over Unit I indicates that a very small amount of information and understandings in the unit was already known by the pupils of the control and experimental groups. Table II shows that the knowledge of the specific area which was to be treated was practically the same for each group.

*Data on which Tables II, III, and IV are based appear in Table VIII, Appendix D.*
The same test was used as a retest at the end of the teaching period and the mean score of the control group was 66.4 showing a gain of 47.4 during the teaching period of the unit. The experimental group had a mean of 84.8 showing a gain of 65.1.

A comparison of the results of the two tests in each group reveals that each group had practically the same previous knowledge of the area to be taught. The results of the retest reveals that the experimental group, which received specific development of vocabulary during the unit of work, had a much greater gain than the control group.

TABLE III

GAIN IN MEAN SCORES OF PUPILS IN THE CONTROL AND EXPERIMENTAL GROUPS ON THE PRETEST AND RETEST OF UNIT II

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Retest</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>19.4</td>
<td>71</td>
<td>51.6</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>19.5</td>
<td>91</td>
<td>71.5</td>
</tr>
</tbody>
</table>

Table III shows that the mean pretest scores on Unit II were almost the same for each group. The control group
had a mean of 19.4 and the experimental group had a mean of 19.5. The retest showed a mean of 71 for the control group and a mean of 91 for the experimental group. The control group had made a gain of 51.6 while the experimental group showed a gain of 71.5. Both groups showed a greater gain on Unit II than Unit I, but more gain was made by the experimental group in both Unit I and Unit II.

TABLE IV

<table>
<thead>
<tr>
<th>Gain in Mean Scores of Pupils in the Control and Experimental Groups on the Pretest and Retest of Unit III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Control Group</td>
</tr>
<tr>
<td>Experimental Group</td>
</tr>
</tbody>
</table>

The pretest on Unit III revealed, as in the other two units, no significant difference as to the amount of subject matter known to the pupils previous to the study of the unit. The control group had a mean of 18.2 on the pretest and the experimental group had a mean of 20. The retest showed a mean score of 78.1 for the control group and a mean score of
92 for the experimental group. The gain for the control group was 59.9 and for the experimental group the gain was 72.

From the data presented in the above tables, the gain was definitely in favor of the experimental group. A summary of these data appears in Table V.

**TABLE V**

A SUMMARY OF MEAN SCORES MADE BY THE CONTROL AND EXPERIMENTAL GROUPS ON PRETESTS AND RETESTS OF UNITS I, II, AND III

<table>
<thead>
<tr>
<th>Control Group</th>
<th>Experimental Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>Retest</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>Unit I</td>
<td>19</td>
</tr>
<tr>
<td>Unit II</td>
<td>19.4</td>
</tr>
<tr>
<td>Unit III</td>
<td>18.2</td>
</tr>
</tbody>
</table>

The relatively low mean scores for each of the pretests shows that the groups were evenly matched as to amount of information at the beginning of each unit. Results of the retests show that the material presented was learned efficiently. Both groups showed significant gains but the greater gain each time in the experimental group shows evidence that specific development of vocabulary in the social studies area promoted greater gain.
II. ANALYSIS OF THE STANDARDIZED TESTS

Standardized tests may be superior to the informal tests in that there are comparable forms for successive testing to determine the progress of the pupil and for diagnostic purposes. Test norms and standards help to evaluate normal expectancy for different ages and grade levels. The test material is ordinarily new material and determines what the child can do with materials which he has never seen. This seems to be a real test of power in achievement.

Raw scores of a test have little meaning until they are interpreted. These scores must be translated into equated scores which are comparable from test to test. The Stanford Achievement Tests are comparable from test to test with the use of the equated score or the grade equivalent. The Metropolitan Achievement Test is comparable from test to test on the basis of grade equivalent only. For basis of comparison of achievement on the two tests, the investigator has reported results on the basis of grade equivalents.

Grade equivalents were obtained from the grade norms accompanying the tests. They indicate the position on a grade scale at which the pupil's test performance places him. Grade equivalents show that a pupil may receive a score which is identical to the average score of pupils in the fifth grade. If so, his grade equivalent is 5.0, regardless of whether he
may be in the fifth grade or in some grade above or below the fifth grade.

Data obtained from the testing should be interpreted through the use of both central tendencies and the amount of variation shown by each group. Greene, Jorgenson, and Gerberich are of the opinion that the arithmetic mean is the best known and most widely used measure of central tendency. The arithmetic mean is defined as the measure resulting from dividing the sum of measures in the distribution by the number of measures. The value of the arithmetic mean lies in the fact that it lends itself to describing by means of a single term a group of widely varying scores or measures. It expresses in a very compact form one specific fact about the scores in which every single score has a part.

---

Mean grade equivalents are presented as the measure of central tendency as the basis of interpretation. It will be noted that 5.0 and 5.5 are accepted as expected grade attainment for September and January testings, respectively.

For lack of other ways to determine the gain made, the September mean was subtracted from the January mean to determine the amount of gain. Grade equivalents were used because history and geography could be averaged on that basis for comparison.

A study of the relative achievement in vocabulary of the groups reveals that the control group made a gain of one month as measured by the Stanford Achievement Test and

<table>
<thead>
<tr>
<th>Control Group</th>
<th>Experimental Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Scores on Vocabulary Tests</td>
<td>Mean Scores on Vocabulary Tests</td>
</tr>
<tr>
<td>New Stanford</td>
<td>5.1 5.2 .1</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>5.7 6.2 .5</td>
</tr>
</tbody>
</table>

**TABLE VI**

A COMPARISON OF THE STATUS OF THE CONTROL AND EXPERIMENTAL GROUPS ON THE VOCABULARY TESTS FROM SEPTEMBER TO JANUARY
five months as measured by the Metropolitan Achievement Test. On the Stanford Test the gain was below expectancy while on the Metropolitan Test the gain was of normal expectation. The experimental group showed a gain of seven months on the Stanford Achievement Test and one year on the Metropolitan Achievement Test. In both tests the gain was above normal expectation. However, the gain on the Metropolitan Test was twice the normal expectation. The gains were in favor of the experimental group. The experimental group made a gain of six months more than the control group on the Stanford Vocabulary Test and a gain of five months more on the Metropolitan Vocabulary Test.

The greater gain made by the experimental group harmonizes with previous findings.

Complete entries in Table IX, Appendix D show that improvement was impressively greater for those of the experimental group. These findings emphasize the importance and value of teaching directly the meanings of words plus systematic vocabulary development.

As an additional check on achievement in the social studies, the standardized tests in history and geography included in the Stanford Achievement Tests, were administered in September, before the instructional program was initiated, and another form of the same test was administered at the conclusion of the experimental period in January. The same techniques for history and geography area of the Metropolitan
Achievement Tests were used. Table VII shows the data secured from the administration of these tests.

**TABLE VII**

A COMPARISON OF THE STATUS OF THE CONTROL AND EXPERIMENTAL GROUPS ON SOCIAL STUDIES TESTS FROM SEPTEMBER TO JANUARY

<table>
<thead>
<tr>
<th>Control Group</th>
<th>Experimental Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Scores on Social Studies Tests</td>
<td>Mean Scores on Social Studies Tests</td>
</tr>
<tr>
<td>Score Score</td>
<td>Score Score</td>
</tr>
<tr>
<td>New Stanford 4.5 5.2 .7</td>
<td>New Stanford 4.5 5.9 1.4</td>
</tr>
<tr>
<td>Metropolitan 4.8 5.5 .7</td>
<td>Metropolitan 4.6 5.7 1.1</td>
</tr>
</tbody>
</table>

The grade equivalents of both groups showed that the groups were below normal expectancy of their grade level, with both groups evenly matched in September. This was not true of the vocabulary tests as shown in Table VI. The January administration of the second form of the tests revealed that the control group had made a gain of seven months as measured by both tests. The experimental group had made a gain of one year and four months as measured by the Stanford Test.
The same group made a gain of one year and one month as measured by the Metropolitan Test. The gain for the experimental group was twice that of the control on the Stanford Test and almost as much on the Metropolitan Test. The detailed entries listed in Table X, Appendix D show that all pupils made gains during the experiment, with a few exceptions which will be discussed. The findings also show that at the end of the experimental period the experimental group had reached beyond the normal grade expectancy of 5.5. The control group was not up to that point on the Stanford Test but at the exact point on the Metropolitan Test. However, in the case of both groups, the gain was above that of normal expectancy for the experimental period.

The findings show a significant difference in favor of the experimental group and indicates that pupils do profit from direct vocabulary guidance.

The daily records show that pupils of the control group asked for very little help when compared with the pupils of the experimental group. When left to their own resources, pupils either failed to identify specific needs or were negligent about asking for help.
An analysis of the results of the vocabulary tests, shown in Table IX, Appendix D, reveals a few cases which merit attention. There are five cases in the control group which showed a loss in grade placement from September to January, on the Stanford Vocabulary Test. One pupil who ranked second place in the group in September with a grade placement of 7.8, reduced this grade placement to 5.0 on the January test. This showed a loss of one year and eight months. The other cases did not show losses as great as this. On the Metropolitan Vocabulary Test, the above case showed a similar loss in grade placement from September to January. In September the grade placement was 6.1 and in January the grade placement was 5.0. There was a loss of one year and one month on this test. This pupil had the same grade placement on both tests in January. The other cases mentioned as showing slight losses on the Stanford Vocabulary Test, showed gains on the Metropolitan Vocabulary Test. The one case merits further individual study to determine the cause of this loss in grade placement on both tests.

Table IX reveals that there was no loss in grade placement of any pupil in the experimental group on either vocabulary test. Indications are that specific guidance in vocabulary development results in consistent gain by members of the experimental group.
CHAPTER V

SUMMARY AND CONCLUSIONS

I. SUMMARY

The experimental study of the value of specific vocabulary development on the achievement in social studies originated from contrasting theories of methods of teaching the social studies. A summary of the experiment follows:

1. An experiment was planned to secure data to determine the value of systematic vocabulary development and the relative importance of the program to achievement in the social studies.

2. The data were secured by means of experiment, using the equivalent groups method. The control group and the experimental group were equated on the basis of intelligence quotients derived from the administration of the Kuhlmann-Anderson Intelligence Test for Grade V. Twenty pupils participated in each group.

3. The instructional program consisted of three units in the social studies. The period of time for each unit was six weeks. A test was constructed for each unit. Each test was used as a pretest and retest to determine the gains made by each group.

4. The vocabulary meanings received by the control group came from context alone, and help from the investigator
if the pupils asked for help. The dictionary was used on their own initiative. The experimental group was given a systematic program of vocabulary development as outlined in Appendix B.

5. Standardized tests in vocabulary and history and geography were employed to determine growth in general information in vocabulary and in the two fields comprising the social studies. Data secured from initial and final administration of the two forms of the standardized tests were used to (1) determine the status of the pupils before and after presentation of the instructional program and (2) whether specific vocabulary training resulted in specific gains in achievement in the social studies.

6. Results from the unit tests and the standardized tests of the control group were compared with those of the experimental group. This technique was employed to determine whether or not more growth resulted from specific vocabulary development in the social studies.

7. It is not claimed that the use of these tests produced data from which complete evaluation of specific vocabulary development used in the study resulted. They furnished data, however, on which the following conclusions were based.
II. CONCLUSIONS

Positive conclusions, based upon the interpretation of unit and standardized tests, would be highly unreliable because the number of participants was limited.

Keeping this in mind, the findings were interpreted as follows:

1. From the data secured by the administration of the unit tests, there is evidence that the pupils of the experimental group gained much more than did the pupils of the control group. Indications are that direct and systematic development of vocabulary was effective in securing significant growth in achievement in the social studies. It was disclosed from analysis of the data that the control group obtained some improvement from the context method of obtaining word meaning. However, the improvement was by no means as effective as the systematic program of vocabulary development used with the experimental group. From this evidence may be drawn the tentative conclusion that systematic development of vocabulary does promote significant growth in achievement in social studies.

2. Data secured from the administration of comparable forms of the vocabulary tests, expressed in terms of grade equivalent scores, revealed achievement in terms of school unit classification. Grade placement gains from September to January showed gains in favor of the experimental group. The gains made were greater than normal expectation, with the
gain on one test twice the normal expectation. The gain made by the control group was below normal expectation on one test and exactly normal expectation on the other test. In view of these facts, there is indication that specific vocabulary development promotes greater growth in word meaning than the indirect method of vocabulary development.

3. Data secured from the administration of comparable forms of the standardized tests in history and geography and reported in terms of average grade equivalents, showed significant gains in favor of the experimental group. Growth in achievement, for this group, was more than twice the normal expectation. From this evidence, indications are that gains in general information made by the experimental group were significantly high, even though the instructional program emphasized specific rather than general areas of learning. As indicated in preceding conclusions, significant gains in achievement in the social studies by the experimental group seem to lead to the conclusion that systematic development of vocabulary, general and technical, in the social studies is a contributing factor to gains in achievement on the tests.

4. Several problems that have been recognized during the period of the experiment are these: There is evidence of a vocabulary problem in the social studies materials. This will have to be met by teacher and author alike. There are too many unknown words in the materials which hinder the pupil
in securing the thought of materials presented. Continued research of methods and materials is necessary, especially at the intermediate level.

In general, the instructional program in social studies using systematic development of vocabulary is conducive to achievement which exceeds normal expectation.
BIBLIOGRAPHY
BIBLIOGRAPHY

A. BOOKS:


C. PUBLICATIONS OF LEARNED ORGANIZATIONS


APPENDIX A
UNIT I

EARLY EXPLORERS: FINDING A NEW WORLD

I. Introduction
   A. Pretest
      1. Vocabulary
      2. Facts

II. Objectives
   A. Realization of how the boundaries of the known world of Europe were made to expand by the discovery and explorations
   B. Realization that the motive for exploration was a desire for trade and material wealth
   C. Realization of the part science and inventions played in discovery and exploration
   D. To become acquainted with the lives and discoveries of the outstanding explorers
   E. An appreciation of the courage of the leaders and their followers in sailing the unknown seas

III. Approaches
   A. Through the use of maps:
      1. Use of wall maps, maps in text, and individual maps to chart the routes of the explorers
      2. Use of maps to get the general view of location, size, and surface features of the new lands
B. Use of pictures illustrating various phases of the explorations: ships, loading the ships, natives, etc.

C. Through stories about explorers:
   1. Individual reports of the pupils

D. Through class discussion

E. Extended reading in the reference library:
   1. Britannica Junior
   2. Compton's
   3. World Book
   4. Any other library book, either at home or school.

IV. Activities
A. Make a collection of pictures
B. Make a pictorial map of the voyages of the explorers
C. Write a cooperative, original Columbus play

V. Culminating Activities
A. Exhibit of the work done during the Unit to be on display for the Parent Teacher's Association
B. Present the Columbus play for the Assembly program, Oct. 12

VI. Evaluating the Unit
A. Do the pupils know?
   1. Motives behind the exploration
   2. Effect of the opening up of new lands has on the people of the world
   3. The courage needed to undertake these explorations
   4. How to locate places discovered on the map.
5. How to use reference books for study and class reports

B. Has the pupils' interest been sufficiently stimulated to encourage further independent reading?

C. Retest
   1. Vocabulary
   2. Facts
UNIT II

NEW ENGLAND AND THE MIDDLE ATLANTIC STATES

I. Introduction
   A. Pretest
      1. Vocabulary
      2. Facts
   B. What we'd like to find out about this region
      1. Physical features
      2. Climate
      3. Resources
      4. Industries
      5. Early settlers

II. Objectives
   A. An appreciation of the character and motives of the settlers of the northeastern and middle states
   B. Realization of the manner of living and hardships that were overcome in settling these regions
   C. An understanding of the changing industrial development of these regions
   D. A knowledge of present day life in the northeastern and middle states
   E. An understanding of how and why the Middle States grew as they did
   F. A knowledge of the relation of Indians and white men
   G. An understanding of the conditions that caused the
Middle Atlantic States to become industrial centers

H. Develop skills in locating places studied

III. Approaches

A. Show a collection of travel folders illustrating this region

B. Illustrative pictures of colonial life

C. Visit our own museum in Forest Park

D. Stories of colonial life in books in the school library

IV. Activities

A. Informational
   1. Reading from the text
   2. Reading references
      a. Locating reading materials to solve problems brought out in class
   3. Class discussion
   4. Map studies
   5. Special reports

B. Creative
   1. Boys: Make a model of the Mayflower
   2. Girls:
      a. Collection of pictures of prominent men in colonial times
      b. Make a frieze of people in colonial dress
      c. Plan an original play
3. Individual reports
   a. The first winter at Plymouth
   b. Life of Benjamin Franklin
   c. Life of George Washington
   d. Paul Revere
   e. Patrick Henry

V. Culminating Activities
   A. Place our exhibit of pictures so that the entire school may view them
   B. Present the original play at the Assembly program

VI. Evaluation
   A. Retest
UNIT III

SOUTHEASTERN STATES

I. Introduction
   A. Pretest
      1. Vocabulary
      2. Facts
   B. What we'd like to know about this region
      1. Physical features
      2. Climate
      3. Early settlers and history
      4. Industrial development

II. Objectives
   A. An appreciation of the character and motives of the settlers of the southeastern states
   B. An understanding of the problems early settlers of this region had to meet and solve
   C. A knowledge of the geographical features that have helped make life such as it is in this section of the country.
   D. How England founded and developed a great farm community in the South
   E. A knowledge of the founding of other Southern colonies
   F. A knowledge of present day development of industry in the South
G. An understanding of the value of cotton to the South

III. Approaches

A. Show a collection of pictures of the South.

B. Illustrative materials of life on a plantation

C. Through the use of maps:
   1. Use of wall maps, maps in the text, and individual maps
   2. Use of maps to get the general view of location, size, and surface features

IV. Activities

A. Informational
   1. Reading from the text
   2. Reading references
      a. Locating materials to solve problems brought out in class
      b. Locating materials for the solution of independent problems
   3. Class discussion
   4. Special reports
   5. Map studies

B. Creative
   1. Visit food market and list several things that come from the southeastern states
   2. Find and display maps, pictures, books, and magazines that help pupils understand the land and people of this section
   3. Plan a display of articles produced in this section
V. Culminating Activities
   A. Exhibit the collections made by the committees
   B. Dramatize a day on a plantation
   C. Learn a few Southern songs

VI. Evaluating the Unit
   A. Do the pupils know?
      1. Motives behind the explorations
      2. The effect of opening up this part of the New World on the people of the world
      3. How to locate places on the map
      4. How to use reference books for study and class reports
   B. Retest
      1. Vocabulary
      2. Facts
SEQUENTIAL PROGRAM OF VOCABULARY DEVELOPMENT
IN
SOCIAL STUDIES

GRADE V

I. General skills to be learned:

A. Scrutiny of word forms:

1. Identify root forms, prefixes, suffixes, and endings as visual units in a word.

2. Identify visual clues that aid in determining the accented syllable in the word.

3. Use of meaning clues to check analysis.

B. Skills in structural analysis:

1. Apply the following in attacking compound, inflected, and derived words:
   (a) Root words, prefixes, and suffixes are units in words.
   (b) Determine syllable units in a word.

2. Analysis of the various word forms.

3. Formulate principles of syllabication.

C. Skills in phonetic analysis:

1. Visual-auditory perception of consonants and vowels.

2. Auditory perception of accent.

3. Blending of consonant and vowel sounds.

4. Blending syllables into whole words and determining the accent.

---

5. Application of phonetic skills:
   (a) Variability
   (b) Principles that aid in determining vowel sounds:
      (1) Position
      (2) Silent vowels
      (3) Consonant controllers
   (c) Accent
      (1) Meaning affects accent and pronunciation.
      (2) If a word ends in le, the final syllable is usually unaccented.
      (3) Endings, prefixes, and suffixes are usually unaccented - the accent falls on or within the root word.

II. Use of the dictionary
   A. Locating entries
      1. Recognizing alphabetical sequence or general position.
      2. Using guide words.
      3. Identifying root word to locate entry word.
   B. Deriving meanings
      1. Comprehend definitions of meanings as given in the dictionary.
      2. Comprehending and selecting definitions in the light of a given context.
      3. Adapt this definition to fit context.
   C. Deriving pronunciations
      1. Identify consonant and vowel sounds and associate them with symbols shown in the pronunciation key.
2. Blend consonant and vowel sounds into syllables and syllables into words.

3. Recognize the function of the syllabic divisions and of the accent mark.
**UNIT I**

**TRUE — FALSE TEST**

Directions: Place a T on the line before the number if the statement is true. Place an F on the line before the number if the statement is false.

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Egyptians lived in northeastern Africa.</td>
</tr>
<tr>
<td>2.</td>
<td>The Phoenicians discovered the Atlantic Ocean.</td>
</tr>
<tr>
<td>3.</td>
<td>The Romans explored very little land.</td>
</tr>
<tr>
<td>4.</td>
<td>The Crusaders brought back stories of the wonderful things they saw and therefore encouraged trade.</td>
</tr>
<tr>
<td>5.</td>
<td>Navigation was an invention to help sail ships.</td>
</tr>
<tr>
<td>6.</td>
<td>Columbus was the first white man to visit the New World.</td>
</tr>
<tr>
<td>7.</td>
<td>Marco Polo's travels to the Far East discouraged the spirit of adventure.</td>
</tr>
<tr>
<td>8.</td>
<td>Khan was an emperor in Europe.</td>
</tr>
<tr>
<td>9.</td>
<td>The first all-water route to India was discovered by de Gama.</td>
</tr>
<tr>
<td>10.</td>
<td>Balboa called the ocean he discovered the &quot;Pacific&quot;.</td>
</tr>
<tr>
<td>11.</td>
<td>Columbus landed in the Bahama Islands.</td>
</tr>
<tr>
<td>13.</td>
<td>Montezuma was chief of the Aztec Indians.</td>
</tr>
<tr>
<td>14.</td>
<td>La Salla looked for the seven cities of gold.</td>
</tr>
<tr>
<td>15.</td>
<td>Pizarro took Peru from the Inca Indians.</td>
</tr>
<tr>
<td>16.</td>
<td>Ponce de Leon found the &quot;fountain of youth&quot;.</td>
</tr>
<tr>
<td>17.</td>
<td>Ericson came to America about 1000.</td>
</tr>
<tr>
<td>18.</td>
<td>The crop most widely grown by the Indians was corn.</td>
</tr>
<tr>
<td>19.</td>
<td>The first Indians are believed to have reached the New World by way of Alaska.</td>
</tr>
<tr>
<td>20.</td>
<td>These Indians brought horses with them so that they could hunt buffaloes.</td>
</tr>
</tbody>
</table>
21. All the Indian tribes spoke the same language.
22. The Cordilleran range of mountains is in western North America.
23. We live in the Eastern Hemisphere.
24. The Mississippi River is named for Henry Hudson.
25. John Cabot made two voyages to the coast of North America for the King of England.

PART II
Directions: Fill the blanks with the correct word.
1. The Phoenicians discovered the _______ Ocean.
2. There were three famous merchants named _______.
3. Crusaders made pilgrimages to the tomb of _______.
4. _______ Polo made an expedition to China.
5. An invention which points out directions is a _______.
6. Diego was the son of _______.
7. Columbus lost _______ ships.
8. John Cabot claimed land in North America for the _______.
9. Magellan named the _______ Ocean.
10. Cortez conquered _______.
11. The King of the Aztec Indians was _______.
12. The _______ Indians lived in Peru.
13. Coronada found _______.
14. Cartier discovered _______.
15. The Smithsonian Institute is a famous _______.
16. The chief river in North America is the _______.
17. The largest body of fresh water in the world is _______.
18. Grassy, flat lands are called _______.
19. All Woodland Indians lived in _______.
20. Plains Indians hunted ________.

21. The best constructed Indian house is a ________.

22. Indian ________ tended the crops.

23. There were about ________ tribes of Indians when 
Columbus came to the New World.

24. An Indian game we play now is ________.

25. Indians got their horses from the ________.

PART III

Directions: Find the best choice for completing each of the following statements and write the number of this choice in the blank at the right.

1. America was discovered by (1) Isabelle (2) Magellan 
(3) Columbus (4) Pizarro . . . . . . . . . . . . . . . . . . . . . . . . . . . .

2. Columbus believed that by sailing westward he would 
find (1) a new continent (2) a shorter route to India 
(3) the end of the world (4) the Phillipines . . . . . . . . . .

3. Columbus died (1) in America (2) while governor of 
West Indies (3) poor and neglected (4) wealthy . .

4. Columbus claimed the New World for (1) Spain (2) Italy 
(3) England (4) Portugal . . . . . . . . . . . . . . . . . . . .

5. John Cabot explored the coast of Newfoundland to North 
Carolina and claimed it for (1) Spain (2) Italy 
(3) Portugal (4) England . . . . . . . . . . . . . . . . . .

6. In their treatment of the Indians the Spanish were 
generally (1) extremely cruel (2) honest and fair 
(3) businesslike (4) kind and honorable . . . . . . . . . . . . .

7. Spain took a leading part in exploring the New World 
because the Spaniards wanted (1) homes (2) slaves 
(3) gold (4) war . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

8. Pizarro took a vast amount of gold from the Indians 
of (1) Brazil (2) Peru (3) Mexico (4) North America

9. Ponce de Leon explored Florida in search of gold and 
(1) flowers (2) orange groves (3) the Mississippi 
River (4) a "fountain of youth" . . . . . . . . . . . . . . . . . . . .
10. The woods Indians (1) had well-built houses (2) hunted buffaloes (3) found much game and raised crops (4) had much gold

11. The plains Indians (1) had well-built houses (2) lived chiefly on buffaloes (3) lived chiefly on fish (4) raised corn

12. The Pueblo Indians (1) lived in tents (2) lived chiefly on buffaloes (3) had plenty of all kinds of game (4) were great corn farmers

13. Some white people who tried only to do good to the Indians were (1) early explorers (2) traders (3) gold seekers (4) Spanish and French missionaries

14. The most highly civilized of the Indians in what is now the United States were in the (1) northeast (2) southwest (3) southeast (4) northwest

15. The number of tribes in America in 1492 was probably about (1) ten thousand (2) a hundred (3) ten (4) two thousand

16. Two plants which we got from the Indians are (1) corn (2) wheat and barley (3) apples (4) rice and bananas

17. Indians made their tools of (1) wood (2) iron (3) stone (4) steel

18. A famous museum in our country is the (1) Appalachian (2) Washington (3) Smithsonian (4) Chicago

19. The English discovered fishing grounds off the coast of (1) India (2) France (3) Newfoundland (4) Brazil

20. pemmican is (1) a tent (2) a tree (3) dried meat and berries (4) a headdress

21. The first map makers were (1) Italians (2) Africans (3) Phoenicians (4) Crusaders

22. America was named for (1) Magellan (2) Vespucci (3) Cabot (4) Coronada

23. Canada was discovered by (1) Cartier (2) Hudson (3) Marquette (4) Champlain

24. Brazil was claimed for (1) Spain (2) Italy (3) Portugal (4) England

25. Florida was named by (1) Pizarro (2) Cabral (3) Ponce de Leon (4) Cortez
<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. exploration</td>
<td>large amounts of money</td>
</tr>
<tr>
<td>2. motive</td>
<td>a trip to discover new things</td>
</tr>
<tr>
<td>3. discovery</td>
<td>to gain by force</td>
</tr>
<tr>
<td>4. wealth</td>
<td>earth rising higher than the surrounding country</td>
</tr>
<tr>
<td>5. expedition</td>
<td>exchange of goods</td>
</tr>
<tr>
<td>6. conquer</td>
<td>reason for doing something</td>
</tr>
<tr>
<td>7. isthmus</td>
<td>a group of nations under one ruling power</td>
</tr>
<tr>
<td>8. continent</td>
<td>quiet and undisturbed</td>
</tr>
<tr>
<td>9. province</td>
<td>the discovery of unknown country</td>
</tr>
<tr>
<td>10. empire</td>
<td>an early explorer</td>
</tr>
<tr>
<td>11. calm</td>
<td>to find and make known the existence of new lands</td>
</tr>
<tr>
<td>12. Columbus</td>
<td>a narrow strip of land joining two continents</td>
</tr>
<tr>
<td>13. trade</td>
<td>land soaked with water</td>
</tr>
<tr>
<td>14. mountain</td>
<td>by a certain road</td>
</tr>
<tr>
<td>15. swamp</td>
<td>a distant colony</td>
</tr>
<tr>
<td>16. route</td>
<td>a great division of land on the earth</td>
</tr>
</tbody>
</table>
17. progress
18. valuable
19. missionary
20. mutiny
21. region
22. fertile
23. ancient
24. civilized
25. trader

belonging to times long past
a person who trades
a part of the world
growth or development
being worth something
a person who goes on the work of a religious mission
open rebellion against lawful authority
producing crops easily
changed from being savage to having good laws and customs
UNIT II
TRUE - FALSE TEST

Directions: Place a T on the line before the number if the statement is true. Place an F on the line before the number if the statement is false.

1. The first white people to settle in New York were the English.

2. The Mayflower Compact was an agreement in which the Pilgrims agreed to obey all laws which their government might make.

3. The Puritans were a happy and carefree people.

4. An Indian, Squanto, lived with the Pilgrims and taught them many things.

5. The Pilgrims established the first colony in the New World.

6. The Erie Canal connected the Hudson River and Lake Erie.

7. The settlement on Manhattan Island was known as Fort Orange.

8. The principal banking center in New York today is Broadway.

9. Connecticut was the first colony in the New World with complete religious freedom.

10. The Puritans lived on farms and plantations.

11. The Pilgrims kept peace with the Indians for more than fifty years.

12. The Puritan settled in towns.

13. The New England region is a manufacturing section of the United States.

14. Blockhouses were used as places of punishment.

15. The most important building in a Dutch colony was the church.

16. Pennsylvania was settled by a group of people called the Society of Friends.

17. Peter Stuyvesant was the first governor of the Middle Atlantic States.
18. Philadelphia is a great steel center.
19. Franklin established the first circulating library.
20. Lumbering is a famous New England industry.
21. Men train at West Point to become officers in the Navy.
22. The Statue of Liberty is on Long Island.
23. Albany and Philadelphia are seaports.
24. Henry Hudson searched for a water passage around northern Europe.
25. The New Netherlands extended from Cape Cod to Delaware Bay.

PART II

Directions: Fill the blanks with the correct word.

1. New York City is made up of five ________.
2. New York's largest industry is the ________.
3. The young Englishman who brought the Quakers to our country was ________.
4. The principal settlement, called the "city of brotherly love", was ________.
5. Annapolis is the home of the ________ Academy.
6. A product of the New England forests is ________.
7. The state of ________ makes one-third of all shoes manufactured in the United States.
8. The greatest fresh fish market in the United States is ________.
9. People who wandered were called ________.
10. Puritans permitted only ________ to hold office.
11. A stone found in Vermont is ________.
12. The name New Amsterdam was changed by the British to ________.
13. The men in the New Netherlands who owned large estates were called ________.
14. The Military Academy is called ________.
15. Pittsburgh is the center of ______ and ______.
16. People who opposed showy places of worship were the ______.
17. A seaport that is one hundred miles from the ocean is ______.
18. The author of Poor Richard's Almanac is ______.
19. William Penn made a ______ with the Indians.
20. The man who saw the value of an all-water route between the Hudson River and the Great Lakes was ______.
21. Benjamin Franklin founded schools for older children which were called ______.
22. Man-made waterways are called ______.
23. The Indian who taught the colonists to plant corn was ______.
24. Peter Stuyvesant was the first governor of ______.
25. Early colonists came to the New World to ______ as they pleased.

PART III

Directions: Find the best choice for completing each of the following statements and write the number of this choice in the blank at the right.

1. In colonial times people obtained oil from (1) tanks (2) boats (3) whales (4) wells . . . . . . . . . . . . ______
2. The leader of the Rhode Island colony was (1) Roger Williams (2) John Smith (3) John Winthrop (4) James Oglethorpe . . . . . . . . . . . . . . . . . . . . . . . . ______
3. The colonists did a profitable business with the Indians in trading for (1) oil (2) fish (3) furs (4) whales . . . . . . . . . . . . . . . . . . . . ______
4. In the colonial family the cooking was done (1) by gas (2) out-of-doors (3) at a fireplace (4) on a stove . ______
5. A New England block house was a (1) playhouse (2) school (3) dwelling (4) protection from the Indians . ______
6. Much of the food of the early colonists was (1) rice (2) from England (3) peanuts (4) game . . . . . . . . . . . . ______
7. Rhode Island was founded by people (1) who did not like the Puritans' ways (2) prisoners from England (3) new people in the country (4) people from Connecticut.

8. The tallest structure in the world is the (1) Rockefeller Center (2) Empire State Building (3) Washington Monument (4) Capitol Dome.

9. The first white people to settle in New York were the (1) English (2) French (3) Dutch (4) Spanish.

10. Pennsylvania was settled by (1) prisoners (2) French (3) Puritans (4) Quakers.

11. Boats on the canal are raised and lowered by means of (1) derricks (2) pumps (3) locks (4) pullies.

12. The most rapid transportation in New York City today is (1) subway (2) automobile (3) trolley (4) bus.

13. Large landowners in the New Netherlands were called (1) governors (2) patroons (3) bosses (4) captains.

14. Cloth is woven on large machines called (1) shuttles (2) spools (3) looms (4) cards.

15. The United States Military Academy is at (1) New York (2) Washington (3) West Point (4) Baltimore.

16. The Statue of Liberty was a gift from (1) France (2) England (3) Germany (4) Canada.

17. The land nearest the ocean is called the (1) Coastal Plain (2) Fall Line (3) Sandy Belt (4) Mountain Range.

18. Massachusetts today is a great (1) cattle country (2) corn belt (3) coal-producing area (4) manufacturing region.

19. North of Cape Cod, the Coastal Plain (1) is very wide (2) disappears (3) is very narrow (4) is good farm land.

20. The settlers of New Amsterdam (1) frightened the Indians (2) had a long war (3) paid the Indians for their land (4) refused to trade with the Indians.

21. The banking center of our nation is on (1) Wall Street (2) Broadway (3) State Street (4) Fifth Avenue.

22. The Dutch surrendered to the English because they (1) were treated better (2) like Stuyvesant (3) wanted money (4) wanted to go back to England.
Directions: Place the number of the word in the first column next to the meaning in the second column.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ice Age</td>
<td>people who wandered about</td>
</tr>
<tr>
<td>2. wampum</td>
<td>great sheets of ice</td>
</tr>
<tr>
<td>3. Puritans</td>
<td>a hiding place</td>
</tr>
<tr>
<td>4. cache</td>
<td>magic power</td>
</tr>
<tr>
<td>5. trenchers</td>
<td>the business of buying and selling goods</td>
</tr>
<tr>
<td>6. catechism</td>
<td>bowls hollowed out of blocks of wood</td>
</tr>
<tr>
<td>7. rendered</td>
<td>a book of questions and answers about religion</td>
</tr>
<tr>
<td>8. Pilgrims</td>
<td>boiled</td>
</tr>
<tr>
<td>9. glaciers</td>
<td>Indian money made from shells</td>
</tr>
<tr>
<td>10. commerce</td>
<td>a long period of cold</td>
</tr>
<tr>
<td>11. carding</td>
<td>people who thought the church was too showy</td>
</tr>
<tr>
<td>12. witchcraft</td>
<td>people who follow strict rules</td>
</tr>
<tr>
<td>13. puritanical</td>
<td>process of combing wool fibers apart</td>
</tr>
</tbody>
</table>

23. A bay used as a gateway to the west is (1) Boston (2) Chesapeake (3) Albany (4) New York.
24. The Puritans believed that all people should be taught the (1) new books of that time (2) addition facts (3) best way to behave (4) Bible.
25. Robert Fulton's invention was (1) a radio (2) the way to construct a canal (3) a steamboat (4) the sewing machine.
14. industry
   something produced in making something else

15. import
   owners of large estates

16. export
   making something new

17. resource
   man-made waterway

18. patroon
   a branch of business, trade, or manufacture

19. by-product
   an artificial pipe bringing water from a distance

20. governor
   goods shipped to foreign countries

21. port
   goods shipped into our country

22. canal
   place where ships can be sheltered

23. invention
   carry from one place to another

24. transportation
   any supply that meets a need

25. aqueduct
   a man who rules
UNIT III

TRUE - FALSE TEST

Directions: Place a T on the line before the number if the statement is true. Place an F on the line before the number if the statement is false.

1. The Atlantic Coastal Plain is the land nearest the ocean.
   
2. The principal products of West Virginia are bituminous coal, petroleum, and gas.
   
3. The Fall Line is on the Atlantic coast.

4. Jamestown was the first permanent English settlement made in America.
   
5. Much truck farming is done on the Piedmont Plateau.

6. Truck farms require less labor than larger farms.

7. Sir Francis Drake plundered Spanish treasure ships and, therefore, was feared greatly by the Spanish.

8. Sir Walter Raleigh settled the colony of Jamestown.

9. Captain John Smith was saved by Pocahontas.

10. The English settlers were gentlemen who didn't want to work.

11. Captain Newport discovered that Virginia soil would yield large crops of tobacco.

12. The beginning of slavery in our country was at Jamestown in 1619.

13. The representative government of Virginia was known as the House of Burgesses.

14. The Indians thought that the early Jamestown settlers were very fair with them.

15. Jamestown was always the capital of Virginia.

16. Children of the plantations had tutors for teachers.

17. Richmond has been restored to look like it did in colonial days.

18. In colonial days, the chief crop of the Carolinas was tobacco.
1. The greatest swamp in the United States is the
2. The sea rover most feared by the Spanish was
3. Two main crops of colonial Carolinas were and
4. The first successful English colony in America was
5. The Jamestown colony nearly perished because the men quit
6. Southern children's teachers were called
7. A friendly Indian girl was
8. Sir Walter Raleigh tried to found a colony at
9. The first colony in Georgia was founded by
10. The oldest city in the United States is
11. Florida has a warm climate because of
12. Products obtained from pine trees are called
13. The largest city in Georgia and the Southeast is
14. The first capital of Virginia was
15. The representative government of Virginia was called the

PART II
Directions: Fill the blanks with the correct word.

1. The greatest swamp in the United States is the __________.
2. The sea rover most feared by the Spanish was __________.
3. Two main crops of colonial Carolinas were _______ and _______.
4. The first successful English colony in America was __________.
5. The Jamestown colony nearly perished because the men quit __________.
6. Southern children's teachers were called __________.
7. A friendly Indian girl was __________.
8. Sir Walter Raleigh tried to found a colony at __________.
9. The first colony in Georgia was founded by __________.
10. The oldest city in the United States is __________.
11. Florida has a warm climate because of __________.
12. Products obtained from pine trees are called __________.
13. The largest city in Georgia and the Southeast is __________.
14. The first capital of Virginia was __________.
15. The representative government of Virginia was called the __________.
16. In 1619 the new governor of Virginia gave each settler a _________.
17. The first white baby born in America was _________.
18. The first Englishman to sail around the earth was _________.
19. North America was first explored by the _________.
20. The boundary line between the Piedmont Plateau and the Coastal Plain is called the _________.
21. The land in Florida is very _________.
22. The cigar capital of the world is _________.
23. The main food of early colonists in the Carolinas was _________.
24. Jamestown never grew to be a large town because of the _________.
25. Each man in Virginia had to pay _________. pounds of tobacco for the transportation of a wife from England.

PART III

Directions: Find the best choice for completing each of the following statements and write the number of this choice in the blank at the right.

1. Rice is grown on (1) hillsides (2) dry land (3) swamps (4) flooded fields . . . . . . . . . . . . . . . . . . . . . .
2. An important export from colonial Virginia was (1) wool (2) tobacco (3) beef (4) corn. . . . . . . . . . . . . . . .
3. The most important Southern crop in the days of slavery was (1) peanuts (2) cotton (3) wheat (4) corn. . . . .
4. Peanuts grow on (1) on trees (2) on bushes (3) on tall stalks like corn (4) underground . . . . . . . . . . . .
5. An important crop in colonial Virginia was (1) apples (2) tobacco (3) sugar beets (4) cotton . . . . . . . . . . .
6. The chief product of West Virginia is (1) corn (2) wheat (3) gold (4) coal . . . . . . . . . . . . . . . . . . . . . .
7. The land nearest the ocean is called the (1) Coastal Plain (2) Piedmont Plateau (3) Appalachian Highland (4) Fall Line . . . . . . . . . . . . . . . . . . . . . . .
8. Plateau cities manufacture cotton goods because they have plenty of (1) people (2) buildings (3) power and coal, nearby (4) little labor.

9. The southern colonists lived on large (1) plantations (2) resorts (3) houseboats (4) sugar farms.

10. An important product of the Georgia forests is (1) maple syrup (2) rice (3) turpentine (4) peaches.

11. Stone quarries are found in (1) Florida (2) Virginia (3) South Carolina (4) Georgia.

12. The largest state east of the Mississippi is (1) West Virginia (2) North Carolina (3) Georgia (4) Florida.

13. Cotton raising in the South increased greatly with the (1) coming of railroads (2) building of canals (3) coming of the boll weevil (4) invention of cotton gin.

14. Two of the greatest wealth-producing products of the South are (1) lumber and oil (2) hogs and sheep (3) apples and potatoes (4) gold and silver.

15. The large cotton acreage led to a demand for (1) more cotton seed (2) more cotton-picking machines (3) more white laborers (4) more slaves.

16. A southern crop that requires flooded land is (1) sugar cane (2) cotton (3) sweet potatoes (4) rice.

17. A recent plan for transporting coal from West Virginia to the Great Lakes is by (1) truck (2) airplane (3) a large tube with belts (4) railroad.

18. The hardwood forests of the South make an important industry known as (1) naval stores (2) lumbering (3) manufacturing (4) commerce.

19. Florida's important produce is (1) sandstone (2) apples and citrus fruits (3) bananas (4) coffee.

20. A bay famous for its numerous oyster beds is (1) Atlanta (2) Tampa (3) Norfolk (4) Chesapeake.

21. Children of the South had teachers who were called (1) school teachers (2) helpers (3) tutors (4) dames.

22. Savannah is an important city because of the (1) exports (2) imports (3) industry (4) manufacturing.

23. Famous naval shipyards are located at (1) Baltimore (2) Tampa (3) St. Augustine (4) Norfolk.
24. A transportation center of the Southeast is located at (1) Charleston (2) Jacksonville (3) Richmond (4) Atlanta.

25. The first settlement in Florida was made by the (1) English (2) Spanish (3) Dutch (4) Mexicans.

PART IV

Directions: See if you know the meaning of the words in the column at the left well enough to match them with the phrases at the right.

1. bituminous
2. piracy
3. settlement
4. colony
5. tutor
6. plantation
7. representative
8. restore
9. capital
10. seaport
11. establish
12. Naval stores

____ set up and keep going
____ city where the government is located
____ the kind of weather
____ a harbor on the seacoast
____ a person appointed to act for others
____ bring back to former condition
____ private teacher for rich children
____ the settling of persons in a new country
____ large farm on which crops of cotton and tobacco are grown
____ a soft coal
____ a group of people who leave their own country and settle in another land
____ robbery on the sea
13. climate  products obtained from the resin of pine trees
14. resort  principal point or place
15. occupation  place where stone is dug or cut
16. fertilizer  bringing gain
17. swamp  a large bay
18. citrus  the result of good education and surroundings
19. slave  a substance spread over land to make it richer
20. gulf  a place where people go to
21. quarry  wet, soft land
22. Everglades  a person who is the property of another
23. profitable  trees bearing oranges, lemons, and limes
24. culture  the largest swamp in the world
25. center  a business or trade
### TABLE VIII
Scores of the Pretests and Retests of the Control Group and the Experimental Group on Units I, II, and III

| Pupil | Control Group | | | | | | Experimental Group | | | | | |
|-------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|       | Unit I Pre-test | Unit I Re-test | Unit II Pre-test | Unit II Re-test | Unit III Pre-test | Unit III Re-test | Pupil | Unit I Pre-test | Unit I Re-test | Unit II Pre-test | Unit II Re-test | Unit III Pre-test | Unit III Re-test |
| J.M.  | 43             | 85             | 40             | 98             | 42             | 96             | W.H.  | 40             | 93             | 36             | 96             | 50             | 98             |
| L.S.  | 40             | 75             | 36             | 90             | 34             | 92             | J.F.  | 39             | 95             | 42             | 96             | 37             | 98             |
| S.M.  | 38             | 81             | 37             | 90             | 35             | 95             | A.K.  | 37             | 91             | 37             | 98             | 34             | 95             |
| P.L.  | 32             | 77             | 24             | 93             | 26             | 90             | M.D.  | 35             | 90             | 30             | 95             | 35             | 97             |
| M.C.  | 30             | 75             | 20             | 87             | 22             | 88             | D.F.  | 35             | 88             | 34             | 97             | 30             | 95             |
| B.P.  | 26             | 81             | 31             | 80             | 26             | 90             | J.S.  | 29             | 90             | 31             | 94             | 34             | 96             |
| E.B.  | 24             | 74             | 27             | 72             | 20             | 85             | E.W.  | 25             | 90             | 35             | 90             | 23             | 96             |
| M.F.  | 20             | 70             | 21             | 70             | 18             | 75             | F.W.  | 22             | 85             | 25             | 95             | 24             | 94             |
| J.S.  | 18             | 68             | 30             | 85             | 22             | 94             | H.M.  | 17             | 82             | 15             | 90             | 15             | 90             |
| E.H.  | 15             | 84             | 18             | 70             | 15             | 80             | M.L.  | 15             | 87             | 14             | 92             | 15             | 95             |
| D.N.  | 14             | 69             | 10             | 67             | 8              | 70             | J.P.  | 12             | 85             | 10             | 94             | 16             | 96             |
| M.B.  | 10             | 67             | 15             | 65             | 18             | 72             | J.M.  | 10             | 86             | 10             | 91             | 11             | 90             |
| J.H.  | 10             | 55             | 9              | 58             | 10             | 75             | V.S.  | 10             | 83             | 9              | 88             | 7              | 90             |
| R.G.  | 8              | 52             | 4              | 68             | 8              | 69             | K.P.  | 9              | 80             | 8              | 89             | 8              | 85             |
| N.S.  | 7              | 55             | 11             | 60             | 10             | 68             | D.H.  | 8              | 75             | 8              | 87             | 10             | 87             |
| E.J.  | 6              | 48             | 7              | 54             | 5              | 59             | E.S.  | 8              | 82             | 6              | 88             | 10             | 90             |
| J.E.  | 6              | 50             | 10             | 47             | 8              | 60             | R.M.  | 7              | 78             | 5              | 85             | 8              | 86             |
| H.W.  | 5              | 45             | 5              | 45             | 7              | 64             | E.O.  | 5              | 73             | 4              | 83             | 5              | 87             |
| D.L.  | 4              | 42             | 6              | 50             | 5              | 58             | D.L.  | 7              | 70             | 4              | 78             | 6              | 80             |

| Mean  | 19             | 66.4           | 19.4           | 71             | 18.2           | 78.1           | Mean  | 19.7           | 84.8           | 19.5           | 91             | 20             | 92             |
TABLE IX
GRADE EQUIVALENT SCORES OF PUPILS OF THE
CONTROL AND EXPERIMENTAL GROUPS ON TWO FORMS
OF THE STANDARDIZED VOCABULARY TESTS

<table>
<thead>
<tr>
<th>Control Group</th>
<th>Experimental Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupil</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td>Stanford</td>
</tr>
<tr>
<td></td>
<td>Form E</td>
</tr>
<tr>
<td>J.M.</td>
<td>8.1</td>
</tr>
<tr>
<td>E.J.</td>
<td>7.8</td>
</tr>
<tr>
<td>S.M.</td>
<td>6.8</td>
</tr>
<tr>
<td>M.C.</td>
<td>6.0</td>
</tr>
<tr>
<td>E.H.</td>
<td>6.0</td>
</tr>
<tr>
<td>N.S.</td>
<td>5.8</td>
</tr>
<tr>
<td>J.H.</td>
<td>5.5</td>
</tr>
<tr>
<td>L.S.</td>
<td>5.2</td>
</tr>
<tr>
<td>P.L.</td>
<td>5.2</td>
</tr>
<tr>
<td>J.S.</td>
<td>5.2</td>
</tr>
<tr>
<td>M.F.</td>
<td>5.0</td>
</tr>
<tr>
<td>B.P.</td>
<td>5.0</td>
</tr>
<tr>
<td>H.W.</td>
<td>4.8</td>
</tr>
<tr>
<td>E.B.</td>
<td>4.7</td>
</tr>
<tr>
<td>M.B.</td>
<td>4.4</td>
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</tr>
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Mean  5.1  5.2  5.7  6.2  Mean  5.3  6.0  5.9  6.9
### TABLE X

GRADE EQUIVALENT SCORES OF PUPILS OF THE CONTROL AND EXPERIMENTAL GROUPS ON TWO FORMS OF THE STANDARDIZED HISTORY AND GEOGRAPHY TESTS

<table>
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<td>Form R</td>
<td>Form S</td>
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Mean 4.5 5.2 4.8 5.5  Mean 4.5 5.9 4.6 5.7